AN EVALUATION OF THE CONCEPT OF MATERIALS MANAGEMENT: A FUNCTIONAL APPROACH. (A CASE STUDY OF LIVESTOCK FEEDS PLC KADUNA)

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APPROVAL SHEET

This project has been read and approved as meeting the requirements of the post-graduate school and the Department of Business Administration, Ahmadu Bello University, Zaria, for the award of master of Business Administration (MBA).

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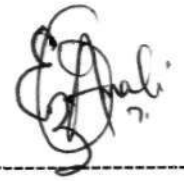
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DECLARATION

I do hereby declare that this project contains the report of my own research work and has not been presented and accepted in any previous application for post graduate degree.

That all information that is not the original effort of this research have been duly acknowledged by way of references.



EDWARD O. O. AMALI — Date: 14/10/02

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Name & Signature of Supervisor — Date

CERTIFICATION

This project work titled: **AN EVALUATION OF THE CONCEPT OF MATERIALS MANAGEMENT: A FUNCTIONAL APPROACH, (A CASE STUDY OF LIVESTOCK FEEDS PLC)**, by EDWARD O. O. AMALI meets the regulations governing the award of the degree of masters of Business Administration (MBA) of Ahmadu Bello University, Zaria, and it is approved for its contribution to knowledge.

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DEDICATION

This research work is dedicated to the living and evergreen memory of my late father:

MR. EMMANUEL OCHEGBUDU AMALI

"That you lived, and well too, remains my fountain of inspiration."
May God continue to bless and give your soul eternal rest. Amen.

ACKNOWLEDGEMENT

Reaching this level of academic endeavour was a dream made possible only by almighty God to whom I remain eternally grateful.

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I wish to express my deep gratitude to "mama" Anyame for seeing in me one who is capable, and who has borne the burden of seeing me through this programme and to my uncle Mr. Ekwo Amali Snr. on whose bicycle I rode to school the day my academic career began for his invaluable support through this programme.

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My endearing gratitude goes to my mates in this programme, Mr. Joseph S. Okwori, Godwin Ugbabe, Tunde Alokan, Mr. Jonah Kore and his wife who all stood by me. God bless you all.

To Aunty Jane, Barrister Godwin Obla, Adamu Ochepo, my friend Dr. Hassan Abdul, thank you; what else can I say?

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Mallam & Mallama Alhassan Amali, I thank you both most sincerely for keeping me and understanding when it mattered most.

For typing this work, thanks to Abbas Aba (the Guru)

There are many more of relevance not mentioned; don't worry you will get a mention before God!

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ABSTRACT

An Evaluation of the Concept of Materials Management: A Functional Appraisal - A Case Study of Livestock Feeds Plc, Kaduna, is a research work directed at studying the practical adaptability and workability of theoretical assertions of the concept in manufacturing organizations in Nigeria.

The study noted relativity and deviations from normal where so.

It also attempted to answer some important questions bordering on experiences, specialization, and problems of unethical practices. Most of the work however treads carefully along functional operations of a manufacturing organization revealing 'how' it handles its raw materials with the aim that it could be of benefit to interest groups and to the well being of the nation.

Research efforts that utilised theoretical representations were to a large extent followed. Deviations were few but significant. Such deviations were quite simple and orchestrated to mending operational lapses and to suite the organizational setting. Functional operations avoid complexities largely. The main pullout is in the acquisition and development of human resources, it is noted in the research that these area is accorded great priority with the belief that a trained and competent staff equals 70 percent of quality work done.

Another aspect is the close monitoring of purchasing and warehousing which limits activities considered unethical appreciably.

Prompt payment of suppliers was shown to be of particular importance to uninterrupted flow of materials into the company's materials management system.

A little more attention and practical amendments of ineffective normalcies appear to have given Live Stock Feed Pic the edge over its peers in the industry. It is important to note therefore by virtue of this research that major landmarks have been achieved by adjustments of little things that matter.

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CHAPTER ONE

1.1 INTRODUCTION

The concept of materials management didn't come to centre stage of industrial marketing management practice until the turn of the 20th Century.[1] In Nigeria, the multinational organizations who came along with it have made good its use. Some indigenous firms have only recently seen the need for its application.

Within the years, the function has undergone complete re-evaluation by business managers.[2]

From the responsibility and authority that materials management has assumed recently, it has become practically impossible to underscore its importance in the production process.

Cost of materials in business operations until now remains variable, hence it would be seen that a reduction in the cost of materials offers an unusual opportunity for profit improvement. Over 60-75 percent of most organizations money-resources is said to be spent in acquiring materials and services,[3] it is clear therefore that an opportunity for profit improvement in the materials aspect is virtually impossible to match in any other area of business operation, if materials cost is optimized, the organizations objective of profit maximization is improved, the over-all implication of effective materials management is a boost to national economy.

This study becomes appropriately necessary considering its importance and on the other hand its impediments, many of which could result in a possible disruption of incoming supplies, this might lead to among others, an upset in production schedules and consequently an upset in profits.

Such problems as, side inducements to influence purchases are quite frequent and rampant among those directly involved.

Common problems of excessive inventories, too little inventories, storage and obsolescence, all snow ball to form the black spot of the concept, as are unforeseen, transportation, staff, all-clogs in the wheels of a rather progressive concept, this makes a situation of fetching honey with a sting.

How Live Stock Feeds Plc copes in practical terms with all these, is the priority of this research study. Widening the scope of this consideration, it would be seen that materials well managed in purchases, inventory and production as mentioned earlier, switches on the smile of company owners. Inspite of the crave and indulgent habits of profit optimization, the humane face of manufacturers may unveil. This could mean good and competitive cost prices for users of the products. In our case, the farmers, especially of poultry may come to terms with reasonable cost prices of feeds, and the bandwagon effect may well reach every home. This is of extreme importance to the nation considering as the case is today, efforts being made to increase production of protein, thereby alleviating the poor protein level of diets in the country. In these first infant steps, it is best to begin to address associated limitations which only act to deny us progress. The importance of this concept and the need for concerned organizations to attend closely to it would be better projected as we study the concept as practiced by Live Stock Feeds Plc.

An Evaluation of the Concept of Materials management; a Functional Appraisal - A Case Study of Live Stock Feeds Plc, Kaduna, is a research work which attempts to study the practical adaptability and workability of theoretical assertions of the concept in a manufacturing organization in Nigeria.

The study will note relativity and deviations from normal norms where necessary.

It also attempts to answer some delicate questions bordering on experiences, specialization, and problems of unethical practices.

1.2 STATEMENT OF THE PROBLEM

In Nigeria's slowly growing economy, market competition is very intense, feeble competitors soon derail. The agro-milling business is one such activity where the act of balancing has to be well articulated, a slip could result in disastrous economic consequences. The area of this research is a particularly precarious one where-in, closure of most related industries result not exactly from bad market strategies but as a result of ineptitude and lack of attention to the all important concept of materials management. Management at all levels would find themselves embroiled in problems which take root in materials.[4]

Many business failures are direct outshoot of this ignorance or lack of concern. Short supply of industrial goods, supply delays, manufacturing delays, production stoppages and sometimes eventual closure of the factory are a pinch of the multitude of problems that may be so generated. In the face of great uncertainty some organizations are fairing well.

One such is Livestock Feeds Plc. How have they survived? What is their own practical interpretation of materials management? What have we got to learn? These are some of the problem areas that require answers or solutions.

1.3 OBJECTIVE OF STUDY

Livestock Feeds Plc being one of the foremost in its industry could exert positive influences especially regarding experiences to knowledge seekers and partakers in the industry for a generally improved effect on the nation, with this in mind, this research effort is intended to understudy the:

1. Maintenance of operating fluidity by efficient inventory management.
2. Management of unethical practices that are judged to be an influence in reaching buying decisions.
3. Organization of the warehousing system addressing both techniques and practices .
4. Management of unforeseens that belabour industries in unstable economies such as is now experienced in Nigeria; abrupt changes and

irregular policies of government, natural disasters such as draught, floods, etc. accidents, strikes, etc. are some of these irretractable unforeseens.

It is also intended to use the study to:

5. Highlight the importance of effective materials management in the production and distribution process.
6. Identify problem points and make useful recommendations where necessary.

1.4 SIGNIFICANCE OF STUDY

Livestock Feeds Plc a leading name in its industry, having originally been scioned to a multinational and made successful management of its materials department inspite of turbulent manipulations of the economy and other important unanticipated interferences, the advantage of being scioned to a multinational has no doubt added immensely to their experience and approach, which they appear to be putting into adequate use.

We are all aware that such experience is lacking in most organizations especially of same agro-milling type. The effect of non-utilization of this concept has led to untold business mishaps which could easily have been avoided and which would thereafter bring along the benefits that are so desired.

Aside provision of job spaces for thousands of able Nigerians, the industry would be seen to heavily boost the economy, manipulating its internal machinery and greatly improving them, farmers at the local level can give positive attestations to this, for the grains they produce all year is virtually consumed by this industry, such grains as maize, millet, sorghum, etc. and this can be said to be the encouragement and sustenance of the peasant farmers who are very important to the economy as they still form a large part of Nigeria's production work force. This slight improvement has helped in the imbalance in Nigeria's foreign transactions in a small but important way, it has given a much

desired lift to the proposal of self dependency in food production and an obvious life in our attempt to conserve foreign exchange.

Variously the Food and Agricultural Organization (FAO) and the world health organization (WHO) have painted cachexic pictures of protein levels and its consumption rate in this part of the world, it is however fair to say there has been great strides of improvement over the years, thanks to the contributions of this industry. Millions of eggs and chickens are produced yearly at relatively affordable rates. This has improved the intake of the much desired protein in the country. It is really never possible to have enough of animal food, this is attributable to the imbalance in production capabilities, bigger countries of Europe and America who have made good use of materials management practices, inspite of declared surpluses and self sufficiency have not lowered their guards. It therefore is of compelling necessity to take these aspect of production seriously as it has become clear that materials management is a major pivot in the well being of this all important industry.

Moreso, that we as a nation are just taking the first infant steps in the long journey of utilizing materials in manufacturing, not only in this industry but in most other manufacturing industries. In these first infant steps, it is best to begin to address associated limitations.

It is expected that Livestock Feeds Plc would allow the influence and experience of good management culture to be of benefit to aspiring, and others already in the business, moreso to academics.

1.5 SCOPE OF THE STUDY

Purchasing, a major activity of materials management is a very important phase in the control of the flow of materials into the manufacturing plants from its supply source.[5]

The classes of industrial materials controlled are: raw materials, purchased parts, sub-assemblies, finished products, supplies and equipment

items, etc. Purchasing decisions are influenced by business policy decisions taken usually at top management levels.[6]

Livestock Feeds Plc by virtue of its business as an agro-based industry, manufactures animal feeds. It becomes imperative therefore that the class of industrial materials needed would basically be raw materials.

The scope of this research in consequence would be restricted primarily to procedures surrounding procurement of raw materials, its inventory and storage.

The research is also designed to accommodate the warehousing of materials.

1.6 LIMITATIONS OF STUDY

The dearth of information especially of secondary data type for basic facts and policy statements accounts for much of the data being through oral and personal interviews.

1.7 RESEARCH METHOD

For the avoidance of complexities for very important and relevant information only, direct or primary data collection is used through personal interview and questionnaire methods. Data are presented in simple percentages and in tabular forms for analysis.

1.8 DEFINITION OF TERMS

Terms that appear frequently in this research work are here defined for flow of comprehension.

Material - is any commodity used directly or indirectly in producing a product or service (such as raw materials, component parts and sub-assemblies).

Materials Management - can be defined as a confederacy of traditional material activities bound by a common idea - the idea of an integrated management approach to planning, acquisition, conversion, flow, and distribution of production materials from the raw materials state to the finished - product state.

Concept - of materials as is implied here would refer as a function to obtain the lowest overall cost of materials to the purchasing firm.

Stock Control - is the operation of continuous arrangement of receipts and issues to ensure that stock balances are adequate to support the forecast rate of consumption. It also involves the related process of provisioning, which is the means whereby instructions are given for the placement of orders.

Inventory - defined as the aggregate of those items of tangible property which are:

a) held for sale in the ordinary cause of business,
b) in process of production for such sale,
c) are to be currently consumed in the production of goods or services to be available for sale.

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CHAPTER TWO

2.1 LITERATURE REVIEW

> "Literature on any subject is reviewed using past information with the belief that the past will help in explaining the present and provides a guide to the future."[1]

The words of James S. Wright appears to have said it all regarding the essence of this chapter. It is necessary to review previous studies on this concept, this provides for not only the basic understanding of the concept but also as a compass for genuine sense of direction.

In this chapter therefore related literature are reviewed on this concept especially with relevance to the materials management aspect of the process of manufacture of industrial products.

2.2 MATERIALS MANAGEMENT

As practiced in business today can be defined as a confederacy of traditional materials activities bound by a common idea - the idea of an integrated management approach to planning, acquisition, conversion, flow and distribution of production materials from the raw - material state to the finished product state.[2]

Brand, refers to this new management function as one which begins with the selection of suppliers and continuing right through until the purchased material is delivered to its point of use.[3]

Dean Ammer refers to this as responsibility for "adding value by distribution to purchases of direct material (i.e material used in the product) up to the point where manufacturing converts it into a product and thereby adds value by manufacture. For convenience, the materials manager may also provide warehousing, traffic, scheduling, trucking and other services for both manufacturing and marketing."[4]

It is noted that authors differ in the definition of materials management essentially only in the use of language and style. It is apparent that content basically is the same.

In a purchasing context, materials usually refers to supplies bought from outside, which a manufacturing business transforms into outputs of finished products. In this sense the final product of one company may be the material input of others. Production in every sector of the industrial economy relies directly or indirectly on inputs of raw materials produced in the extractive industries or agriculture and subsequently, partially processed for use in the production of goods and services.[5]

Management at all levels finds itself embroiled in problems which take root in materials. Many business failures are the direct outgrowth of excessive inventories. Too much materials causes idle funds, storage and obsolence problems and marketing headaches. On the other hand, if materials are not adequate to meet the needs of the operating and distribution segments of the enterprise, efficiency suffers and costs skyrocket. Manufacturing delays are frequent and broken delivery promises inevitable. Material management then, is a continual struggle between too much and too little, too soon and too late.

In some companies, materials represent a large part of the sales receipt, affording management opportunity for substantial savings if it wrings cash from materials cost.

Materials for which supply and demand occasionally get out of balance and those subject periodically to rising and falling prices are given the constant scrutiny required of any fluctuating market situation. Never ending search is conducted for better and cheaper material substitutes. Material buffers are used to cushion the production process from the uncertainty of material deliveries, to decouple progressive stages of product development from disruptions in prior stages, and to provide a steady supply of finished output for the unsteady demand of customers.[6]

Careful controls are placed on the size of inventories so that the enterprise can be responsive to changes in product and processes.

Also, the importance of low inventories to the maintenance of operating flexibility and cash liquidity in our rapidly changing economic world is not to be overlooked.

Costs of storing, packaging and transporting materials are such that management is always on the look out for more efficient methods in each of these fields.

In summary, material management is concerned with controlling the kind, amount, location, movement and timing of the various commodities used in and produced by the industrial enterprise. It starts as an outgrowth of production planning with the "explosion" of the product into materials and parts and with the determination of supply and expendable equipment items required in the manufacturing process. Thereafter it is a partner of production control becoming the "logistics" branch of that function. Its responsibilities end as the correct finished product in proper condition and quantity passes to the consumer.[7]

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2.2.1 **Role:**

The role that materials management plays within an organization depends significantly upon the business sector in which the organization exists. A basic difference exists between manufacturing and retail business and those organizations totally or significantly influenced by the government or service organizations such as hospitals.

Materials management is the department responsible for acquiring material, controlling its use in the organization and then distributing the results of the organizations effort where value added is involved. The material department generally includes procurement or purchasing functions, an inventory control function and or production control function if required, and a warehousing, distribution or traffic function if required.

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2.2.2 **Scope:**

In a manufacturing organization, the scope of the materials department is to prepare and control the manufacturing plan, assure that material is available for manufacture and assure that stocking and distribution of raw material and finished product takes place as required.

The function of production and inventory control in the materials department is to prepare a plan and provide the necessary controls to assure that others are able to execute the plan to completion.

The purchasing department supports this plan by procuring the necessary materials or services. Support is also provided by the traffic, receiving and shipping departments in assuring that purchased materials are properly received and distributed internally and that finished product is properly distributed to the market place.[8]

2.2.3 **Materials Planning:**

As it concerns this study and thus bringing the point nearer home, agro-millers simply are out of business without planning. This business is doubly dependant on uncertainties and unforeseens. Raw materials for this industry depends largely on rainfall, which in the least is unpredictable. The industry experiences price fluctuations, storage problems (damage by insects, leakages, etc), unmet promises of raw material deliveries and late deliveries. These areas are the vertebra of the industry and the more compelling reason planning must play a very significant role and must be the beginning of a reasonable process of thought in the organization.

Procurement executives apply the basic concept of planning, formally and informally in making a multitude of daily business decisions. In addition, most procurement executives use a number of specific planning techniques as they look beyond the daily decision making activities. Three broad planning techniques that can exert far reaching influence on the effectiveness of the

management of materials are: budgeting, purchasing research, and critical path scheduling and analysis.

1. A budget is a device for both planning and controlling the activities within a business for a given period of time. The planning phase results in the preparation of the budget, which then becomes an instrument for keeping expenditures within planned limits. In order to arrive at the overall total budget, each unit of the business prepares its particular budget by requesting its own subdivisions to prepare their budgets. Thus each level plans its budget and the successively higher levels incorporate the budgetary plans of those below. Finally the overall budgetary plan can be completed.

   Budgeting has long been recognized as a useful tool in managerial planning and control. A company budget is a device which balances the planned allocation of expenses with forecasted income during a specified period of time.

   Budget planning is most frequently done annually, with the budget broken down to cover operations on a monthly basis. When a materials budget is to be expressed in monetary terms, the purchasing manager is normally called upon to supply the budget department with two types of information:

   a) His estimates of materials prices during the coming year.
   b) His plan for the specific timing of purchases.

   This information gives the finance department the necessary data to draw up a realistic schedule of cash requirements for each operating period.

   When a materials budget is to be used for measuring and controlling purchasing performance, it must be expressed monetary terms. When so expressed, control data from periodic accounting reports can pinpoint variance from budgeted volume or budgeted price standards.

Even when the materials budget is expressed only in terms of units, it still provides positive benefits in planning purchasing activities. Precise knowledge of material requirements over an extended period of time permits advantageous use of contract purchasing and blanket - order purchasing techniques.

Quantity discounts can also be utilized more effectively. Surventory investment and its associated risks can likewise be reduced by advanced planning of requirements.

Material budgets provide maximum purchasing lead time. This benefits permits the careful selection of qualified suppliers, negotiation without the pressure of deadlines and a better chance to obtain maximum value for each Naira spent.

The second aspect of planning techniques for procurement is the purchasing research.

In planning stages, most purchasing actions require certain research investigation. Because he is confronted with numerous unknown facts, an industrial materials buyer cannot make an enlightened purchasing decision until these unknown areas are explored. Many companies have consequently discovered that the mounting pressure of daily buying activities tends to require an increasing amount of the individual buyer's time, leaving him without adequate time to conduct all the necessary pre-purchase investigation. Instead of simply adding more buyers to the department, some company have attacked the problem by creating a staff of purchasing research specialists to assist the buyers. this type of approach it is claimed solves the problem more efficiently. It ensures adequate time for thorough research and it eliminates duplications of research effort. The approach effectively centralizes the required indepth research activities within a small group of highly skilled specialists.

A formal purchasing research programme serves as a procurement planning instrument. The general objective of such a programme is to undertake indepth investigations which improve total procurement performance and increases the procurement functions contributions to company profits. An American purchasing research executive classified purchasing research staff functions into three primary jobs and one special project area. These are as follows:

a) Procurement Planning: This involves a study of the firms short and long range material requirements and a determination of acceptable cost objectives. Using these data as a base, further studies are undertaken by research specialists to discover potential suppliers and to examine in depth the advantages and disadvantages of developing relationship with them. Procurement planning also includes the responsibility for developing cost estimates and other data required in planning for specific purchasing negotiations.

b) Research on purchased materials: Involves both economic and technical investigations. In the economic area forecasts of general economic conditions are made and studies of specific industries and commodity markets are undertaken. Price trends and technological developments in industries producing interchangeable materials are studied in an attempt to forecast future conditions in competitive industries. These forecasted conditions are then related to the firms future needs. This type of analysis permits an assessment of cement purchasing policy and points up the possible need for changes which may require careful advance planning.

c) Research on the purchasing systems: Involves studies of administration problems. Specific activities include the analysis of such things as policies, procedures reports, organization structure, job specifications, wage payment plans and so on. Staff

studies of this type materially assist the top purchasing executives in developing an effective operation.

d) Special projects is often a fourth area of formal purchasing research activity. Staff assistance is frequently sought to study a multitude of special problems that arise in areas such as inventory management, traffic management, quality control and vendor relations for example.

The specific investigations conducted by a formal purchasing research group naturally vary widely among companies, depending upon each firms unique needs. The nature of the investigations may also vary due to the different ways in which various companies are organized to perform other related staff functions. The wide range of activities encompassed by the formal purchasing research concept may well overlap the activities of other existing staff groups in some companies.

For example some firms retain a staff of economists and statistician at the corporate level to conduct economic analysis for top management. In such cases, the purchasing research group would normally work with this group in obtaining the data necessary for purchasing planning. A similar co-operating pattern of operation would be followed if the firm had a staff of systems analysis functioning at the corporate level.

If the value analysis programme were centred in the purchasing department, purchasing research would normally assume responsibility for administering the programme.

The formal purchasing research concept recognizes the need for generating and analyzing a sizeable amount of detailed data when planning procurement operations. If the required data are available or can be developed effectively in other existing departments, the job of the purchasing research group is to obtain such information and organize it

for use in purchasing. If the information is nowhere available within the firm, it is the purchasing research staff job to generate it.

In summary, the purchasing research staff is charged with the responsibility of obtaining, organizing and interpreting data which facilitate procurement planning and hence improve the total materials management operation.

3. The third planning technique for procurement is the critical path scheduling and analysis. This is the basic technique used for planning and controlling complex projects composed of a large number of interrelated and interdependent activities. A procurement executive should understand the fundamentals of this technique for two reasons. First, his firm may at some time become a subcontractor on a job which requires the use of critical path scheduling. In some event, purchasing activities may be subjected to this type of scheduling and control procedure. Second, an increasing number of purchasing departments are finding the technique useful in scheduling and controlling the efforts of certain vendors. This technique is particularly applicable in subcontracting, project buying, construction contracts and development work.

Critical path scheduling begins with the identification and listing of all significant activities involved in the project to be planned and controlled. When the list of activities is complete, the sequential relationship between all activities is determined by constructing an activity network. The network shows the time required to complete each activity and it explicitly indicates the relationship of each activity to all other activities. Finally it establishes the sequence in which activities should be scheduled for efficient completion of the total project.

Some activities can be parallel, allowing many different jobs to be carried on simultaneously; other activities must be placed in series to allow step-by-step completion of interrelated tasks.

Construction of the network permits determination of a projects `critical path' - the chain of activities requiring the most time for completion from start to finish of the project. Once the critical path is determined, the planner can identify precisely and completely the activities that require close control. He can also determine which activities permit the greatest latitude in scheduling and can if necessary, most easily relinquish manpower to more urgent jobs. An activity network also highlight the activities that can be expedited most effectively in case a stepped up pace becomes necessary.

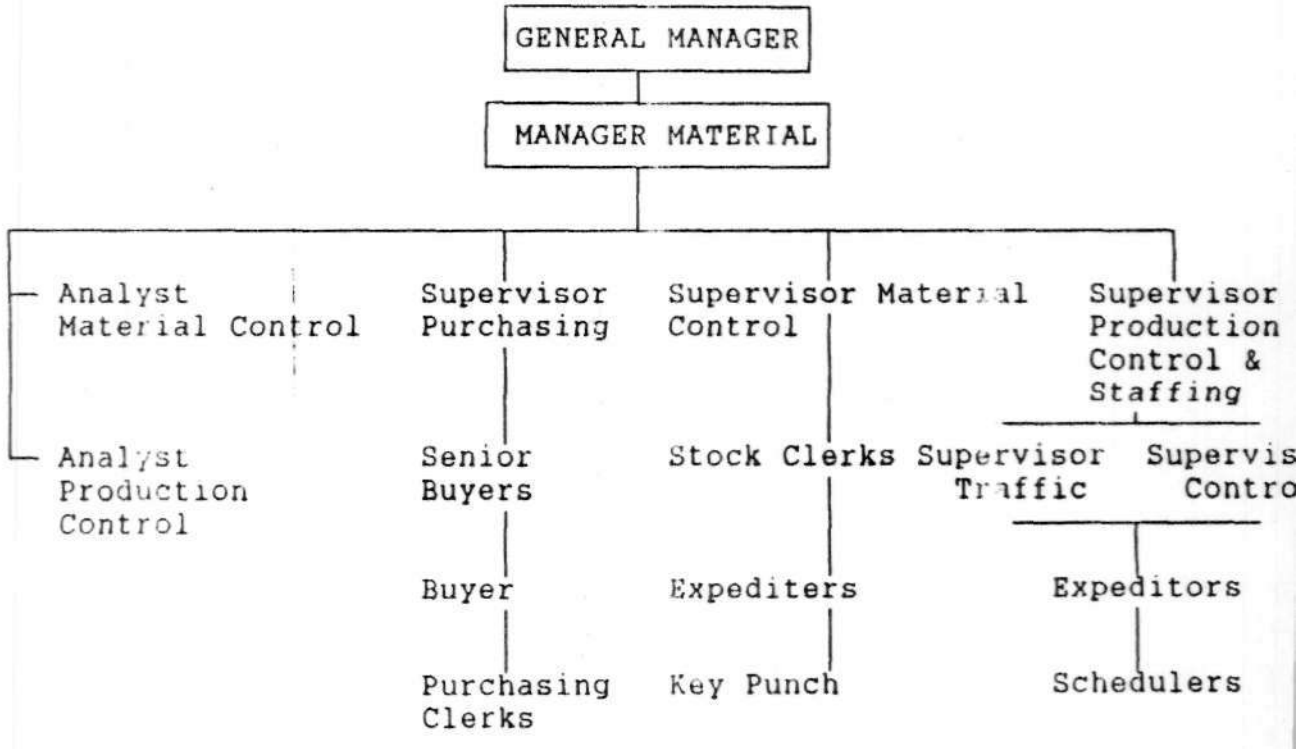
In summary therefore, a plan is predetermined course of action designed to facilitate accomplishment of a particular task. Consequently planning focuses on the future. It is based on certain premise, some factual and others forecasted.

Procurement planning normally takes place within the framework of the rational decision making process.

Among the technique of procurement planning i.e budgeting, purchasing research, and Critical Path Analysis. Each of these techniques finds various applications in the planning activities conducted in different companies. A simple materials budget expressed in terms of units provides significant benefits in planning management activities. The budget allows reduction of inventory levels, permits use of efficient contract purchasing techniques and facilitate careful vendor selection and negotiation, if a materials budget is expressed in monetary terms it can be included as a cost control device in the total accounting control systems.

The basic objective of a formal research programme is to develop and analyse data which can be used to increase procurement profit contribution. Critical path techniques can provide virtually complete management control data for a project, with respect to both time and cost

Figure 2.1 A MATERIAL DEPARTMENT ORGANISATIONAL CHART



Source: Paul Maranaka: Materials Management in Management Handb
Page. 590

factors. To determine its applicability, the cost of control must be weighed against its benefits. All planning techniques are subject to the same limitation - they can be no more accurate than data on which they are based. A manager must always keep this fact clearly in mind when assessing the value of using a particular technique in this operation. Most planning techniques posses one simple but very important attribute: they allow management to do more thorough and more precise thinking about future needs and conditions than would otherwise be done.[9]

2.3 SELECTED RELATED CASES

The following cases have been deliberately selected to reflect major activities of the concept. They discuss experiences of the concept by other organizations in materials management, purchasing practices and inventory variously.

2.3.1 **CASE I**: Materials Management as a Profit Centre (The Manager of materials should be expected to take the same entrepreneurial approach that most other company executives do)

Many executives in manufacturing companies regard themselves as manufacturers or marketers of certain products and services. But very few executives think of themselves as materials managers. Even fewer think of the possibility that as high a return could be earned on the company's investment in materials as on assets tied up in marketing or manufacturing. This oversight is a serious one. Its correction could lead to significant opportunities in many manufacturing concerns.

Nevertheless, materials management does not possess the enormous potentials of manufacturing and marketing; usually no more than 10 percent of a company's assets are associated with materials (as compared with 60 to 70 percent in manufacturing and up to 20 percent in finished goods inventories

associated with marketing). Nevertheless, it is an important function in the typical corporation, and its improvement could be a significant factor indeed in the struggle for improved earnings. It will not be surprising, therefore, if this function receives far more attention in the next few years than it has received in the past.

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Current Approaches:

It is symptomatic of the current low status of materials management that few top executives have many convictions about it. Among those who do posses such convictions, there is no agreement on how the function ought to be viewed and organized. Some people look on it as a sort of regulator of the flow of materials from suppliers through the various manufacturing departments to customers. In such an organization the materials manager is responsible not only for raw materials inventories but also for finished goods and even work-in-process stocks. Under his jurisdiction are the purchasing, production and inventory control and traffic departments, as well as such secondary activities as shipping, receiving, nonproduction stores, and materials handling. In this structure, the material manager not only is responsible for purchased materials but also is directly involved in manufacturing and marketing management. Working with marketing, he schedules manufacturing's output, stores and ships activities outside of sales and marketing.

Others (including myself) take a more limited view of the materials management process. They believe that the materials manager's line of responsibilities begins with selection of suppliers and ends when purchased material is delivered to its point of use. Thus, he is responsible for adding value by distribution to purchases of direct material (i.e., material used in the product) up to the point where manufacturing converts it into a product and thereby adds value by manufacture. With direct materials (i.e., those used in making the product but not incorporated in it) he performs essentially the same function as a captive industrial distributor. He buys supplies stores them until they are, in effect, repurchased by their ultimate users.

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Leading Advantages:

Most companies that adopt the materials management form of organization simply appoint a materials manager and regroup purchasing, production control, and traffic functions under him. This change is easy to make and yields substantial benefits.

1. Forced cooperation between purchasing and production control: In the *traditional organization, purchasing is responsible* for selecting suppliers, and production control is responsible for obtaining purchased materials. If materials are not delivered on time, production control is supposed to do something about it. But, of course, so is purchasing, which picked the supplier who failed.

   Thus, there is built-in conflict of authority between purchasing and production control in the conventional organization. The two departments rarely work well together and conflicts are frequent. For example, purchasing and production control work well with one another only if they think of themselves as partners seeking common objectives. They perform separate phases of the same job, making decisions that can most conveniently be arrived at by a single person. In some companies conflicts can be resolved only by the chief executive-but, obviously, he is occupied with many other problems. Cooperation is much more probable in an organization where a materials manager is concerned with optimizing conflicting production control and purchasing objectives.

2. Tighter inventory control: Both purchasing and production control have a built-in bias toward high inventory in the traditional organization. And if management complains, each can usually fix the blame on the other. Production control is directly responsible for inventory control, but every decision to buy which purchasing makes is also an inventory decision.

   Purchasing is responsible for buying at the lowest price. Since the average unit price usually varies inversely with lot size, purchasing has

a built-in incentive to buy in large quantities even though this boosts the average inventory level. While production control may, in theory, be responsible for maximizing inventory turnover, it too has a vested interest in a large inventory because it is responsible for making certain that manufacturing is supplied with material. When the production control manager is subordinate to the manufacturing department rather than to a materials department, he can easily be overly conscientious in attempting to assure a steady supply of material. Slow turnover is the inevitable price that is paid for ready availability.

The author of a study of materials management found that companies which had adopted this form of organization achieved "forced co-ordination between purchasing and production and inventory with the result that one department cannot make itself look good at the expense of another, nor `pass the buck'. As a result, all the companies that he studied agreed that materials management resulted in "reduced lead time for purchased parts, fewer parts shortages on the line, more realistic buying policies, and better finished product delivery performance." He also reported that "companies with true materials management agree almost unanimously that it cuts inventory 20 percent to 40 percent and increase inventory turnover (T/O) by two turns per year "

3. Efficiency in coordination: Companies adopting the materials management concept enjoy lower purchase costs as a result of annual purchase contracts, material substitution, and value analysis.
Under the traditional approach to organization, production control and purchasing personnel must spend thousands of hours per year communicating with one another to assure good performance. However, so much coordination is not necessary if there is a group of people for each product who are responsible for all buying, inventory, and expediting activity; such groups are easily formed under the materials management approach.

Reasons for Rejection:

If materials management is so advantageous, why don't more companies adopt it?

One reason is simply resistance to change. In every reorganization there are both "winners" and "losers." The executive who is promoted to materials manager is naturally delighted with the change, but he may find himself saddled with disgruntled subordinates who are one level further down in the organization than they used to be.

When change is made, purchasing moves down the ladder one step. Typically, the purchasing manager reports to the materials manager who, in turn, reports to the purchasing manager's old boss.

As a practical matter, the easiest decision to make is not to upset the applicant until retirements or transfers permit the organizational changes to be made painlessly.

A second reason is that top management fails to recognize that materials management is a money making activity. Materials management is seen as a service activity. It does not contribute directly to the objectives of the business but helps the real contributors (manufacturing, marketing, and sometimes, engineering) do a better job. Significantly, the purchasing, production control, and traffic functions are controlled as cost centres. They are measured by the cost of the service they perform rather than by their contribution to profit.

Why Not a Profit Centre?:

Top management should be only secondarily interested in the cost of operating its materials activities, its primary concern should be contribution to profit. The integrated materials management activity need no longer be treated as a cost centre whose contribution is measured (in part, at least) by whether or not it keeps other departments happy.

The integrated materials management organization satisfies three out of four basic criteria for a profit centre-it employs capital; it incurs costs; and it adds value by distribution. Just one basic criterion is missing in the typical company - pricing. However, this lack is not terribly serious. Similarly, it is possible for a materials management activity to behave much like an industrial distributor, adding value by distribution and charging a price that gives it a reasonable return on the capital it employs.

Responsibility for Return on Investment (ROI):

Of course, no company can operate without using some capital in materials management and incurring some costs in the process. If an economically worthwhile service is performed, then that capital is entitled to a return. When the materials department transfers material to manufacturing at a price which is normally greater than its total allocated costs, it is functioning as a profit centre. For example, suppose that a materials manager is responsible for the following assets:

Raw materials inventory	-	1,000,000
Office equipment and floor space	-	200,000
Storage areas and related equipment	-	300,000
Total capital employed		1,500,000

If his company earns a 20 percent return on capital before taxes, he might conclude that he should be earning this return on the capital he employs in materials management. This would mean he should be gaining a 300,000 profit (before taxes).

End Note:

It is seen in this article how the author argues that materials management offer an important opportunity for many companies, the profit centre approach in particular could make this function an important contributor to corporate earning. During the stages covered by materials management, value by

distribution is added and capital is tied up. In principle therefore, the author says, materials managers should charge a price that gives them a reasonable return on the capital employed.[10]

2.3.2 **CASE II**: Purchasing Procedures of Roberts Fibre Products Company.

The Roberts Fibre Products Company operates 20 plants throughout the Midwest. The company manufactures fiberboard and, in some plant locations, also manufactures corrugated papers containers. Management is decentralized, each plant being under the control of a vice-president in charge of manufacturing. Mr. Ward, Purchasing Agent for the plant in Capitil City, reports directly to the Vice-President in charge of manufacturing.

Mr. Ward's most important responsibility is the purchase of straw and wastepaper, the two principal raw materials used by the plant. In purchasing these commodities he is guided largely by market prices as published in trade papers in the two fields. Mr. Ward also processes all purchase requisitions involving expenditures in excess of 25.00.

Reporting to Mr. Ward are Mr. Bond, Inventory Control Clerk, and four clerical employees. Mr. Bond is authorized to purchase items not exceeding the 25.00. limitation. It is also his responsibility to requisition materials and parts on which he maintains inventory control cards whenever he notes that the supply of an item is too low. It is left to his discretion to determine the reorder point.

As insurance against plant shutdowns and slowdowns in the plant the company maintains an inventory of replacement parts and fittings for its machinery and equipment. Each replacement part is tagged as it is received with such information as the part number and the supplier's identification. When a part is issued from stock, Mr. Bond is expected to make an entry on the tag, which is removed, noting the date and the equipment for which it is being used. He is then required to forward the tag, along with a requisition for replacement, to the purchasing agent.

Stock items may be requisitioned by any employee, and the requisition is then sent to the purchasing agent for his processing. Requisitions involving purchases in excess of 1000 are treated as capital expenditures. Requisitions for capital expenditures can be initiated only by the purchasing agent, the plant manager, or the plant superintendent and must be approved by the Vice-President. All such requisitions must be accompanied by a form showing the estimated costs, the reasons for the expenditures, the annual savings anticipated, and the proposed disposition of any old machinery or equipment.

A recent purchase of forklift trucks illustrates the procedure of the purchasing agent, Mr. Ward, with respect to the selection of a supplier for such items. The plant superintendent initiated the approved requisition. Mr. Ward then visited several fiberboard plants to determine the type of trucks they were using. He next arranged for three suppliers to send in demonstrator models so that his workers could try them. His choice of supplier was based largely on the preference expressed by the workers who used the forklift trucks.

Mr. Ward says that he likes to keep paper work to a minimum because of the small size of the purchasing department. The two most frequently used forms are the purchase order requisition and the purchase order form. The requisition form has space for identification of the item, quantity desired, the department initiating the requisition, the purpose for which the item will be used, and the date by which the item is required. The individual initiating the requisition fills in all the information. There is also space on the requisition for the purchasing agent to fill in the name of the supplier, the purchase order number, the price, terms of sale, and shipping information.

The purchase order is typed in triplicate by one of the clerical employees from the requisition form. One copy is sent to the supplier, one to the receiving department, and one is kept for the purchasing department files.

A postcard is used when follow-up of an order is indicated. The printed card contains a simple request for information as to the expected shipment date of an order which is identified by purchase order number.

End Note:

Purchasing procedures in this company virtually answers to all protocols in theory, such behaviours as decentralized management (considering the large number of the company's plants this approach appears reasonable especially respecting individual indulgent localities), use of publicized market prices in tarde papers, an indication of stability of market prices, processing of purchasing requisitions following all normal norms, tagging of materials, maintaining good inventories and immediate replacement of issued stock appear as textbook cases.

The company's method of selecting suppliers is a collective effort, everyone contributing in decisions to buy and everyone positioned to accept fault where this arises. Work satisfaction is elaborated.[11]

2.3.3 **CASE III**: Inventory Control for a Stock Bag Manufacturer (MERRIWELL BAG COMPANY)

One of the major problems Merriwell Bag Company faces is procuring an adequate supply of raw materials (papers) and maintaining an acceptable level of finished goods inventory in order to meet both expected and unexpected demand for stock bags.

Prior to the shortage of pulp and paper in 1973, Merriwell purchased approximately 95 percent of the paper from National Paper Company of Seattle, Washington. The remaining sources of paper were firms in various Scandinavian countries. Because of the uncertain delivery dates of imported paper and the dwindling price advantage of foreign-produced goods, Merriwell decided to purchase only domestically produced paper. Also, because of the increasing difficulty in getting enough paper of different weights and colours,

Merriwell began buying raw materials from three suppliers - Rags dale paper Company, Savannah Paper Company, and West Coast Paper and Products, Inc.

In the latter part of 1973, the shortage of paper became critical. In August of that year, management decided to reduce its bag offerings from five colours (green, gray, blue, natural, and white) to two colours (natural and white). In addition, orders for 25-Kg weight paper were discontinued, thereby restricting the company's offerings to 30-and 40-Kg weight bags. Because Merriwell's competitors were experiencing identical problems, Merriwell did not suffer a loss of sales as a result of its restricted offerings. In fact, Merriwell was forced to reject new customers during this time because of the shortage of paper. (For the first time in the company's history, sources of raw material supplies became more critical than customers). All attempts were made, however, to supply established customers with the quantity of bags ordered, but often in different colours and weights.

During the time, Merriwell expanded its storage capacity for both raw materials (paper) and finished goods inventory (printed and plain bags). Total storage capacity for raw materials following the expansion amounted to one million Kg of paper, which constituted approximately a two-month supply. Physical facilities for finished goods inventory were doubled. (A large amount of space was required for finished goods inventory because most of Merriwell's customers - small chain stores - do not have storage facilities and because the storage order per customer is small (approximately ten bales).

Prices and quantity of finished goods are basically the same among paper bag manufacturers throughout the country. Competition, then, is in the area of service to customers. Essentially, the focal point of customer service is the delivery of bags in the right quantity at the right time. To make certain that it is able to fill the orders of customers on schedule. Merriwell attempts to keep its raw material inventory at 100 percent of capacity at all times. (With an average price per Kg of sixteen Naira, Merriwell's investment in raw materials inventory amounts to approximately 160,000).

Not only is Merriwell concerned with maintaining an adequate supply of paper on hand, it is equally concerned with storing correct amounts of different weight and colour paper. Delivery of raw materials, therefore, is particularly critical to Merriwell's operations. Since delivery dates are not guaranteed by suppliers of paper who ship by rail, Merriwell uses its own permit. (Usually, Merriwell's truck departs the Seattle plant filled with bags and returns with paper). If Merriwell chooses to allow the suppliers to ship the paper (by either rail or truck), the delivery date is approximately one month from date of order.

Nearly 85 percent of all raw materials purchased is shipped by truck. However, West Coast Paper and Products, Inc., one of Merriwell's suppliers, frequently ships its supplies by rail. To facilitate such delivery, Merriwell's expansion programme included a rail spur adjacent to its warehouse.

Typical, regular customers request Merriwell to keep on hand a specified number of bales (or Kg) of paper against which they will make purchases in the form of finished goods. Hank's Dollar Store, for example, has requested Merriwell to keep 30,000 Kg of 30 weight, natural colour paper on hand at all times, thereby assuring Hank's of a supply of paper bags in the event of paper shortage.

In addition to the inventory kept on hand for regular customers, Merriwell buys paper to satisfy the needs of new and irregular customers. Approximately 80 percent of its annual sales are to repeat (regular) customers.

Merriwell uses a simple Cardex system of inventory control. For each regular customer, a different card is maintained for each colour, weight, and size bag ordered. Each card shows the quantity and date of raw material purchases and each reduction in inventory as a result of filling orders. This system allows Merriwell to know the quantities of various colours and weights of paper it has in stock for all customers at any given time. Whenever an order is filled, Merriwell systematically submits a purchase requisition to one of its suppliers in order to bring the inventory back up to the desired level.

Physical inventory is taken quarterly. Comparisons are then made to see if the physical inventory agrees with the Cardex balances.[12]

End Note:

Shortage of pulp encouraged a multiple supplier system as source of raw materials. It is apparent that suppliers are more valuable at this time and this appears appropriate. There are surplus customers since the problem is that of a general depression.

Merriwell goes to great lengths to satisfy both customers and suppliers. This seems rather at high costs and risk.

2.4 PRACTICE OF PURCHASING MANAGEMENT

> "Buying well is as important as selling well, the most capable sales effort cannot compensate for poor purchasing."[13]

The buying of industrial goods was originally done at a very low level within the corporation, it was infact a clerical task. The heart of the matter then was the negotiation, and agreement as price and delivery. This was an important responsibility entrusted only to senior officers.

Later, about the beginning of the 20th Century, the specialist in buying appeared. He added the perspective of planning and policy, organized the buying function and added follow up inspection and co-ordination with other departments, this concept was now called purchasing and was headed by a purchasing officer.[14]

The purchasing function of the enterprise is the liaison agency which operates between the plant organization and the outside vendors on all matters of procurement. The importance of the function to the successful operation of the enterprise ranges from minor, when raw materials and purchased parts represent a low percentage of the value of goods sold, to major, when purchases comprise a high percentage of the sales.[15]

The concept of a purchase denotes the action to obtain something by payment of some consideration of value of medium of exchange.[16]

Purchasing Objectives:

Purchasing objectives are commonly expressed as "buying the right items in the right quantity, at the right price for delivery at the right place and time."

This simple definition is used for identifying the major dimensions of the buyers problems:

1. Product specifications and quality.
2. The quantity to purchase.
3. The price.
4. Delivery and time.[17]

Activities of the purchasing department: They are expected to:

1. Know and maintain records showing possible materials and substitutes, sources of supply, prices and quantities available.
2. Review specifications for possible simplification and standardization of materials or for unreasonable requirements.
3. Negotiate with vendors.
4. Accumulate and analyse quotations.
5. Place purchase orders with vendors.
6. Follow up purchase orders for delivery as specified.
7. Audit invoices to check compliance with agreed terms.
8. Maintain records of all purchases.
9. Co-ordinate with other departments on all matters pertaining to procurement.[18]

Purchasing Ethics:

Because of the nature of the work, purchasing personnel are often confronted with questions of ethics. Buying decisions must stand scrutiny especially where price discriminations may be an issue or where other legal

technicalities prevail. And because the behaviour of purchasing people is always subject to challenge, it should be above suspicion. High personal integrity and moral conviction are prerequisites in dealing with ethical buying questions.

The problem areas involving ethics occurs when side inducements are offered the buyer. Vendor influence such as gifts or entertainment is discouraged and frequently forbidden by company policy. Bribery or kickback, of very common incidents in Nigeria, is not condoned by any responsible company.

Unquestionably, the best answer for any one involved in the buying profession is to stay away from situations judged by others to be an influence in reaching buying decisions. All business relationship should be conducted in such a manner that no one has an opportunity to assume improper influence.[19]

2.4.1 SELECTION OF SOURCES OF SUPPLY

If there is one activity which, more than any other, epitomizes the purchasing process, it is the selection of sources of supply. All of the other activities of purchasing come to focus and function in the crucial decision as to whom shall be selected as the supplier of goods and services. The selection process includes the continuing surveillance of the relationship between the supplier and the buyer to maintain mutually satisfactory conditions of co-operation and interest.

In selecting, a source of supply the purchasing officer makes decisions that influence not only the firm's economic success but the livelihood of the supplier and the efficiency of the entire economy.

The vitality of the entire economy is involved because proper functioning of our free enterprise economy depends on sound product choices.

The efficiency exhibited in vendor selection stimulates the competition, which results in the development of better products and services for the economy.

Procedure:

The procedure of source selection involves the preparation of an exhaustive list of suppliers and the successive elimination from this list on various grounds until the number has been reduced to the one or few to be favoured with the business. The procedure is therefore one of searching and sorting - searching for all likely suppliers and then sorting for the one or ones with whom to do business.

The first step in the process of selecting a supplier is to prepare a complete list of prospective suppliers. The thoroughness with which the list is prepared depends on the importance of the business to be transacted.

Quite naturally, the purchasing department will not make an exhaustive search for suppliers unless the value of the orders to be placed warrants the cost. The following discussion should therefore be read with the realization that very seldom would any buyer consult all of the named sources.

However, in any given case, any or another of the sources might prove helpful. The list below gives the more important sources from which a buyer may build his list of prospective suppliers, i.e experience, salesman interviews, catalogs, trade directives, trade journals, associates, trade shows and conventions, requests for quotations.

Each of these sources will now be evaluated as a source of supplier information.

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Experience:

Past experience with suppliers is perhaps the most available and widely used source of information about prospective suppliers. Since so much purchasing is repetitive in nature, a wealth of information is available to the buyer on the basis of which the performance of suppliers can be judged.

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When a new item is under consideration, a buyer should, therefore, first inquire whether any of the present or past suppliers are likely prospects.

Some buyers rely on their memory for facts about their relationships with suppliers. Since human memory is short-lived, uncertain and sometimes biased, it is much more satisfactory to have records available for reference on these matters. Most purchasing departments maintain vendor files that contain the names and addresses of all vendors with whom the company has dealt throughout its history as well as a notation of the classes of goods that have been purchased from each vendor. Frequently, the files are set up to include additional data on such things as the reliability of the supplier in meeting committement dates, willingness to handle emergency and such orders, and defect or reject ratios on purchases received in the past. Companies with computers frequently record experience with vendors in the computers memory bank which can reproduce this information in complete detail upon demand.

Salesman Interviews:

The sales people who call on purchasing agents are extremely valuable sources of information about suppliers for particular products. In most cases their information relates to their own companies and their own products, but often a salesman is also able to tell the buyer about a source of supply for an item his company does not make.

In an attempt to provide visiting salesmen with the greatest possible amount of information about their requirements, many firms display their finished products and purchased components in reception or special display rooms. The salesman is then able to determine items he can supply and provide technical assistance. Supplementary information relating to standards of quality expected are also provided. The more a salesman knows of his prospective buyers needs, the better are his chances of being a good source of supply.

Because salesmen are such valuable sources of information, many buyers make it a practice to see every salesman who calls, if it is physically possible to do so.

A buyer never knows when a salesman may have either a product or information about a product that will prove beneficial to the buyers company. Many buyers jot down information that may later prove valuable after each salesman has been interviewed and maintain a file of such data for each salesman who calls and for each supplying company.

However a buyer should not rely solely on representations of the salesmen in evaluating a supplier where the amount of the purchase transaction is especially large.

Catalogs: The catalogs published by vendors in which they list the various items they make for sales constitute a valuable source of information about possible suppliers. For standard production items, such catalogs frequently are one of the most effective and efficient sources of potential suppliers. Studies have shown that almost all buyers make some use of their catalogs and a substantial percentage of buyers use them extensively.

Trade Directories: A trade directory is a publication that lists and classifies suppliers according to the products they make. Frequently it gives a minimum amount of information on such matters as the financial status of the companies, their method of distribution, and location of sales offices.

Some trade directories are specialized by industries, the better known directories, however cover all industries. In some areas it is possible to make use of directories prepared by chambers of commerce, such directories frequently list small local suppliers who do not have the resources to make themselves known through ordinary channels.

Either the specialized or general trade directories contain enough information to enable a purchasing agent to prepare a first tentative list of possible suppliers. The specialized directory is likely to contain somewhat more pertinent information than a general directory, but which ever directory is used, the purchasing agent will have to go to other sources to be sure that the companies whose names she has are worth considering as suppliers.

Trade Journals: or business magazines are other very fruitful sources of supplier names. There are thousands of such publications, a company's choice must be limited to those fields in which it has primary interest.

As sources of information on suppliers, the value of trade journals depends on the regularity and thoroughness with which they are read.

In general they are not useful as directories to be consulted as the need arises. Rather, they are general sources of information on new products, developments, and methods that are described in the editorial and advertising pages.

Associates: Many a buyer has found a truly valuable reservoir of information on potential suppliers in the circle of purchasing associates with whom she has become friendly through business relationships, or through association meetings. They are especially useful in developing sources for materials or suppliers that the buyer had not previously had to procure for his establishment. Its reliability depends on the confidence the buyer places in the associate and the assurance she has that her associate is given a full disclosure of the facts.

Trade Shows and Conventions: Practically all important industrial groups hold such shows at various times of the year. At the trade show, the members of an industry display their wares in an attempt to attract buyers, build up their interest, and if possible make sales. Some of the local associations of

purchasing agents sponsor industrial shows. At these shows one can find items ranging through varieties of buyer needs. A buyer attending such shows can talk to representatives of many firms making similar products and get a good idea of whether the suppliers are worthy of further investigation.

Request for Quotations: Information on prospective suppliers can be secured through a request for quotation form. A written request to a supplier to quote price and delivery on a named part is referred to as a request for quotation or request for bid. Such requests contain a blue print or written specifications including quality requirements and estimated usage. This procedure is usually used annually on all significant parts and services that are being purchased. Bids are solicited from at least three potential suppliers providing an opportunity for equitable comparism among competitors.

Important Factors Considered in Supplier Evaluation:

After the list of possible suppliers has been compiled, the next step is to evaluate each supplier so that the list may be narrowed down to the predetermined number with whom the buyer chooses to place her business. This process of evaluation is conducted by comparing the suppliers in terms of their ability to provide the desired quantity, quality, price and service.

Location - the geographical location of the supplier is an important consideration in evaluating service. Shipments to a supplier located at a great distance from the buyers plant are subject to more and greater risks of interruption such as accidents, strikes, and floods because of the distance and time involved in transportation.

Reserve Facilities - the reserve facilities that supplier has available are another consideration to be taken into account in evaluating a potential suppliers service. This issue is of special importance during periods of high industrial activity. A supplier with a good reserve of productive facilities is in the best position to meet increased demand and to assure his customers that their demand will be met in terms of both quality and quantity.

Internal facilities - the stage of a suppliers technological development and his interest in keeping up with current methods are also considerations affecting service. As improvements and developments are made by competitors, the buyer is certain to want better products from his suppliers and if their technological capabilities do not enable them to keep up with competitors, the buyer will suffer from having chosen a technologically inferior supplier.

The inspection methods and the quality control standards maintained by the prospective supplier are also important as much as "house keeping" or plant maintenance standards.

Other important factors include the labour relations of the supplier firm and its attendant carry along and the credit and financial analysis of these firms.[20]

Special Considerations Affecting Source Selection:

Size - frequently the buyer is faced with the alternative of buying either from a large supplier or from a relatively small one. Although size alone is no criterion of effectiveness, nor an assurance of suppliers, there are at least two advantages in dealing with larger firms.

Size provides some measure of the reserve facilities of the supplier. A large company cannot work so close to the limit of its capacity as a small company can and is increased in its output to meet commitments to its customers. But perhaps even more significant is the fact that a large concern will ordinarily maintain a large technical and research staff and be more interested in the technological improvement of its products and processes than the smaller concern.

On the other hand, there are impressive advantages that can be cited in favour of the small supplier. He is more likely to be appreciative of his customers since he has fewer of them and cannot afford to advertise or travel

extensively to find new ones. He will probably give greater consideration to special or unusual requests from his customers. The relationships between suppliers and customer tend to be more personalized and there is greater understanding of each others requirements.

Direct or Distributors - sometimes the buyer has the choice of purchasing directly from the manufacturer or through an industrial distributor. The preference for buying direct is rather general among purchasing personnel. Not only is this preference based on the prestige of buying direct and the possibility of extra profit, which may accrue to the buyer through the absorption of the middleman's margin, but also very often on the fact that the volume bought by an industrial firm is greater than that bought by the average industrial distributor. Furthermore, if the item requires contact between the maker and the user on specifications or other technical details, it seems altogether super flows to interpose a distributor between the parties.

In other situations one can make a strong source case for the use of the distributor. The existence of the industrial distributor is necessary.

Many standard items are purchased by many buyers in such small quantities that they do not warrant the cost to the manufacturers of direct sale.

Also because many of these items are not carried in stock by the users, there is need for storage of such items near the point of use so that orders can be filled promptly. The buyer who by passes the distributor for most of his purchases weakens the position of this middle man. If this occurs too frequently, there may not be enough volume left to support the distributor, and finally the users will have to carry larger inventories of small use items, thereby increasing their costs. Therefore it may pay a company to patronize a distributor for certain borderline items in order to ensure his existence.

Because an industrial distributor combines the needs of many buyers, it is often possible to affect economies of scale in providing specialized service.

Single or Multiple Suppliers: Frequently a company has a policy of placing orders where possible with several suppliers rather than a single supplier. In some respect this makes the problem of sources selection more difficult, since it frequently is easier to choose the best out of a group than several comparable supplies.

Deciding on the best policy as between one or a number of suppliers is difficult, since good reasons can be advanced for either choice. Occasionally there may be no alternative as for example when a supplier has an item protected by patent. He then is the only source unless the buyer can develop an acceptable substitute.

Frequently, because of quantity discount or lower shipping rates on large quantities it is more economical to concentrate purchases with a single supplier. In still other instances the total requirement may be too small to justify splitting the order among suppliers because it would increase per-unit handling and processing costs or because no supplier would be willing to accept the small order.

Occasionally one supplier so far excels all others in his field in quality or service as to make it impractical to consider splitting the order. Still another situation that encourages the use of a single supplier is purchase of parts manufactured by a process that uses expensive tools. Since the buyer pays the cost of tools, he hesitates to provide separate sets for several suppliers but rather concentrates his purchases with a single supplier.

Last, but not the least important, one should consider the effect on supplier service of concentrating the order. It is much easier to plan deliveries on an orderly basis when there is only one supplier. Also, the supplier who knows that he is getting all of a buyers business tends to favour that buyer over one who splits his business. In times of material shortage this can lead to greater assurance of supply to the buyer who has concentrated his purchases with a single buyer.

Plus's for Multiple:

On the other side of the issue, it can be argued that the buyer who splits his orders among several supplies has greater assurance of uninterrupted supply because he is more protected against such occurrences as fire, flood strike which might disrupt the operation's of a single plant. Even if all suppliers were subject to the same mishap, there could still be a greater chance of getting some shipments, since the buyer would personally have access to the reserve supplies of all of them.

Another important reason for splitting orders is that this is one means that buyers have of encouraging keen competition among suppliers in order to secure the best possible price and superiority in the products being purchased.

The typical buyer favours having multiple sources for most of the significant items he buys. He tends to justify his preference on the grounds of the greater security this policy affords in terms of assurance of supply, the fostering of competition, and the flexibility of choice it permits.

It should be observed that the decision to split orders among suppliers immediately raises certain problems. Among how many suppliers should the order be split? On what basis should the business be divided? How does a policy of reciprocity affect the split of the order?

There are no simple answers to these questions. To a considerable extent, the number of suppliers will be dictated by the size of the requirement and the relative size of the supplies available. The evaluation plans described will aid greatly in this determination and provide impetus for spirited competition. probably the most common split of orders is between two favoured suppliers. Sometimes the business is divided equally between the two, but more often one supplier will be selected to fill the greater part of the order on the basis of past performance. The second supplier is given a portion of the business for goodwill reasons. This basis of splitting is an attempt to get some of the advantages of multiple sources without sacrificing all of the advantages of a single supplier.

Supplier development must be a continuous undertaking. Constant changes in production technology and material development require periodic review of existing and potential suppliers.[21]

2.4.2 DETERMINATION OF QUANTITY

The right quantity is the most important parameter in buying. Concepts such as EOQ, Economic purchase quantity, fixed period and fixed quantity systems will serve as broad guidelines. But the buyer has to use his knowledge, experience and common sense to determine the quantity after considering factors such as price structure, discounts, availability of the item, favourable reciprocal relations and make or buy considerations.

Developing the right attitude too, is necessary and should be future oriented. The purchasing manager should not follow the safe and well trodden path, he should be innovative and his long term objective should be to minimize the cost of the ultimate product. He will be able to achieve this if he arms himself with techniques such as value analysis, materials intelligence, purchase research, analysis of Strength, Weaknesses, Opportunities, Threats (SWOT), purchase budget, lead time analysis, etc.

The buyer has to adopt separate policies and procedures for capital and consumer items. He should be able to distinguish between indigenous and international purchasing procedures. He should be aware of the legal and contractual aspects in international practices.[22]

2.4.3 DETERMINATION OF QUALITY

The determination of appropriate quality of materials and components influences all aspects of production and performance.

Quality is an expression of the measured properties conditions or characteristics of a product or process, usually stated in terms of grades.

Quality has been described as fitness, merit and excellence. A material that has the attribute of good quality gives the expected utility when applied for usage.

In procurement process, quality is related to suitability and cost rather than intrinsic excellence. The best quality is that which can be purchased at the lowest cost to fulfill the need or satisfy the intended function for which the material is being purchased.

In industrial purchasing, quality is the controlling consideration, only after the quality required to perform a function is determined does a buyer become concerned with price. Quality comes first, price comes second, otherwise stated in industrial marketing quality determines prices.

In the area of quality, most progressive companies give their purchasing departments a major management responsibility along with its economic responsibility. This management responsibility is the right to challenge the quality requirements on all requisitions received in the purchasing department.[23]

2.4.4 THE RIGHT PRICE

The prices of raw materials are from time to time subject to substantial and often sudden fluctuations, with far reaching effects on costs and profits not only for those firms directly using large quantities of the price affected materials but also for other enterprises using components or products embodying the materials whose price has varied.[24]

The purchasing officer usually wants to enter a specific price on the purchase order that he sends to the selected suppliers, unfortunately there is no single set of pricing principles which can be used for calculating precisely what constitutes a fair and reasonable price for any given purchase.

To obtain the right price, a number of constantly changing variables must be evaluated in the light of the total circumstances surrounding a specific purchase at a specific point in time. Because of its variable nature, the right price is of prime importance to competitive enterprise. He must therefore establish a sound procedure for securing this price information. There are a number of sources by which a buyer can seek to arrive at the right price on items that he wishes to buy. His choice will depend on the item he is buying and the type of organization he represents.

Some of these sources include: published price lists, sales persons, published market data, negotiations, competitive bids, unpriced orders.

1. **Published Price Lists** - there are many items that the purchasing agent buys frequently on which price information can be maintained in the purchasing files of the company. These are standard production items for which catalogs and price lists are prepared. The typical purchasing agent has a large collection of such lists and catalogs for a wide range of products from many suppliers.

   In using the published price list the purchasing agent is primarily concerned with making sure that the price lists are current and have not been superseded by newer published list.

   When the purchasing agent receives a requisition for a standard production item he is likely first to determine from the records when she last bought that item and from which supplier. She will then send a new order to the same supplier and specify "price as before". If the item is one that has not been purchased recently, the purchasing agent is likely to use his catalog files to locate possible suppliers and prices quoted for the item.

2. **Sales Persons** - a second important source of price is salespersons. The buyer can learn from sales people of any price changes or revisions

in the price lists and can also secure quotations on modifications of standard stock items. It should be noted that in many instances, sales persons cannot bind their companies to prices of their quote, but must secure confirmation from their sales managers. Therefore, although the purchasing agent may use salesperson's price information for standard production items, is well advised to rely on more direct negotiations for the prices of nonstandard items.

3. **Published Market Data** - most raw materials are traded on organized central markets. price information are published for these markets. However prices of raw materials tend to fluctuate with almost every sales, for this reasons price data are of value to the purchasing agent mainly as a basis on which to begin price negotiations.

An important factor in determining this price to be paid for raw materials is the price trend of the commodity. It is therefore vital that a buyer of commodities sold in organized markets keep himself posted on both market price and market trend.

When buying a commodity whose price is related to an organized market quotation, the buyer should first check a dependable source of published market information, with this, he should then contact his usual sources and such new sources as he thinks are worth a trial, to ascertain their prices in relative to the published market price.

Negotiations - when the usual source is found to be higher in price or to offer delivery terms that are not desirable as those offered by a competitor, the buyer will frequently negotiate with the regular source for better price or delivery terms. These negotiations may be conducted with the suppliers salesman or they may be carried on by correspondence between the buyer and the seller. Negotiation are most frequently employed with nonstandard items that have to be produced to the buyers specifications. Negotiations permit a more

personalized approach to the problems of agreeing on the terms of the sale.

Competitive Bids - Another method of determination of price is to secure competitive bids from potential suppliers. Most buying by governmental and other public agencies is done almost exclusively by this method because of statutory rights.

Industry resorts to the competitive bid procedure to a very limited extent and usually only for certain special purpose.

Bids may be used by a company as a means of developing a list of suppliers for a product not previously purchased or to secure alternative sources of supply. The competitive bid is frequently used by industries in buying special, non repeat terms such as heavy equipment or machinery. In some instances, industrial firms making good under government contracts must use the competitive-bid process in order to establish costs to the satisfaction of the government.[25]

2.4.5 THE RIGHT TIME

The time at which some purchases are made frequently determines the price paid, similarly, the quantity to be purchased at any given time is a direct function of anticipated future purchase dates and use.

The importance of timing varies with the types of materials purchased. On stating it more precisely, it varies according to the type of market in which materials are purchased. Market can be grouped into two general categories:

1. Markets in which the factors of supply and price are reasonably stable in the shortrun.
2. Markets in which supply and price fluctuate substantially producing a highly unstable short-run situation.

In considering the timing of purchases, a buyer is primarily interested in

assuring his firm of an adequate supply of materials and in acquiring the materials at the best price consistent with quality and service requirements. As a general one, timing is not a critical matter from either point of view when the purchase is made in a market which tends toward price stability. Timing is a much more important matter when a purchase is made in market which tends to be unstable. Careful observation and analysis of market conditions are essential if the buyer hopes to satisfy his objectives relative to supply and price. Although he cannot influence the market price, he, can, by his timing of purchases, control to some extent the price he pays. In a highly competitive business, the results of his timing can significantly affect both the competitiveness and the profitability of his firms operation.

Basically, a purchasing executive could choose one of the two alternatives:

1. Purchase according to current requirements.
2. Purchase according to market conditions.

If he adopts the first policy, he basis his purchasing timing strictly on the volume of his firms current needs and largely disregards the action of the market in which the purchase is made. If the manager adopts the second policy, in addition to considering anticipated needs, he bases purchase timing decisions in part on the action of the market.

The importance of purchase timing depends to a great extent upon the type of market in which the purchase is made.

Timing generally become more critical as markets become less stable, because risks associated with fluctuating prices become greater.

The following basic timing policies can be employed:

1. Purchase according to current requirements (one to three months supply in most cases).

2. Purchase according to market conditions which includes:

   a) Hand to mouth buying covering a short period.

   b) Forward buying covering approximately three to twelve months requirements.

   c) speculative buying, defined as buying in quantities exceeding foreseeable operating requirements.[26]

2.5 INVENTORY PLANNING AND CONTROL

Inventory Planning - the management of inventories involves two basic functions: planning and control for inventories.

Inventories management is not an isolated factor, but is essentially bound to the purchase of the business which would most certainly be production or sales. It is also related to the nature of the firms customers as well as the market it serves.

Planning for inventories considers such decision as what to store or produce, what are the best sources of procurement of goods, the most suitable transportation arrangements, etc.

Generally, the objective is to maintain the lowest possible level of investment in inventories that will satisfy the production, sales and financial requirements of the enterprise.

Two main decisions are needed with respect to planning for inventories. The first is the choice of a vendor and consideration factors such as quality, price, credit facilities, and discount.[27]

Inventory Policy - is concerned with decisions at policy level which affects the operations of the production/inventory system. In particular, it is concerned with the stages in the system at which inventory is held. These are for instance

inventories of components and finished goods.

Inventory policy will affect customers delivery promise dates, the quality of service and also the production planning and control system.

Inventory Control - concerned with decisions at the tactical level using the existing control system in order to meet current objectives over the whole inventory.

The main aim of inventory control is to strike a balance between the costs of holding too little and too much inventories in order to minimize costs. Other reasons include the need to maximize profit, avoid stockouts, avoid overstocks, keep inventories within available storage capacity, control capital inventories, minimize human effort and maximize sales or share of the market. It is concerned with the process used to set the control variable values, e.g the re-order level, the re-order quantity.

Inventory control can thus be defined as "the science based art of ensuring that just enough inventory (or stock) is held in an organization to meet both its internal and external demand commitments economically.[28]

Classification of Inventories:

One of the most common ways of classifying inventories is as follows:

1. Raw materials that have been purchased for use in the operations of the business.
2. Semi-finished parts or partly processed raw materials awaiting further processing.
3. Finished products that are in transit or awaiting distribution to customers in warehouses at the production site or at some location a distance from it.
4. Maintenance, repair and operating supplies which are consumed in the production process (e.g lubricating oil, soap, machine repair parts, etc) are usually included.[29]

Importance of Inventory Policy:

The prime function of inventories anywhere in the production distribution system is to "uncouple" the links in the chain. A good inventory system will make it possible to allow frequent replenishment and to cater for uncertain rates of use. At each point inventory provides buffer between stages, e.g raw materials between production and the supply market, work-in-process between production facilities etc.[30]

Inventory Operations - is concerned with the implementation of the control parameters. It involves the day to day operating system which records stock availability and outstanding orders, processes stock transactions and generates replenishment orders. Thus it is seen that the inventory system must be examined at all levels and that it has critical impact on the manufacturing system.[31]

2.6 WAREHOUSING

A warehouse is a storage and handling facility. Storage is the biggest job of ware housing, but handling and processing jobs such as dividing, packaging certain products and controlling inventory are also important.[32]

The warehouse performs three main functions:

- it serves as a material packaging warehouse, supplying the needs of the manufacturing process.
- it serves as a plant warehouse, receiving a constant flow of product from the factory.
- it also serves as the distribution or field warehouse providing direct delivery to country customers.[33]

Other purposes served by the warehouse include protection of goods, increasing their value, helping to stabilize prices and easing financial burdens. The warehouse keeps goods in good condition. It protects them against theft, fire, flood, heat, cold, insects and animals.

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Types of Warehouses:

There are two basic types of warehouses: public and private.

Public warehouses - an independent business that provides the service of storing and handling goods for other businesses is called a public warehouse. The public warehouse own its building and equipment but does not own the goods it handles. It is however, responsible for providing reasonable protection for the goods. The most common type of public warehouse is the general merchandise warehouse, which stores any kind of product that needs only protection. A public warehouse used for agricultural products that need special care such as grains and cotton (all raw materials) is called a special commodity warehouse.

Private warehouse - most warehouses are privately owned by manufacturers, whole sellers or retailers. A private warehouse is a storage and handling facility owned by the company that uses it. Private warehouses are of many types. Each designs its warehouse to suit its own products.

Companies that own their own warehouse try to locate them close to where the goods will be needed.

Inside the Warehouse:

Receiving - the first job in the warehouse is to see that materials are received safely and intact nay storable. This means safe unloading and careful inspection of each raw material to assure that it is in the condition claimed by the supplier. Unloading in a modern warehouse may involve automatic conveyor belts, trolleys or pellets that travel along the floor. These systems and other tools operated by the unloaders and movers, such as the driverless forklift truck and the driverless tractor are all designed to make the unloading job more efficient.

Storing - once goods are accepted by the warehouse, they are placed in a storage

Location - warehouse storage equipment includes bins used for small items, Island stacks used for layer products and overhead racks used for hanging products in spaces that would otherwise be unusable.[34] Platforms, pellets and cages, etc. are used in the process of storing.[35]

Processing - the amount of processing a material receives in a warehouse depends on the number of services available and on the wishes of the owner of the goods. Materials may be split up and stored in units, units may be price marked and repackaged.

Issuance - this is done depending on agreed duration of storage of material. For private warehousing, usually issuances are made upon requisitions from the production department of materials.[36]

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CHAPTER THREE

HISTORICAL BACKGROUND

3.1 HISTORICAL BACKGROUND OF LIVE STOCK FEEDS PLC

Livestock Feeds Plc has its antecedent rooted in Pfizer incorporated. Pfizer is world famous, more for its achievements in the specialization of human health, but over the years, its involvement in other important aspects of life include a major activity in animal health in which it has made landmark endeavours world wide.

Pfizer incorporated commenced its animal health business in Nigeria in 1957 to find out that efforts directed at marketing their pharmaceutical products returned low sales and in consequence growth, this was due largely to generally unorganized farms where available, to none at all. It became clearly logical that there had to be animals if the veterinary pharmaceutical they produced must be effectively marketed.

Consequent upon these, the company commissioned a feasibility study which was aimed at determining relative causes of a virtually stalled sales of otherwise good products and recommend necessary improvements. The study showed that the major impediment of the organizations commercial activity was the absence of the animals upon which these drugs would be used and these inturn was due to the absence of commercial feeds.

Pfizer incorporated therefore decided to set up feed milling plants to bridge this gap. They thus diversified into commercial feed milling with the birth and incorporation of Livestock Feeds Limited at Ikeja in 1963. Following the success recorded at the Ikeja plant, other plants were founded padded by the same founding ideals. The plants were located in each of the then regions of the Federal Republic of Nigeria. They include one each in Aba (1966), Kaduna (1968) and Benin in 1972. A premix plant was also established in Oregun to service the commercial feed mills with blended vitamins and minerals.

Each of the feed mills has production capacity of 10 metric tons per hour and is fully automated with the exception of the Kaduna Mill.

Livestock Feeds Limited imported day old chicks into Nigeria in the early sixties, this was complimented by free chick marsh and Terramycin chick formula to the entrepreneurs. This was done aimed at the improvement of commercial farming especially of Poultry to augment the functions of the feedmills which by implication were kept busy. With this strategic advantage as the pioneering commercial feedmiller, livestock feeds has remained the leading company in the provision of animal nutritional products in Nigeria.

Recently in 1997, after 40 years of operation, Pfizer incorporated with headquarters in New York divested from their Nigerian operation as part of global restructuring of their business and sold their majority shareholding to ADSET Limited, a management group in Nigeria, the company incorporated for the Management Buy-Out (MBO). As it stands today, Livestock Feeds Plc. is a wholly indigenous firm. This is the first management buy-out in the annals of public liability companies in Nigeria.

Material acquisition of Livestock Feeds Plc has been identified as a major factor in the operation of the organization. This is complimented by good inventory management and financial policies. The company's raw materials, some of which are imported include maize, soya cake, groundnut cake, maize offal, wheat offal, cassava, limestone, fish meal, lysine, methionine, bone meal, etc.

Research materials for this study were obtained from the Kaduna mill located at No. 1 Waziri Ibrahim Crescent, Abakpa, Kaduna.

The new corporate headquarters of the organization is at 7, Ayodele Diyan Street, Ikeja industrial estate, Lagos.

3.2 OBJECTIVES OF LIVE STOCK FEEDS PLC

- To encourage improvement in the livestock production sector by producing and making readily available commercial feeds at all times to sustain the animals.
- To help in providing quality protein by protection and sustainance of animal health.
- Improvement of commercial farming especially of poultry through the importation of Day old Chicks (DOC).

3.3 ORGANIZATIONAL STRUCTURE

The organizational structure of Livestock Feeds Plc. is headed by a board of directors. This is the highest policy making group in the entire structure. It is headed by the Chairman.

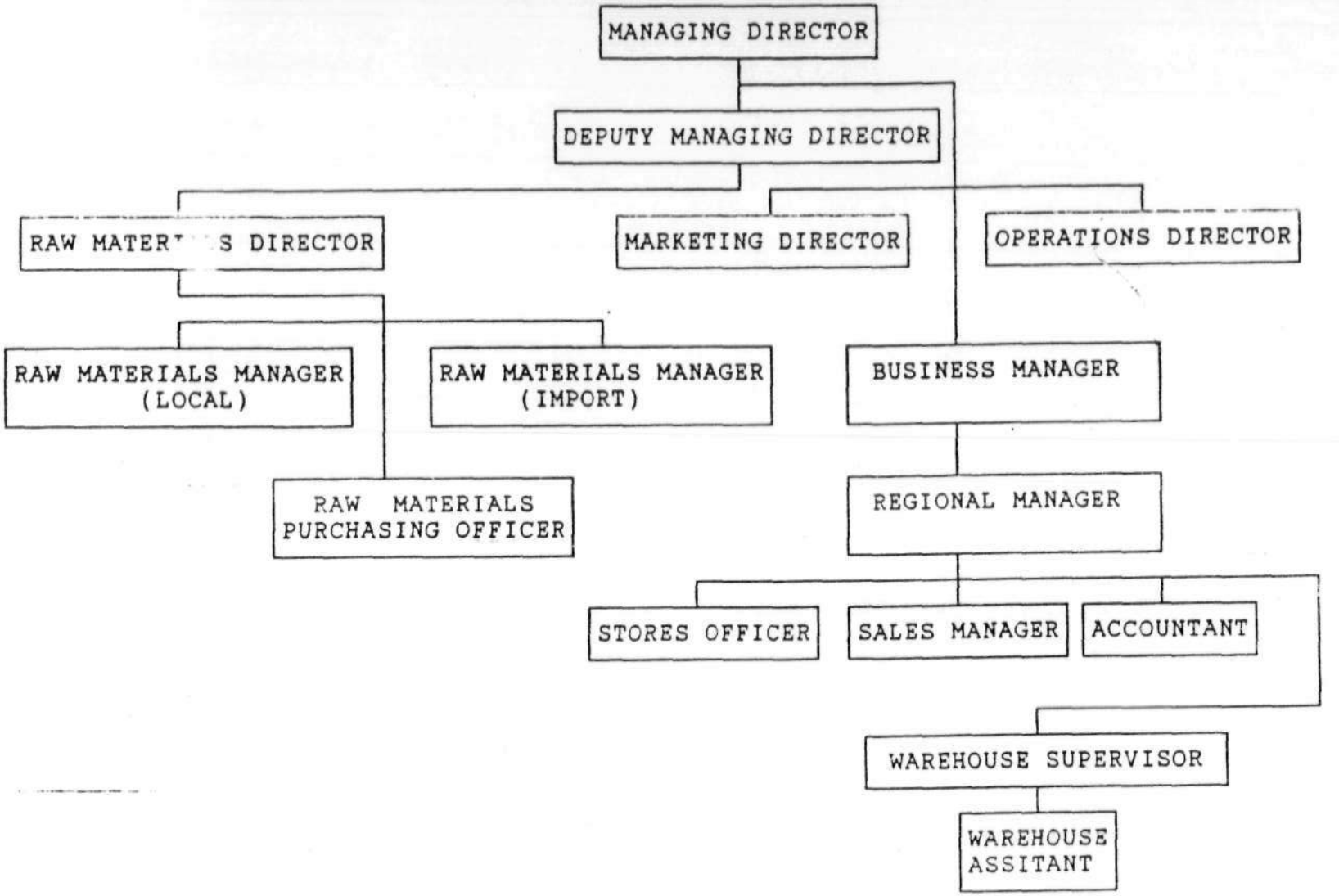
The company's management is headed by the Managing Director to whom the raw materials director, marketing director, operations director and the business manager all report.

More precisely, the materials management department is headed by the raw materials director whose subordinates are the raw materials managers. The department has two arms, that of imports, whose manager is responsible for supervision of sourcing and importation of some of the raw materials imported by the organization as part of the end product. The second arm is local, also headed by a raw materials manager responsible for sourcing and procurement supervision of raw materials obtainable locally, the most of raw materials processed usually are from local sources.

The raw materials purchasing officer is the subordinate of the raw materials manager, in each of the regional mills there is one purchasing officer. His duties include direct local sourcing and buying of materials, market surveys, supervision of activities of suppliers.

Purchasing assistant - assists the purchasing officer in his duties.

Figure 3.1 A Moderated Organisational Chart of Livestock Feeds Plc



Source: Livestock Feeds Plc.

3.4 MATERIALS DEPARTMENTS FUNCTIONAL OPERATIONS

Livestock Feeds Plc runs the central organizational system. The headquarter, which is the administrative centre point of the four feedmills is located in Lagos.

Operational orders are gotten from the headquarters and operational reports from the regional mills are despatched to Lagos weekly. The operating system of the four mills are functionally interlocked.

Material procurement and management are ordered from the centre point and carried out to the mills. Materials understocked in some mills may be replenished by mills overstocked with such material, an effective intra-mill and centre point information system ensures this efficiently.

Kaduna mills (our study centre) in particular has only few staff in the purchasing department, this was explained to be as shying away from overstaffing and its attendant responsibilities, the functions of the procurement department as other departments in Livestock Feeds Plc is organized for optimal human resources utilization, each keyed to his job and executes it efficiently.

Procurement are done through the multiple source pattern and are obtained from suppliers through direct purchases. The materials having been procured are subjected to quality assurance checks at the point of delivery. Samples are sent to the quality control laboratory in Lagos where from the final quality assessment and approval is made.

The materials are received into the warehouse where the stores officer becomes responsible for the weighing in and out, stocking, tagging, etc., until they are requested for by the production department who in turn handle this materials appropriately until the end product point. Product stores assume duty just before distribution starts.

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3.5 PURCHASING SYSTEMS AND TECHNIQUES

The Kaduna mill is one of Livestock Feeds Plc's four operating mills. Purchasing activities in the Kaduna mill as is in the other mills, is controlled from the central administration in the Lagos office of the company.

Material requirements are monitored from the centre, this is made possible by an effective communications network enabling a sustained feedback system. Weekly reports are despatched to the Lagos office where from it is determined whether to place orders for procurement or that stock is adequate for projected use covering planned time span.

In other words, the procurement officer in the Kaduna mill waits for procurement orders from Lagos on every item. The purchasing officer inturn does the field survey for current prices and trends which he feeds the head office for further directives.

Raw Materials:

Livestock Feeds main raw materials include maize, guinea corn, cassava, soya cake, groundnut cake. Others include; bone meal, limestone, lysine, methionine, oyster shell, etc.

Most of these raw materials are sourced locally while a few of them are sourced through imports. Price determinants, quality and convenience are projected as reasons for walking these extra mile. It was sounded out that the major raw materials are readily available for purchases locally.

Procurement Procedures:

In the earlier chapter's of this study, it was indicated that raw materials procurement in most industrial concerns gulp up between 60-75 percent of total expenditure, it is with a nudge of the shoulder that most believe this statement, as a further proof of these theory, Livestock Feeds gross procurement expenditure and sales are shown here in part for two of the years buying and selling periods.

Table 3.2 Gross Procurement Expenditure

	CURRENT PERIOD	YEAR TO DATE
Gross Sales	28,200,609.83	198,080,343.88
Discount	3,481,588.89	24,962,818.73
Net Sales	24,719,020.94	173,117,525.15
Prod. (Material) Cost	21,694,108.35	166,754,327.02

Source: Livestock Feeds Plc.

The importance of buying materials well, can truly not be overlooked.

The central administration is largely responsible for placing orders or making requisitions for raw materials for each mill through the purchasing officer of the mill. This is made possible because material requirements are planned sufficiently in advance. The purchasing officer is also responsible for determining sources and prices from the field. Because of the open unorganized nature of markets, prices are determined largely by negotiations.

Raw material supplies are obtained mainly through vendors and through direct purchases particularly during unanticipated insurgencies.

The multiple source pattern is used for acquisition, this implies the use of more than one vendor.

Upon receipt of a placement order or requisition for materials by the central administration, the purchasing officer prepares the purchase orders for regular vendors or use direct methods for purchases. This is done for the advantage of negotiating better prices. Once source and prices are determined, LPO's which would include haulage are issued to suppliers who supply the material directly to the mill. It should be noted that buying is done according to demand and price trends throughout the year, though stock balance is done at least 3 months ahead.

Quality Assurance and Control:

This is a major activity in the materials unit and a determinant of acceptance or rejection of raw materials supplies and utilization.

At point of reception, quality assurance staff make a preliminary check of these supplies. Fresh supplies are usually examined for moisture content. Spoilages, and other conformities to laid physical standards including weight.

This preliminary examination avails the suppliers the preliminary approval of acceptance of his materials.

Livestock Feeds Plc has provision for detailed quality control, this facility is based in their Lagos office.

The quality assurance personnel sends samples of new supplies to the quality control laboratory. It is only after confirmation from this laboratory that materials supplied are finally accepted and issued to production department.

Warehousing:

New material supplies after preliminary acceptance are received in the warehouse by stores officers.

Major activities in the warehouse would include; immediate stocking arrangements on pellets and tagging. Tags identify suppliers name, product type weight, and other supply data.

Issuing of materials by the warehousing officer is not done until the quality control approval is received.

Material requisitions to the warehouse which are done daily are effected simply by the First-In-First-Out (FIFO) method, and implies no over stayed, stale materials in the warehouse.

Bin cards (stores) contain the following details:-

- Received from or issued to, quantity received, quantity issued, balance, etc and the stores ledger are instruments of control during supplies and issuance.
- Stock taking is done monthly but daily checks are done to ensure materials are in good conditions. The warehousing officer is also involved in monitoring usage of the materials to limit overage to minimum and stock reconciliation to confirm proper use of material collected.

Role of Accounts Department in the Materials Procurement Process:

Payments for materials supplied is one aspect that generates interest and is therefore of importance in materials management. All other aspects are quite physical in material resource availability and control. This aspect would deal specifically with payments of suppliers of material to the company.

Livestock Feeds Plc has its own policy guidelines regarding payments, norms that should be met with directly or indirectly by the supplier before payments are effected. These norms essentially cover's a range of important considerations elucidated below:

1. Suppliers Invoice - the basis upon which payment procedures will be initiated, gives indications of material quantity, unit cost and the total cost of supplies made.
2. Material Receiving Report (MRR) - issued from the warehouse, is an indication of materials supplied and received stating its highlights.
3. Way bill ticket.
4. Local Purchase Order (LPO) - the original document to the supplier requesting material to be supplied to the company, contains material specification, quantity and supply prices.
5. Quality control clearance certificate - issued from the quality control office at the headquarters, it is an indication of approval of quality of material supplied considering set standards. Serves also as approval for issuance.

6. Security check clearance - document containing facts about supplies having truly been made to the company, made by the authority of the item passing through the gate.

3.6 INVENTORY CONTROL AND OPERATIONS

The classification of inventory that is of particular interest here is raw materials that have been purchased for use in the operations of the business and have been kept in the company private warehouse. In Livestock Feeds Plc, setting the control variable values e.g the re-order level and the re-order quantity depends on some factors taken into serious consideration. Some of these factors are:

a) Seasonal availability of raw materials: control operations take into consideration the fact that these products are sometimes out of market, some other times during season, these materials flood the markets. These influences the re-order levels and quantity.

b) Properties of materials: some materials are perishable, can go rancid, be destroyed by weevils or even go mouldy. Such products may not be kept in large stock to ensure quick usage.

c) Space Constraints may also affect inventory and its control. Space may determine maximum and minimum stock in the warehouse, inventory on hold cannot be beyond the size of the warehouse were it will be stored.

d) Availability and proper usage of funds: In the face of enough funds, the inventory size is bound to swell and were funds are not available inventory may be adjusted to reflect such, etc.

Against this background, Livestock Feed Plc keeps inventory up to eight weeks only, to maintain freshness of inventory.

Stock inventory is taken every week and the result of this is sent to their headquarters, by implication, the headquarters is aware of all stock balances virtually at any time of the week. This is to determine what is required and at what quantity.

Regarding operations, as earlier discussed, the company operates the central purchase system. Purchases made though the central administration and distributed to the other mills for use, locally sourced materials like maize and groundnut cake are purchased with limited authority at the local level.

Information to the effect that purchases be made at the local level by purchasing officers have to be related from the head office. These directive, may contain quantity to be purchased.

Information required in the operation of production control system would include:

- measures of capacity to produce.
- standard input required to produce a given quantity of any end item.
- a backlog of orders or a forecast of demand or both:
  - cost information.
  - An estimate of uncertainties.

such documents as the Materials Receiving Report (MRR), Materials Issue Vouchers (MIV) and the maintenance, repair and operating supplies consumed and bin cards are used in this process. Issuance are made to the production through requisitions by the first in first out method. This ensures that no material stays for longer than is necessary.

3.7 GENERAL PROBLEMS IN THE MATERIALS MANAGEMENT SYSTEM

Problems confronted in the materials management system are prominent in the two principal areas of purchasing and warehousing.

Purchasing:

- The job of the purchasing officer is made cumbersome by undulating prices and trends. This is especially so that materials are seasonal. High prices of today's purchases may hit the minimum tomorrow. The effect of this is usually very telling on the purchasing unit and the

company in general.

- Materials and their price approvals that come from the head office as in the case of Livestock Feeds Plc can delay functions especially when activity is urgent.
- Release of funds for immediate direct purchases are tied up with many bureaucracies even in glaring cases. Apparently material budgetary controls are too tight.

Warehousing:

- Delayance of quality control certificate could delay use of material and ultimately the product reaching waiting customers.
- Weight loss is experienced after storage in the warehouse of some material, usually this becomes a poser for the warehousing officer.

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CHAPTER FOUR

RESEARCH METHODOLOGY

INTRODUCTION

This chapter explains the methods used in the process of data collection for this research. Data collection methods, sample selection and the method of data analysis used are discussed. This gives an insight into the field activity of the researcher.

4.1 TYPES OF DATA

In this study two types of data were used, these includes data of primary and secondary types.

Primary Data: These are the raw data collected first hand from the company, they are original data gathered specially for the research at hand, they may include those data from questionnaires, observation, experimenting and interviews.

Secondary Data: They are data which come from a source other than those originally compiled. It makes reference to data available in bulletins, journals, annual reports, etc.

4.2 RESPONDENTS

The materials management department of Livestock Feeds Plc. Kaduna mill is the concentration point of this study.

The department is made up of only a few members of staff and this would inform why the respondents are few. This had been envisaged earlier but the choice of Livestock Feeds Plc was based on the high performance and standards of the organization.

Research investigations covered the management, officers and other staff of the department. The suppliers of the materials are also interviewed to sample opinion on their activities with the materials department of Livestock Feeds Plc. They are considered an important addition to this investigation considering their function as suppliers of the materials in question.

4.3 METHODS OF DATA COLLECTION

Data is collected for analysis, interpretation and making of inferences about the subject under investigation. It is therefore the fulcrum of any research work. For this research purpose the following methods of data collection were used:

1. Primary source of data collection - Both the questionnaire and the personal interview devices were employed in this data collection effort.

a) **Questionnaire:** Three different questionnaire schedules were designed to obtain particular and specific answers and distributed through management and officers of the materials department to the suppliers of the materials who relate officially with Livestock Feeds Plc. The questionnaires contain between 15 and 30 formulated questions. For facilitated reference:

Questionnaire `A' for management.

`B' for stores officers.

`C' for suppliers.

The format of the questionnaires are such that each contains, structured (open-ended), semi-closed and unstructured (closed-ended) questions. The semi-closed questions were included in order to allow the respondents add to the already provided alternatives. The inclusion of these three types of question was deliberate considering the high level of education of the interviewees. An exception is questionnaire `C' meant for vendors. This were strictly closed-ended and administration was by oral interview for reasons that 2 out of the 3 are non-english comprehending.

Questionnaire `A', meant to solicit for data from the material managers and purchasing officers raised pertinent questions bordering on management roles. Such areas as staffing, authority and responsibility, supervision, unethical practices, interdepartmental relationships, sourcing, material procurement, logistics, information control systems, quality control, etc. were investigated.

Questionnaire `B', directed at stores officers, seeks to know about roles of these officers in materials management. Auditing staff, requisitions, warehouse operations, inventory control, etc. are areas considered.

Questionnaire `C', questions the suppliers on relationships with the company, complaints, and how they meet the challenges, etc.

b) **Personal Interview:** This involves face to face discussions. It was meant to augment the questionnaire and also to give room for interviewees to give broader expressions on issues that allowed for only limited answers in questionnaires.
More valid contributions were made via this method. This practice of materials management is better understood with experience and this was expressed more elaborately by this method.

Responses through this method were not without the usual secretive tendencies of organizations who guard against manourvers of competitors. It however was even more revealing.

2. Secondary source of data collection - In this research effort, there had been limited use of this data collection method, though quite necessary, the adduceable reason is the fact that only few publications were made available for references.

4.4 METHOD OF DATA ANALYSIS

Data collected is presented here in tabular form and the data expressed in simple percentages which were used for the analysis.

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS

INTRODUCTION

Data collected during field investigation are presented and analyzed in this chapter. As explained earlier, the data is presented in form of tables for easier comprehension and analyzed using simple percentages.

The chapter is divided into 3 units to enhance discussion as follows:

a) Presentation and data analysis,
b) Research findings, and
b) discussion of findings.

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5.1 PRESENTATION AND DATA ANALYSIS

Responses from questionnaires administered to management, purchasing stores officers and the company's suppliers are presented here as data.

Three sets of questionnaires were developed for this purpose, identified as A, B and C, questionnaire `A' was proposed for and administered to eight respondents of management level, who all returned the questionnaires as anticipated. Questionnaire `B' was administered to ten respondents in the materials warehouse all were promptly answered and returned. Questionnaire `C' were presented and responded to by oral interview, respondents either could not comprehend English or preferred to have it administered that way. Eight respondents were investigated. All data collected are presented and analyzed below:

QUESTIONNAIRE `A'

(ADMINISTERED TO MANAGEMENT)

TABLE 5.1: **ADEQUATE STAFFING**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
YES NO	4 4	50 50
T O T A L	8	100

Source: Field Research 1998.

From table 5.1 above it shows that four members of management are of the opinion that the company is well staffed, this represents 50 percent of the interviewees.

This is an indication that for most of the work day, the workers are kept appropriately occupied with work and would as in this case imply adequate management of staff.

TABLE 5.2: PROPER DELEGATION OF AUTHORITY AND RESPONSIBILITY

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
YES NO	8 0	100 -
T O T A L	8	100

Source: Field Research 1998.

Table 5.2 above, eight respondents all agreed that authority and responsibility were properly delegated. This represents 100 percent.

This eliminates official clashes and friction in the administrative process, clearly pointing out responsibilities and easily determining fault points.

TABLE 5.3: EMPLOYEES TRAINED AND COMPETENT ON THEIR JOBS

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
YES NO	8 0	100 -
T O T A L	8	100

Source: Field Research 1998.

All the eight respondents agreed that staff of the company were well trained and competent on their jobs. This represents 100 percent.

Well trained staff usually translates to duties efficiently carried out.

TABLE 5.4: **RATE PERFORMANCE OF MATERIALS STAFF**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Very Effective Fairly Effective Poor	8 0 0	100 - -
T O T A L	8	100

Source: Field Research 1998.

In this table, performance of materials staff is rated as very effective by all of eight respondents representing 100 percent.

This explains the functional efficiency of the materials department.

TABLE 5.5: **UNETHICAL PRACTICES**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Common Few Negligible Absent	- 2 4 2	- 25 50 25
T O T A L	8	100

Source: Field Research 1998.

Table 5.5 indicates that two respondent feel that cases of unethical practices are only few, 4 respondents think that cases are negligible representing 50 percent, while two other respondents says unethical practices are absent in the organization. This represents 25 percent.

Unethical practices have the single capacity to ruin an organisations dream of attaining objectives. An organisation with negligible cases as in this case are on course for greater hieghts.

TABLE 5.6: **RATE RELATIONSHIP BETWEEN MATERIALS DEPARTMENT AND OTHER DEPARTMENTS**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Excellent Fair Bad	6 2 -	75 25 -
T O T A L	8	100

Source: Field Research 1998.

6 respondents in the above say relationship between materials department and other departments is excellent, representing 75 percent, 2 other respondents say the relationship is fair.

Soured interdepartmental relationships are capable of stalling organised production process. A situation such as is obtainable here encourage the process.

TABLE 5.7: **ORGANIZATIONAL ADMINISTRATION**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Central Decentralized	8 0	100 0
T O T A L	8	100

Source: Field Research 1998.

All eight respondents agree that the organization operates central administration.

In the face of epileptic power supply and unstable telecommunication services, communication breakdown can occur, which would not be in the interest of the company.

TABLE 5.8: **LEVEL OF MANAGEMENT SUPERVISORY PARTICIPATION**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
All Levels Selected Areas Planning Only	6 2 0	75 25 0
T O T A L	8	100

Source: Field Research 1998.

Shows that six respondents representing 75 percent of interviewees say management supervision is at all levels while the remaining 25 percent represented by two respondents believe management supervision is in selected areas only.

Supervision is important in fine tunning. This points why high quality is attained in livestock feeds plc.

TABLE 5.9: **IS MATERIALS REQUIREMENT PLANNED SUFFICIENTLY IN ADVANCE?**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
YES NO	4 4	50 50
T O T A L	8	100

Source: Field Research 1998.

Here four respondents agreed that material requirement is planned sufficiently in advance while the other four respondents disagree. Both sharing 50 percent in each case.

Uncertain circumstances sorround the materials in this industry. Planning well ahead helps the company reduce shock effects of unknowns.

TABLE 5.10: **SOURCING PATTERN**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Sole Source Multiple Source	0 8	0 100
T O T A L	8	100

Source: Field Research 1998.

All eight respondents agree that sourcing pattern is by the multiple source.

The company does not give allowance for monopoly thus encouraging competition. This brings out the best materials and at competitive prices.

TABLE 5.11: **RAW MATERIAL SUPPLIES**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Vendors Direct Purchases Both	0 0 8	0 0 100
T O T A L	8	100

Source: Field Research 1998.

Shows that all eight respondents agree that raw material supplies are through both vendors and direct purchases.

Where it becomes economically profitable, the company takes the line of advantage, that which makes more economic sense.

TABLE 5.12: **HOW OFTEN ITEMS ARE PROCURED?**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Monthly	0	0
Quarterly	2	25
Annually	0	0
Trends	6	75
T O T A L	8	100

Source: Field Research 1998.

Two respondent say procurement are done quarterly while six respondents say they procure by market and price trends.

In the highly unstable materials market where prices rise and fall indescriminately, the company assumes an edge buying as the market and price dictates.

TABLE 5.13: BASIS OF MATERIAL PROCUREMENT

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
LPO	2	25
Cash	2	25
LPO/Cash	4	50
Credit	0	0
T O T A L	8	100

Source: Field Research 1998.

Two respondent says procurement are done on the basis of LPO representing 25 percent while two other respondents agree that procurement are done on the basis of cash, also representing 25 percent. The other four respondents representing 50 percent agree both methods are utilized during procurement.

To avoid unnecessary delays that sometimes accompany LPO's, Cash procurements are also used. They have proved useful to Livestock Feeds Plc.

TABLE 5.14: **ITEMS THAT DO NOT CONFORM WITH SPECIFICATIONS**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Reject Manage Accept	8 0 0	100 0 0
T O T A L	8	100

Source: Field Research 1998.

Table 5.14 shows all eight respondents agreeing that items that do not conform with specifications are outrighly rejected, this represents 100 percent of respondents.

Items that do not conform with specification cannot be of use to the system, the organisation only does well to reject outright, materials that may clog their wheel of progress.

TABLE 5.15: **HOW PRICES ARE DETERMINED**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Bids Negotiations	0 8	0 100
T O T A L	8	100

Source: Field Research 1998.

All the eight respondents agree that prices are determined by negotiation. Good buyers do so much to reduce company's production costs.

QUESTIONNAIRE 'B'

(ADMINISTERED TO STORES OFFICERS)

TABLE 5.16: **JOB RATING**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Challenging	5	50
Boring	0	0
Cumbersome	5	50
TOTAL	10	100

Source: Field Research 1998.

Five respondents rate their jobs as challenging, implying 50 percent of respondents, while the five others say the job is cumbersome also taking 50 percent of respondents.

A challenging and tasking job points to an organisation with high productivity, everyone putting in the best.

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TABLE 5.17: **HOW OFTEN STOCK BALANCE IS TAKEN**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Daily	0	0
Weekly	10	100
Monthly	0	0
TOTAL	10	100

Source: Field Research 1998.

All ten respondents say stock balance is taken weekly. This represent 100 percent of respondents.

Regular stock taking checks out of stock, over stock situation, pilfering etc. its employment has benefited Livestock Feeds Plc immensly

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TABLE 5.18: **GENERAL STORES AUDITING**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Monthly Quarterly Annually	0 10 0	0 100 0
TOTAL	10	100

Source: Field Research 1998.

Table 5.18 shows that all the respondents agree on the fact that stores auditing are done quarterly.

This helps the company determine its standing at any point.

TABLE 5.19: **FREQUENCY OF REQUISITION**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Daily Weekly Bi-Weekly	7 3 0	70 30 0
TOTAL	10	100

Source: Field Research 1998.

Table 5.19 indicates that of ten respondents, seven say requisition from warehouse is on daily bases, while three respondents say it is done weekly.

This depends on their respective units. Frequent requisition of materials represent a healthy production arrangement.

TABLE 5.20: EFFECTIVE INVENTORY MONITOR

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Yes No	10 0	100 0
TOTAL	10	100

Source: Field Research 1998.

All the ten respondents in this table say inventory monitoring is effective (100%).

This introduces accountability and control in the material stores.

TABLE 5.21: **CONTRIBUTE TO PROCUREMENT DECISIONS**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Yes Sometimes No	5 5 0	50 50 0
T O T A L	10	100

Source: Field Research 1998.

Five respondents agree that they contribute to procurement decisions, while the other five representing 50 percent say its only sometimes that they contribute.

Contribution brings in the other view, reduces faulty decisions that could be costly and helps in the acquisition of the best materials.

TABLE 5.22: **OBSOLETE ITEMS IN WAREHOUSE**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Yes No	0 10	0 100
T O T A L	10	100

Source: Field Research 1998.

Shows that all ten respondents say no obsolete items are in the warehouse.

They represent the company's loss and are unnecessary part of the materials store.

QUESTIONNAIRE 'C'

(ADMINISTERED TO SUPPLIERS)

TABLE 5.23: **RAW MATERIALS SUPPLIED**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Grains	4	50
Cakes	2	25
Offals	2	25
Depending on need	0	0
TOTAL	8	100

Source: Field Research 1998.

From table 5.23 above, it indicates that four of the eight interviewed supply grains and that implies 50 percent, while two supply cakes (groundnut, soya bean cakes), the last two respondents supply offals (maize, wheat). Each representing 25 percent.

Therefore more of the suppliers are involved in the supply of grains which form the larger component of the finished product.

TABLE 5.24: **RELATIONSHIP WITH COMPANY**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Excellent	6	75
Fair	2	25
Edgy	0	0
TOTAL	8	100

Source: Field Research 1998.

This table shows that six of eight respondents agree that relationship with company is excellent while two representing 25 percent sees the relationship as fair.

Good relationship can ensure trust and confidence build up between supplier and company with resultant advantages

TABLE 5.25: QUALITY STANDARD REQUIRED OF SUPPLIERS

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Challenging Boring Cumbersome	6 2 0	75 25 0
T O T A L	8	100

Source: Field Research 1998.

Table 5.25 represents six i.e 75 percent of respondents saying standards required are very high, two representing 25 percent says standards are high.

Dictation of high standards to suppliers encourage supply of high quality materials which consequently reflects on finished products.

TABLE 5.26: **MEETING COMPANY MATERIAL DEMANDS**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Yes No	8 0	100 0
T O T A L	8	100

Source: Field Research 1998.

All eight respondents in the above table say they meet all company material demand supplies. This represents 100 percent.

Reliable and responsible suppliers are employed who posses the capacity to meet demands without disappointments.

TABLE 5.27: **UNETHICAL PRACTICES**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Frequent	0	0
Few	2	25
Absent	6	75
T O T A L	8	100

Source: Field Research 1998.

75 percent of respondents being six of eight interviewed say unethical practices are absent, two respondents (25%) say in only few instances.

TABLE 5.28: **PAYMENTS PROCEDURE FOR SUPPLIES**

RESPONSES	NO OF RESPONDENTS	PERCENTAGE (%)
Satisfactory	8	100
Unsatisfactory	0	0
T O T A L	8	100

Source: Field Research 1998.

From the table above, all eight respondents showed satisfaction with payment procedure.

The area that irk suppliers most and is capable of causing friction is payments. The organisation pays promptly hence ensure undelayed, consistent supplies.

5.2 RESEARCH FINDINGS

Following the analysis presented above, the following findings are made:

i. That members of staff were very few but well trained and competent.

ii. That only negligible level of unethical practices may exist in the organization.

iii. That there exists cordial interdepartmental relationship.

iv. That sufficient planning are made in advance for material requirements.

v. That central management method is adopted.

vi. They operate the multiple sourcing system.

vii. They use both vendors and direct purchasing methods.

viii Supplies that do not conform with specified standards are outrightly rejected.

ix. First in First Out (FIFO) method and weekly stores balance checks ensures that no obsolete items are found in the stores.

x. Warehouse officers participate in decision making.

xi. Suppliers attest to cordial relationships, the company's high standards in terms of materials and products, and the promptness with which the company responds to payments.

5.3 DISCUSSION OF FINDINGS

Data presented in tables 1 to 4 are especially related to human resources and its development in the company. As is represented in table 5.1, the members of staff appear to be relatively lower in number than should necessarily be the case. References however show in tables 5.3 and 5.4 that staff of the company are very well and appropriately trained and have accordingly shown competence with very high on the job performance ratings. This is a strong point and an advantage.

The issue of unethical practices is known to be one of the major set backs of the materials department, in this situation as is represented on table 5.5, only 25 percent of respondents notice only a few cases, the other respondents can be grouped as being positive about the fact that incidence are virtually none existent. The researcher found out that extreme disciplinary action and staff dedication and committement to the ideals of the company have helped immensely.

It is noted in table 5.6 that relationship between material staff and the staff of other departments are very cordial, this is important because it could prevent sabotage and other ill intentioned activities at place of work.

The central method of administration is adopted by the company and it appear's this is an inheritance from the original parent multinational company. It has been indicated that quite uneasy times have developed from waiting for results of quality control tests and other information especially in the face of very epileptic power and telephone functions.

Supervision, an important aspect of materials management activity is seen to be carried out by management at all levels. This implies that the management are not `executive chair' managers. They effectively monitor every stage of the functions without undue pressure on the workers as would be noticed in questionnaire `B'.

All indications are that planning is a major pre-occupation of the management of the department nay the company, from research conducted it is found that all requirements of material are not usually sufficiently planned for as a result of market price instability.

The multiple sourcing pattern is applied in sourcing for materials, this is said to be in practice to avoid disappointment which could easily come from dependence on single sources. This is reflected on table 5.10.

On tables 5.11 and 5.12, it is noticed that vendors and direct purchases method are both used in obtaining raw material. The vendors are used at conventional times and when it is affordable to use conventional procedures. The direct purchase method usually is a salvage procedure used mainly during urgency or price advantages - this is because all direct purchases are done by price negotiation as seen on table 5.15. It also indicates that 75 percent (table 5.12) procurement are done more by market and price trends than on quarterly basis. It is noted that materials used in this company are seasonal and this is reflected absolutely in the price of material. It would be unrealistic to accumulate materials for several months within which period prices may fluctuate to a disadvantage. Only materials with stable presence and prices (or fairly so) can be stored in large quantities by strict adherence to plans.

The discrepancy on table 5.13 which implies that two respondents say purchases are made on the basis of cash while two other respondents say they are effected on Local Purchase Order (LPO) may stem from the fact that at various points or unit, requirements and requisition procedures may differ. Others still i.e 50 percent believe that both LPO and cash are used. Under conventional method LPO's are used but under urgency cash is used where `float with funds' are involved.

On table 5.14, it is noted that company rejects outrightly items that do not conform with standards or specifications, this is an indication that there is no room for `managing' items not good enough and by implication proofs that staff are not concerning themselves with inducements.

In Livestock Feeds Plc, the in-thing is for every staff to be kept busy at work time, thus as table 5.16 indicates, 50 percent find this interesting and challenging while others find it on the tough edge as cumbersome. This only goes to show that every one human is not the same and interests vary as ability but not to the disadvantage of the company.

Warehouse activity show as on tables 5.17, 5.18, 5.19 and 5.20 that the warehouse is also busy apart from daily issuances. There are weekly stores balance checks, inventory monitoring, quarterly auditing and daily round checks which ensures that pilferage and spoilage of materials are reduced to the barest minimum. This could explain why no obsolete items are found in the store as shown on table 5.22.

The direct involvement of warehouse officers in the decision making process allows for complete sampling participation. Because of their involvement in the materials process, they stand the position to make useful contributions at least from their own perspective. This, the company does as is seen in table 5.21. Other's (50%) however say they are only sometimes involved, its quite possible out of function between staff but more likely because

of the necessity of the departments being required.

In investigations carried out on suppliers, varied responses sometimes considered as contrasting were obtained, this may be explained by responses on table 5.23 which shows that these suppliers actually do different jobs and as such should experience differences in opinion.

Generally, there are more indications of a cordial relationship with the company and that company demands are frequently met without delays as is represented on tables 5.24 and 5.26.

The suppliers themselves agree that the company has high taste in terms of quality at the materials procurement level, and that has become their (suppliers) guidelines. Table 5.25.

In table 5.27, the suppliers indicated a virtual absence of practices on the part of purchasing officers considered to be inimical to the betterment of the company.

Another very important positive attestation is that regarding payment procedures as reflected on table 5.28. The suppliers say on presentation of complete documents, payments are not delayed and this serves to encourage more effort.

CHAPTER SIX

6.1 SUMMARY

This research work sets out to evaluate the concept of materials management as it is employed by Livestock Feeds Plc. Production in manufacturing companies especially in the agro-milling business have been thought of as herculean. It is considered that a major contributing problem against successful production lies in the handling of the materials so used. Purchasing these materials, storing them, issuing them for use in the production process desire an eagle watch.

Unethical practices have turned flourishing businesses into mere existing names, uncommitted staff, unfavourable working conditions, sour relationships between the triangle of company its staff and suppliers have caused owners of companies to realize the opposite of their dreams. it has been attempted in this research to make the language simpler for a better understanding of the maintenance of operating fluidity by efficient inventory management, avoiding acts that are unethical, managing unforseens effectively by studying how others have succeeded doing the same thing.

From the research carried out, it was found that our case study organization begin their working day thinking of making better the human resources they have at their disposal, optimum priority is accorded the process of recruiting and selecting and thereafter the resource development. From personal interviews it was gathered that Pfizer (LFS's original and former parent organization) was the first to employ Veterinary Doctors to handle their animal health sales unit. The difference in this compared with salesmen uninformed in animal science and health may well be best imagined, it is believed to have given them an edge over competitors.

Investigations further showed that Livestock Feeds Plc have not been bathing in nightmares of the popular inducement to influence purchases. These the research adduces a result of functions being unpersonalised aside strict

disciplinary reactions towards foul practices. Multiple tests e.g of quality control, reassessments of materials and papers involved, opinion of production managers and officers and of course of customers can lead to a `back tracking' of fault lines and consequently fault persons.

Secondly staff and suppliers are distanced at least officially. No unnecessary interactions are allowed and this is effectively communicated.

In support also is the finding that, the triangle of the insiders i.e the management, staff and suppliers have developed a very cordial umbrella of relationship around themselves, this umbrella in turn oils the machinery of work attitude and involvement. Every one feels part of every fault.

It is noted that supervisory functions by management is not an `executive chair' affair. Direct involvement in prosecution of job definitions has enhanced the quality of final product and thoroughness of jobs.

Sufficient planning well ahead of events and engagements informs their near perfect purchasing, inventory control and operations, staffing and such other functions and variables that set the high standards they are associated with.

In addition, findings show that vendors are very consistent. It also shows that direct purchases are done. This helps to check the excesses of suppliers where they exist and drastically help cut down prices and improve profits. This is where advantage of a good buyer comes in handy.

The company does not compromise standards. It is shown in the research finding on table 5.14, that outright rejection awaits materials that do not meet specifications.

Further, the research reveals that the company does not allow unnecessary inactivity, time wastage for loitering, gossips and or calling or receiving phone calls arbitrarily.

In the warehouse research finding reveal that inventory taking is a very frequent indulgence. Supervision is a priority activity. This reduces problems amenable from production department and it also reduces pilfering and spoilage as this are likely to be promptly noted.

The fact that store officers are directly involved in decision making here also enhances efficiency. It was also found out that suppliers' trouble spots' i.e. payments are free of hitches which serves to encourage the suppliers further. The home work is that of the accounting department, a good and efficiently organized arrangement here helps immensely to fulfill these.

6.2 CONCLUSION

Having researched into the functional approach of the application of the concept of materials management, findings prominent enough to make a difference in most lagging organizations are inferable, the original essence of this study is to unearth `how', and imbibe the approach to the benefit of the organization and the country in a general sense. Thus an important inference would refer to the human resource acquisition and development which the organization holds close to its heart. High level intensive management training, training and constant examination of other officers and attendant rewards for excellence, have proven as the tonic for the efficiency and competence exhibited in Livestock Feeds Plc. This is further exemplified by the fact that the over 20 Veterinary Doctors in their employment are always undertaking senior courses in management and sales, to say these courses are expensive is to say the least, that still, is not a deterrent as seen in the attestation from data used. The end point is that Livestock Feeds Plc believes; "Take good care of your staff and they would take good care of their job". This is important to note.

Another aspect is close monitoring of the purchasing and warehousing to reduce activities considered unethical. This can cause very adverse woes to the company. The research has determined that Livestock Feeds Plc have only a neglible amount of this behaviour. Of note in this also is the cultivation of the quality culture. It is attested by data that Livestock Feeds show religious adherence to quality procedure at all levels and making sure that even standards of organizations such as National Agency for Food and Drug Administration and Control (NAFDAC) are met. The quality culture covers materials procurement and product quality etc.

Another important consideration is that the company pay's suppliers promptly, this encourages prompt supplies.

The majority of activity in Livestock Feeds Plc are quite in order with theoretical assertions, this is not to paint a faultless Livestock Feeds Plc as is discussed briefly in the recommendations.

6.3 RECOMMENDATIONS

Having considered data by analysis, and having presented the conclusion, it becomes necessary to make some recommendations. Recommendations are, in this case two pronged: directed at the essence of this research and for the benefit of the company. This is not intended to limit applications. It is essential to begin at this level where from it spreads to the society in general.

In respect of this study:

- Unfettered attention must be paid to human resources acquisition and development. They could form both the bedrock and pillars of the sustenance of the organization. Livestock Feeds Plc by this research has shown that this is one of their strongest points.
- Quality of every facet of the organization is very important to the sustenance and growth of the organization. Livestock Feeds Plc shows that quality takes high votes and it has proven to be of importance to all.

- Prompt attention to suppliers payments can ensure continuous availability of material, which cannot be underestimated.
- Livestock Feeds:

  Members of the purchasing and materials unit are relatively few. This gives an insight into the nearly below average response got from interviewees. The result of these is explained by some other management through oral interviews to be an attempt towards maximizing human resources input, thereby reducing the level of loitering, gossips, idling, etc. during official hours.

  The result of these however is seen by some to generate stress from being over worked. These may eventually temper with work input quality while the quantity of output is very high.

- The central administration mode of operation does not appear appealing any more especially as regards the materials department, the mentors of the company may have had fulfilling times with such methods as they tried to be in charge of all engagements without being practically present in the areas. It may be found thoughtful and worth a trial, to decentralize the administration, and this includes the control laboratories because of the little hitches encountered during functions of the materials department.

- Livestock Feeds Plc may lighten its job load and make more efficient storage of grains. Most grains are doing badly in stores due to bad packing especially, the warehouse space is also small. This is in advising the management of Livestock Feeds Plc to considering replacing the present arrangement with silos.
- The organizational structure is quite complex and should be reviewed to reflect modern trends.

With these recommendations, it is hoped that organizations and others involved will benefit from this research work.

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APPENDIX A

Department of Business Administration,
Faculty of Administration,
Ahmadu Bello University,
Zaria.

Dear Sir/Dr./Alh./Madam,

LETTER OF INTRODUCTION

I am a student in the above named institution pursuing a Master Degree in Business Administration (MBA). As part of the requirements for the fulfillment of the award of the Degree, I am required to submit a project to the institution. My interest is in materials management, and I wish to carry out this study in your organization - Livestock Feeds Plc.

I shall therefore appreciate, if you would be kind enough to assist in this effort. I assure you that all questionnaire answers will be treated in strict confidence.

Thanks for your anticipated co-operation.

Yours sincerely,

Edward O. Oche Amali.

APPENDIX B

QUESTIONNAIRE A (ADMINISTERED TO MANAGEMENT)

Kindly respond to the following questions intended for academic research by ticking in the appropriate box.

1. Is the department adequately staff? Yes [ ] No [ ].
2. Have authority and responsibility been adequately delegated? Yes [ ] No [ ].
3. Are employees trained and competent to do their jobs? Yes [ ] No [ ].
4. Have your achieved goal congruence between company and employee objectives? Yes [ ] No [ ].
5. How do you rate the performance of your staff in terms of procurement and issuance of needed materials?
   Very effective [ ], Fairly effective [ ], Poor [ ].
6. Cases of unethical practices: Common [ ], Few [ ], Absent [ ].
7. How do you rate relationships between material management and other departments? Excellent [ ], Fair [ ], Poor [ ].
8. What is your type of organizational structure?
   Central [ ], Decentralized [ ].
9. What is the level of management supervisory participation? All levels [ ], Selected areas [ ], Planning only [ ].
10. How is your procurement transaction? Single transaction [ ], Joint venture [ ], Long term buyer/seller relationship [ ].
11. Are your material requirement planned sufficiently in advance? Yes [ ] No [ ].
12. What is your sourcing pattern? Sole source [ ], Multiple Source [ ].
13. What are your sources of raw materials? Local [ ], Imports [ ], Both [ ].
14. How do you obtain your raw materials supplies? Vendors [ ], Direct Purchases [ ], Both [ ].
15. How do you move items from source to stores? Through vendors [ ], Self [ ].
16. Delivery of raw materials from source. Consistent [ ], Inconsistent [ ].

17. State logistical problems faced by the department while conducting its duties:

    a) .....

    b) .....

18. Please suggest ways to improve implementation of rules and procedures on procurement if need be:

    a) .....

    b) .....

19. How often do you procure items? Monthly [ ], Quarterly [ ], Bi-annually [ ].

20. How do you rate the procurement procedure? Good [ ], Fair [ ], Poor [ ].

21. On what basis do you procure materials? LPO [ ], Cash [ ], Credit [ ] LPO/Cash [ ].

22. How are prices determined? Bids [ ] Negotiations [ ].

23. How do you treat items that do not conform with specification? Reject [ ] Manage them [ ], Accept [ ].

24 Is a constant effort made to develop supplies and provide technical help, etc. when required? Yes [ ], No [ ].

25. Are relations with vendors cordial? Yes [ ], No [ ].

26. How is your information control system? Good [ ], Fair [ ], Poor [ ].

27. Does the O & M department keep track of research studies which have a direct bearing on the materials needed by your product? Yes [ ], No [ ].

28. Have your inventory policies viz, safety stock, order quantity, etc. been laid down on experience and intuition or through careful analysis of demand and supply patterns?

.....

.....

APPENDIX C

QUESTIONNAIRE B (ADMINISTERED TO STORES OFFICERS)

Kindly respond to the following questions intended for academic research by ticking in the appropriate box.

1. How do you rate your job? Challenging [ ], Boring [ ], Cumbersome [ ].
2. How do you find the dispensation of the company? Good [ ] Fair [ ] Bad [ ].
3. How often do you balance your stock? Daily [ ], Weekly [ ], Monthly [ ].
4. What is your most effective way of preventing pilferage of materials? Monthly reports [ ], Weekly reports [ ], Surprise Check [ ].
5. How often do you conduct general stores auditing? Monthly [ ], Quarterly [ ], Bi-annual [ ], Annually [ ].
6. How do you rate the performance of your staff in terms of procurement and issuance of material? Very effective [ ], Fairly effective [ ] Poor [ ].
7. How often do departments request for materials from your store? Daily [ ], Weekly [ ] Bi-weekly [ ].
8. Do you have any obsolete item in your warehouse?
   Yes [ ], No [ ].
9. Is supervision very close and applying undue pressure?
   Yes [ ], No [ ].
10. How do you identify items in your store?
    Labelling [ ], Locating [ ], Racks [ ].
11. Do you use coding systems to differentiate items?
    Yes [ ], No [ ].
12. Does the inventory control unit have an effective system of determining materials out of stock or below accepted levels? Yes [ ], No [ ].
13. Do you contribute to decisions of the procurement Process? Yes [ ], No [ ].
14. Are you satisfied with supervision in the department?
    Yes [ ], No [ ].
15. What problems do you encounter that you feel deserves managerial attention:

APPENDIX D

QUESTIONNAIRE C (ADMINISTERED TO SUPPLIERS)

Kindly respond to the following questions intended for academic research by ticking in the appropriate box.

1. What raw materials do you supply to the company? Grain [ ], CaKes [ ], Depending or need [ ].
2. How would you assess your relationship with the company? Excellent [ ], Fair [ ], Edgy [ ].
3. What standard does the company expect of your product quality? Very high [ ], High [ ], Average [ ].
4. Are you satisfied with the procurement procedure? Yes [ ], No [ ].
5. Does the company complain of your material supplies? Often [ ], Sometimes [ ], None [ ].
6. Do you easily meet material demands? Yes [ ], No [ ].
7. Are you often confronted with practices considered unethical? Frequently [ ], Few [ ], Absent [ ].
8. Are you satisfied with payment procedure? Yes[ ], No [ ].

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Kindly respond to the following questions that are needed for academic research by ticking in the appropriate box.

Thanks for your co-operation.

1. Is the department adequately staffed?

☐ YES ☐ NO

2. Have authority and responsibility been adequately delegated?

☐ YES ☐ NO

3. Are employees trained and competent to do their jobs?

☐ YES ☐ NO

4. Have you achieved good performance between organizational and employee objectives?

☐ YES ☐ NO

5. How do you rate the performance of your department in terms of procurement and inventory of materials?

☐ VERY EFFECTIVE ☐ EFFECTIVE ☐ NOT EFFECTIVE

6. Cases of unethical practices:

☐ MANY ☐ SOME ☐ NONE AT ALL

7. How do you rate relationship between departmental management and other departments?

☐ GOOD ☐ FAIR ☐ POOR

8. What is your type of organizational structure?

☐ CENTRAL ☐ DECENTRALIZED

9. What is the level of participation of subordinates in decision making?

☐ HIGH ☐ MODERATE ☐ LOW

10. How is your procure[illegible]

☐[illegible] ☐[illegible] ☐[illegible]

11. Are your materials received promptly sufficiently in advance?

☐ Y ☐ N

12. What is your source of term:

☐[illegible] ☐[illegible]

13. What are your sources of raw materials:

☐LOCAL ☐ IM[illegible] ☐ [illegible]

14. How do you obtain your raw materials supplies:

☐ VEHICLE ☐ [illegible] ☐BOTH

15. How do you move it from source to stores:

☐[illegible] ☐ [illegible]

16. Delivery of raw materials from source

☐[illegible] ☐ [illegible]

17. State logistical problems faced by the department while conducting its duties.

a. _____ b. _____

18. Please suggest ways to improve implementation of rules and procedures on procurement if need be.

a. _____ b. _____

19. How often do you procure items?

☐[illegible] ☐ [illegible] ☐[illegible].

20. How do you rate the procurement procedure:

☐ [illegible] ☐ [illegible] ☐ [illegible]

21. What kinds do you procure materials:

☐ [illegible] ☐ [illegible] ☐[illegible] ☐[illegible].

22. Your price determination:

☐ [illegible] ☐ [illegible]

23. [illegible]

☐ [illegible] ☐ [illegible] ☐ [illegible]

- [illegible]



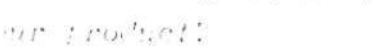
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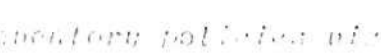
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- [illegible]



- [illegible]



- [illegible]

Kindly respond to the following questions intended for academic research by ticking in the appropriate box:

Thanks for your co-operation.

1. How do you rate your job?

☐ CHALLENGING ☐ TOUGH ☐ CUM JOB

2. How do you find the dispensation of the company?

☐ GOOD ☐ FAIR ☐ BAD

3. How often do you balance your stock?

☐ DAILY ☐ WEEKLY ☐ MONTHLY.

4. What is your most effective way of preventing pilferage of materials?

☐ MONTHLY BALANCES ☐ DAILY REPORTS ☐ SURPRISE

5. How often do you conduct general stores auditing?

☐ MONTHLY ☐ WEEKLY ☐ BI-ANNUAL ☐ ANNUAL

6. How do you rate the performance of your staff in terms of procurement and issuance of materials?

☐ VERY EFFICIENT ☐ FAIRLY EFFICIENT ☐ POOR.

7. How often do departments request for materials from your store?

☐ DAILY ☐ WEEKLY ☐ BI-WEEKLY

8. Do you have any obsolete items in your warehouse?

☐ YES ☐ NO.

9. Is supervision more close on applying our procedures?

☐ YES ☐ NO

10. How do I identify items in your store?

☐ LABELLED ☐ NUMBERED ☐ CODED

11. Do you use codes/numbers to differentiate items?

☐ YES ☐ NO.

12. Does the inventory control unit have an effective system of determining materials out of stock or below accepted levels?

 YES NO.

13. Do you contribute to decisions of the procurement process?

 YES NO.

14. Are you satisfied with supervision in the department?

 YES NO.

15. What problems do you encounter that you feel deserves managerial attention?

_____

_____

_____

[illegible]

Kindly respond to the following questions intended for academic research by ticking in the appropriate box:

Thanks for your co-operation.

1. What raw materials do you supply to the company?

☐ GRAINS ☐ CATTLE ☐ [illegible]

2. How would you access your relationship with the company?

☐ EXCELLENT ☐ [illegible] ☐ [illegible]

3. What standard does the company expect of your product quality?

☐ [illegible] ☐ HIGH ☐ VERY HIGH

4. Are you satisfied with the procurement procedure?

☐ YES ☐ NO.

5. Does the company complain of your material supplies?

☐ [illegible] ☐ [illegible] ☐ [illegible]

6. Do you easily get raw materials for this?

☐ YES ☐ [illegible]

7. [illegible] raw materials [illegible]

☐ [illegible] ☐ [illegible] ☐ [illegible]

8. [illegible]

☐ [illegible] ☐ [illegible].