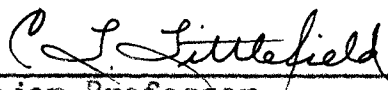



CENTRALIZED PURCHASING ARRANGEMENTS IN A
SELECTED GROUP OF OIL COMPANIES
IN THE SOUTHWEST

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SELECTED GROUP OF OIL COMPANIES
IN THE SOUTHWEST

THESIS

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CHAPTER I

INTRODUCTION

The problem of procurement of supplies for industry has increased in proportion to the complexity and scope of business. Fifty years ago the major industries of the United States were conducted, in the majority of instances, by individual entrepreneurs. At the present time large corporations and chain organizations maintain firms at widely scattered points throughout the country. The problem of purchasing materials for these, therefore, has assumed new significance and merits continuous study to determine the most efficient purchasing methods.

Central purchasing of supplies has been one of the developments growing out of large industrial enterprises. Research and experimentation have indicated that this type of purchasing organization has many advantages in promoting efficiency. If the company has only one plant, the adoption of a central purchasing organization is a comparatively simple procedure, but where a firm has a branch plant, many factors must be considered to find out to what extent to centralize the organization. The degree of geographical separation, the essential homogeneity of products manufactured or purchased, the type of materials bought, the

extent of market fluctuations, and the selection of sources of supply are all questions that come up for consideration. The degree to which centralized purchasing is used in geographically separated firms thus constitutes a very real problem for study and furnishes the basis for the present one.

Oil firms in the Southwest present an almost ideal situation for the study of the extent or degree of centralized purchasing used in companies with geographically separated plants. The Southwestern area is an oil-producing section, and all large oil companies have representative branches in this area. The majority of these operate a number of plants or branches with similar functions, yet working from one central plant or area head. In connection with the operation of these plants there are significant expenditures for materials, supplies, and equipment. A study of the type of purchasing organization and especially of the degree of centralized purchasing, therefore, should provide some data valuable to other industries and to students in the field of business economics. It was from this viewpoint that the present study was undertaken.

Purpose of the Study

The purpose of the study is threefold: (1) to make a survey of the type of purchasing organizations used by a selected number of oil companies operating in the Southwest,

(2) to determine the extent or degree of centralized purchasing used by these firms, and (3) to evaluate briefly the organizational arrangements found in light of accepted principles.

Limitations of the Study

The survey conducted is limited to a selected group of oil companies operating in the Southwest with a large number of branch firms. The limitation to oil companies was made because of the prominence of the oil industry in this area, the wide distribution of branch firms, the large purchasing expenditures necessary in the enterprises, and the highly competitive conditions in the oil industry necessitating a high degree of efficiency in business administration.

Sources of Data

Data for the study were secured from two sources. The nature of centralized purchasing, its advantages and disadvantages, and factors influencing the degree of centralization were studied in professional literature in the field of business economics. Survey data on the type of purchasing organizations and the extent or degree to which centralization is practiced by large oil companies in procurement of material were obtained through the use of a questionnaire, either personally submitted or mailed to the participating oil companies.

The questionnaire was based on information developed

from the readings in the professional literature relative to factors influencing centralized purchasing in companies with geographically scattered plants. The questions were carefully phrased and submitted to the director of the research for his criticism, and revisions were made in terms of his suggestions. The investigator made personal calls on a trial group of purchasing agents of large oil companies in Dallas and Fort Worth, Texas, and submitted the questionnaire to them for study. Final changes were then made to conform to the suggestions.

Previous Studies in the Field

Centralized purchasing practices are a product of the present century with its great industrial expansion. Research in the field, therefore, is not as extensive as in some other fields and is of comparatively recent origin, but a sufficient number of studies are available to contribute much data valuable in understanding the present investigation.

Heinritz, in a study of purchasing procedures, gave attention to the extent of centralized purchasing practices used by industry.¹ He reviewed a number of surveys on the subject and arrived at the following conclusions:

Centralized purchasing departments have been definitely and consistently on the increase for many years and the trend is gaining momentum, both in industrial organization and in governmental units, schools, hospitals, and similar institutions where a

¹Stuart F. Heinritz, Purchasing, p. 10.

comparable purchasing problem exists. Competent surveys of current practice indicate that centralized purchasing has been adopted in well over 85 per cent of manufacturing organizations having an annual output valued at one million dollars or more; or to use another criterion, it has been adopted in approximately 80 per cent of those establishments employing a hundred or more workers. Since these companies account for the great bulk of production and material requirements in this country, it follows that some 70 per cent of all the materials and supplies used in American industry are bought through centralized purchasing departments.²

The foregoing figures indicate that centralized purchasing organizations are widely used in industry. The purchasing agent for a firm, therefore, assumes a highly significant position in industry because of the volume of business that he handles in buying supplies for large industrial firms.

The National Association of Purchasing Agents has been formed, and this organization has pioneered in research in purchasing practices. In 1935, it undertook an investigation of the operation of industrial purchasing departments. Information was secured from the purchasing agents of forty-five companies, subsequently classified as large, medium, and small.³ On the basis of data obtained from a questionnaire filled out by the purchasing agents of the companies, an analysis was made of the tasks performed by them of the differences in duties between agents in the large, medium,

²Ibid.

³National Association of Purchasing Agents, The Scope of the Purchasing Function, Pamphlet No. 22, 1935, p. 16.

and small firms, and of the difference in relationships existing in the companies between purchasing, receiving, inspecting and testing, inventory control, and traffic. The major conclusions developed were as follows: (1) the activities of the purchasing agents varied widely; and (2) a pronounced difference was indicated between the activities of the purchasing agents in the large companies and those in the small companies.⁴

The importance of the function of purchasing in industrial companies was studied by Yoder in 1938. He made a survey of the nature of the organization of industrial purchasing departments, and arrived at the following conclusions: (1) Where purchasing is difficult, where much of the company's money is tied up in purchases and where good or bad purchases cause either a big profit or a big loss, the purchasing agent should occupy a position of major importance in the company; and (2) where purchasing presents fewer problems and where purchasing is of little importance, the agent may report only to the production manager and may hold a position in the company without any great responsibility.⁵ Yoder's study was similar to the present one in that it inquired into the nature of the organization of industrial

⁴Ibid., pp. 16-18.

⁵Joseph D. Yoder, Jr., "An Organization Study of the Industrial Purchasing Departments," Philadelphia Purchaser, (March, 1938), p. 18.

purchasing departments, while it differs in that it considered all types of industrial establishments rather than a selected group with geographically scattered plants.

A recent study conducted by the Ross-Federal Research Corporation was concerned with how industry buys plant equipment, materials, and component parts. The research was conducted by questionnaire mailed to a group of five thousand individuals identified as active in responsible functions in industry.⁶ Analysis was made of 1,249 replies. Highlights of the findings were as follows: (1) industrial purchasing, like production, selling and other important functions, is conducted according to an orderly procedure; and (2) top management delegates basic decisions regarding the kind (as distinguished from make) of capital equipment, materials or component parts to be purchased and specifications to be met, to those charged with engineering and research functions.⁷ No study was made of the type of purchasing organization from the standpoint of centralization of the purchasing function but attention was directed to how industry buys as a whole.

A recent study by a graduate student at North Texas State College investigated the operation of centralized purchasing in the State-supported institutions of Texas and a selected number of States to determine the philosophy,

⁶How Industry Buys, Ross-Federal Research Corporation, September, 1950.

⁷Ibid., pp. 2-3.

method, and operation of centralized purchasing as used in the institutions.⁸ The outstanding conclusion reached from the study was that there has been a definite trend to establish centralized purchasing agencies in State governments. This study differs from the present one principally in that it studied centralized purchasing operations in a number of selected state institutions rather than in oil companies with geographically scattered plants.

These investigations, while not covering all the research that has been made, form an effective orientation to the problems of the present study. They indicate that centralized purchasing is used by the majority of large industrial concerns, but no information is available regarding the extent or degree of centralization in purchasing procedures of oil companies or of other types of companies similarly situated.

Definition of Terms

Procurement. In the narrow sense of the term, procurement means the buying of supplies, materials, and equipment needed for the operation of an industry. Broadly speaking, procurement means more than this and has two functions: (1) contributions to top-management decisions affecting the

⁸H. M. Luckworth, "The Operation of Centralized Purchasing for the State-Supported Institutions of the State of Texas and Selected States," Unpublished Master's Thesis, Department of Business Administration, North Texas State College, 1950, p.1.

entire company's welfare, and (2) responsibility for securing material parts, and supplies needed in a company's organization, negotiating with vendors, and controlling inventories of the items produced.⁹ The present study uses the broader term in its approach to the study of centralized purchasing.

Centralized Purchasing.-- Centralized purchasing exists when all the executives of a company forward their requisitions to a purchasing agent who has the sole power to select vendors and to place formal orders." ¹⁰

Decentralized Purchasing.-- Decentralized purchasing exists when "any executive buys for his own department, or so phrases his requisitions or makes personal demands as to limit the purchasing department's authority over vendor selection, prices and terms." ¹¹

Localized Purchasing.-- Localized purchasing exists when - ever there is a separate purchasing department and a purchasing agent for each plant.

Centralized-Localized Purchasing.-- Centralized-localized purchasing exists where there is a general purchasing department to determine general policies, buy commonly used supplies or materials where conditions favor this arrangement, and to supervise and direct the work of local purchasing departments .

⁹ Howard T. Lewis, Procurement: Principles and Cases, p. 12.

¹⁰ Edwin Lair Cady, Purchasing, p. 191.

¹¹ Ibid

The present study is concerned with determining the extent or degree of centralized purchasing organizations used by the oil companies and the deviations made because of factors relative to different locations.

Order of Presentation of the Study

An overview of the entire study is presented in the first chapter of the study. This includes a statement of the problem, the purpose of the study, its limitations, sources of data, what has been done previously in research on the subject, definition of terms, and the general plan of presentation. The nature of central purchasing, its advantages and disadvantages, and factors influencing the degree of centralization in organizations with geographically scattered plants are considered in Chapter II. Data collected through use of the questionnaire are presented and analyzed in Chapter III. The findings of the study and the conclusions developed therefrom are presented in Chapter IV.

CHAPTER II

ADVANTAGES AND DISADVANTAGES OF CENTRALIZED PURCHASING AND FACTORS INFLUENCING PURCHASING ARRANGEMENTS IN ORGAN- IZATIONS WITH GEOGRAPHICALLY SCATTERED PLANTS

There can be no one pattern of centralized purchasing organizations because situations and needs vary according to the industry and location. Each company must study its own particular problems and use the type of organization which will prove most efficient.

There are some advantages and disadvantages of centralized purchasing, however, apart from specific requirements of individual situations. These need to be studied in order to be better able to take advantage of the benefits of centralized purchasing and to avoid the disadvantages. In this chapter, therefore, an effort will be made to determine authoritative opinion with regard to general advantages and disadvantages which commonly are experienced by companies having widely-scattered branches-- such as the oil companies to be surveyed in this investigation.

In analyzing experience with centralized purchasing, authorities also have formulated some basic principles of

organization which may serve as useful guides in individual situations. Among these are principles having special application to companies with widely-scattered branches. A compilation of principles of the latter type will be undertaken in the final portion of the chapter.

This process of first studying the advantages and disadvantages, and then preparing a synthesis of applicable principles of organization, should serve a three-fold purpose: (1) it will facilitate design of a questionnaire regarding arrangements of purchasing activities in the oil companies surveyed; (2) it will provide a basis of evaluation of the purchasing arrangements found in the data secured from the oil companies; and (3) it will point out the values of various types of purchasing arrangements available for use.

Advantages of Centralized Purchasing

Competent direction and full cooperation of all departments are necessary to derive the full advantage of centralized purchasing. If these are present, according to Lewis, the following definite advantages may and do follow in the centralized purchasing program:

1. Centralized buying places the responsibility on officials who have the interest and the skill to do the work properly and whose primary concern is in the performance of this special task.
2. It aids in the fixing of responsibility and in the

measuring of the consequences of any given procurement policy.

3. It permits the setting up of uniform policies with respect to vendor relationships.
4. It facilitates the prescribing of procedures, records, and routine and also expedites inspection and approval of materials and the payment therefor.
5. It encourages market analysis, the study of price trends, and the analysis of vendor's production costs, with the result that purchases are made under the most favorable conditions and at the most favorable times.
6. It promotes economy by consolidating requirements and by setting up material standards for inventories.
7. Through the use of substitute materials and materials exactly suited to the requirements demanded, it encourages the reduction of manufacturing costs without impairing the quality of the product.¹

Lewis also maintains that the essential justification for centralization of purchasing procedures is not to be found in better prices, better transportation rates, or greater profits, regardless of plant location, but in the principle itself. He explains his reasoning as follows:

These things are merely the results flowing from the underlying raison d'etre of centralized procurement, which is that centralized procurement is a distinctive function, to be so considered and so administered by a personnel whose special interests, aptitudes, experience and training qualify them for dealing with problems related to getting the proper quality of the right quantity at the right time for the best price. This is the basic principle underlying centralization of procurement. The more commonly ascribed advantages are but the results. This fact is not always realized even by procurement officers, and the failure so to appreciate it leads to some very confused reasoning.²

¹Howard T. Lewis, Procurement Principles and Cases, pp. 28-29.

²Ibid.

Heinritz, who has made extensive studies of the purchasing function, lists a number of advantages of a centralized purchasing organization. While some of his opinions coincide with those of Lewis, he used a different approach:

1. Better control is assured by having one complete set of records pertaining to purchase transactions and expenditures, by having one person directly responsible to management for the purchasing function, and by isolating the materials factor from the influence of other departments whose primary interests lie in other directions.
2. Superintendents, department heads, office managers, and so on, being relieved of the detailed buying responsibility and of the interruptions and interviews incidental to the buying procedure, are enabled to give undivided time and attention to their respective functions, thus making for better performance in the administration and supervision of their departments.
3. Concentration on purchasing develops specialized knowledges and skills that result in more efficient and economical procurement. The validity of this point finds striking evidence in the great strides that have been made in purchasing standards and methods since about 1915, when group consciousness and mutual interest first asserted themselves among those engaged in purchasing work and when centralized purchasing first attracted the active interest of industrial management generally, after many years of casual or perfunctory attention.³

Heinritz further states that attainment of these advantages is possible. The fullest attainment, he states, is achieved which is "adequately staffed to do the job and supported with the necessary authority and facilities."⁴ Any special department raises the question of personnel and

³Stuart F. Heinritz, Purchasing, pp. 8-9.

⁴Ibid., pp. 10-11.

administrative costs. The problem facing a business enterprise is how to find a balance between the costs and benefits of a purchasing department in order that such an organizational plan may be economically sound and made a constructive contribution to profitable management.

In a study of Governmental Purchasing, Forbes names some advantages of centralized purchasing for this type of business enterprise. His arguments substantially corroborate opinions expressed by authorities previously quoted.

1. Reduction of overhead cost through reduction in personnel.
2. Lower unit costs and better deliver service.
3. Reduction in the volume of "paper work."
4. Standardization and adoption of standard specifications.
5. Centralized supervision over:
 - (a) inspection of deliveries;
 - (b) storage and distribution of stock; and
 - (c) interdepartmental transfers and sales of surplus stock.
6. Closer accounting control over expenditures.
7. Saving of discounts through prompt payment of invoices.
8. Employment of a full-time purchasing staff:
 - (a) tends to improve buying techniques; and
 - (b) tends to eliminate graft and favoritism.⁵

⁵Russell Forbes, "Centralized Purchasing in Governments of the United States and Canada," Annals of the Academy of Political and Social Sciences, CXIII (1924), 12.

The major test of any type of organization is its use or non-acceptance by business enterprises. Modern business practices are highly competitive, and any type of organization that does not prove profitable will not be used or it will be discarded. As previously shown in Chapter I, there has been a definite trend to increase centralized purchasing in business enterprises, and the majority of industry uses this type of purchasing organization in the procurement of supplies.⁶ These data indicate that centralized purchasing organizations have proven their worth in the highly competitive modern business field. Their increase and continued use show that such organizations have been a valuable addition to business efficiency.

Special Advantages of Centralized Purchasing in Companies with Geographically Separated Plants

The use of centralized purchasing organizations in companies with branch plants, however, has developed a number of problems. The distance between plants, the need for emergency purchases, and differentiated plant needs interpose a number of obstacles. According to Heinritz, these are not insurmountable; in fact, he suggests the following distinct advantages of a centralized purchasing organization for companies with geographically separated plants:

1. It is highly desirable that a uniform company purchasing policy be observed in all plants.

2. It is essential that definite product standards be maintained.

3. Separate negotiation and ordering represents a duplication of effort within the organization as a whole; consolidation of requirements facilitates greater buying power and more favorable contracts.

4. Dealing with much-used material on a large scale increases specialization which cannot be achieved by buyers of goods in small quantities.

5. Centralized control aids in correlating the company materials program and the fundamental interrelationships of plants and departments throughout the entire organization.

6. Transfer of materials from one plant to another may be the quickest and most economical way of meeting an emergency requirement.

7. One plant's surplus may be utilized to fill another's needs without making additional commitments or expenditures.

8. Competent purchasing personnel may be transferred to the point of greatest usefulness.⁹

Disadvantages of Centralized Purchasing

There are a number of arguments advanced in favor of decentralized purchasing. One criticism of centralized arrangement is that no one man can be expected to be

⁹Ibid., pp. 73-74.

thoroughly familiar with all the characteristics and properties of the item which he buys, resulting in the purchase of quality unsuited to the requirements of the using agencies. Lewis answers this criticism by stating that it is not the duty of the purchasing officer to decide for a using department what it shall use; his duty is to possess a general knowledge of the items so that he may make recommendations concerning modifications in the specifications or concerning substitute materials.¹⁰ This argument is valid if the purchasing agent makes an honest effort to understand specific needs. For example, if he stresses cost over quality, losses are incurred in many instances. The use of carbon paper in any business enterprise is considerable; any experienced typist knows that there are very great differences in quality of carbon paper. The least expensive kind, on the surface, appears to be the most economical buy; in reality, it may be the most expensive because it makes fewer carbons, smudges much easier and therefore requires rewriting. The purchasing agent, if he has not had any experience in using carbon paper, may not be able to understand a requisition from a department requesting the more expensive type of paper. This could apply to many materials; the solution is in cooperation, understanding, and an attempt to evaluate the needs of a department in terms of the experience and knowledge of the people who use the materials.

¹⁰Ibid., p. 30.

Another argument advanced against centralized purchasing is that there is delay in securing deliveries because of the time it takes for an order to travel through the necessary channels and through the policy of buying in large lots. Once again Lewis counters this criticism by stating that it is a fault of administration rather than that of the purchasing organization.¹¹ Holcombe states, similarly, that disadvantages accruing from delays may be due to a system that is clumsy and inflexible.¹² He suggests the delegation of discretionary powers to the purchasing agent enabling him by administrative rules and regulations to overcome rigid buying practices.

Centralized purchasing, it is also argued, results in securing larger stocks than necessary through "bargain" purchases. This, too, is an administrative fault and results from lack of specialized knowledge on the part of the purchasing agent rather than a fault of the organization. The human element, it is obvious, is a factor in the failure or success of any type of organization.

In companies with branch plants, some very real and specific disadvantages have been found in using a centralized purchasing type of organization, however. These will be briefly reviewed in the following paragraphs.

¹¹Ibid.

¹²Arthur N. Holcombe, State Government in the United States, p. 425.

Special Disadvantages of Centralized Purchasing in
Companies with Geographically Separated Plants

The most outstanding disadvantages of centralized purchasing in companies with geographically separated branches are listed by Lewis as follows:

1. Undue accumulation of raw materials likely to occur
2. Inventory control from a distance inflexible and costly.
3. Emergency requirements
4. Use of diversified materials by different plants
5. Neglect of local specialized sources
6. Amount of time required for checking invoices
7. Additional transportation expense
8. Authority and responsibility divided.¹³

Heinritz discusses three disadvantages of centralized purchasing in companies with branch plants. In the first place, he states the branch plant or division manager is presumably responsible for the efficient and profitable operation of his division. On the theory that responsibility and authority must go hand in hand, he should have control over the purchases as well as the production, since a large percentage of his costs are represented in the procurement function, as well as the efficiency and continuity of production. He points out that even with centralized buying, there must be some one at the plant assigned to such phases

¹³Lewis, op. cit., pp. 33-34.

of purchasing work as determination of requirements, clearing requisitions, keeping records, handling invoices; and accounting for materials.¹⁴

In the second place, the size of the plant may warrant a separate purchasing agency. Many divisions of large corporations are larger than some independent companies operating in the same area, where centralized purchasing is profitably used. Where the operations are on a very large scale, the complexity of a central purchasing agency may outweigh its benefits.

The third disadvantage is that each plant has different requirements that affect materials and their procurement. Transportation, climatic conditions, storage facilities and other similar factors all have influence in determination of plant purchases.¹⁵ Heinritz, it is indicated, is in substantial agreement with Lewis regarding disadvantages of centralized purchasing in companies with branch plants.

According to these authorities, the foregoing advantages and disadvantages of centralized purchasing in companies with geographically separated plants are the ones most commonly to be reckoned with in the determination of purchasing authority. The problem involved is the development of some practicable method of purchasing organization which will provide the advantages of centralized purchasing without

¹⁴Heinritz, op. cit., pp. 72-73.

¹⁵Ibid.

bringing in the many disadvantages. A number of methods have been proposed and these will be discussed in the following paragraphs.

Principles of Organization for Purchasing in
Companies with Widely Scattered Branches

The chief organization problem in respect to branch plant purchasing is to determine whether it shall be established as a staff division of the branch plant management, or as a line division of the central purchasing department. There are arguments pro and con for each of these types of organization. Heinritz states that the decision "in any given situation depends largely on the administrative policy and accounting practice of the company as a whole."¹⁶ Some companies are organized on the basis of product divisions that are operated to a considerable extent as independent enterprises; in such companies, the central management is concerned mainly with determination of over-all policy matters and serves in an advisory capacity. Other companies are operated on a highly functionalized plan involving over-all supervision and responsibility for manufacturing, engineering, marketing, and so on by the central office.¹⁷ Obviously, the type of purchasing organization set up by the company will depend on these policies of the company as a whole.

¹⁶ Ibid., p. 79.

¹⁷ Ibid.

Figure 1 represents a recommendation for a purchasing organization where the central agency very closely controls all operations of the branch offices, and may be described as a line division of the central purchasing department. As shown in the illustration, there is a general purchasing agent for the company with an assistant general purchasing agent. Under this official there are four buyers who are specialists in different fields. For example, in a large oil company, these buyers might be experts in oil field equipment, lease buying, supplies for refining, and equipment and supplies for branch offices. This affords an opportunity for specialized training on the part of the buyers, for special study of market trends, and many other advantages. Each division of the company then has its own purchasing agent for its different plants. One would buy for Plant A, the others for Plants B and C. A specialized buyer serves for each of these divisions. The general purchasing agent, in the final analysis, is responsible for the buying procedures for all the branch plants of his firm.

Major contracts are customarily negotiated and executed in the central purchasing department, and the branch buyer's role is to issue orders against these contracts for delivery to his plant. The advantages of this arrangement are more favorable terms through purchase of greater quantities and making possible more expert and specialized attention to major commodities and purchased products. The work of the

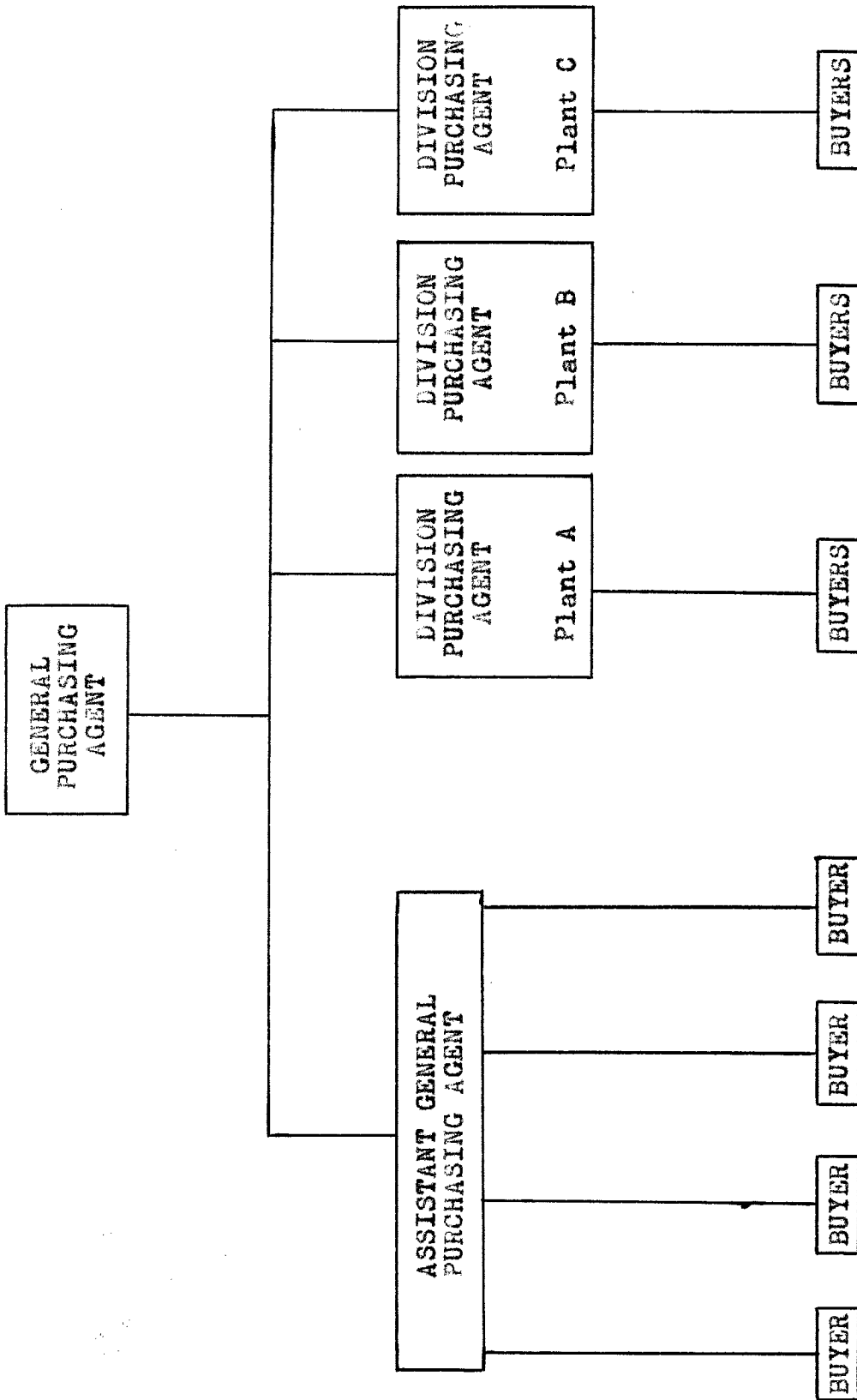


Figure 1. Organization for branch plant purchasing with control from the central office or line division.

division purchasing agent is to direct the flow of materials to his particular plant as needed, to purchase materials and supplies distinctive to his plant's needs and which may be secured from local sources, to make emergency purchases, to keep purchase and stock records, and for administration of the local purchasing department. He also represents the general purchasing agent in his territory, or on special assignment.¹⁸

The central purchasing agency is responsible for general policy and regulations, standardization, over-all inventory and buying policies, trade relations, and the like.

As far as the actual buying is concerned, materials and supplies common to the requirements of two or more plants are centralized under the jurisdiction of the general purchasing department, either for direct purchase or combined contracts against which branch plants may place orders.

Figure 2 illustrates the organization of the purchasing department of a company with branch locations from the standpoint of staff division rather than line divisions. In such an organization, the functions are more or less decentralized with each branch plant exercising a large degree of responsibility and authority for purchase of supplies and materials.

As shown in Figure 2, there is a central director of

¹⁹Ibid., p. 83.

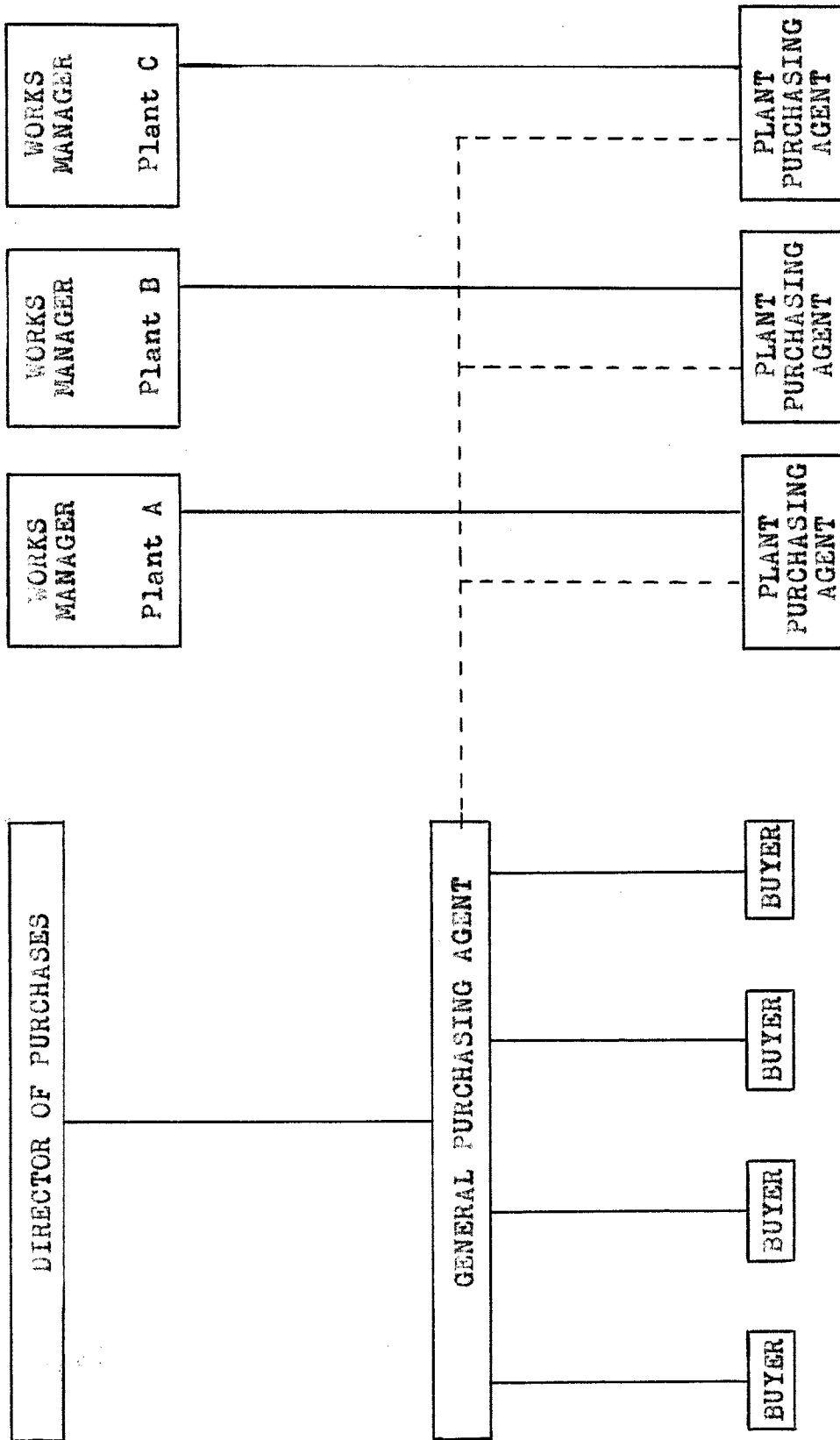


Figure 2. Organization for branch plant purchasing with staff division or decentralized control.

purchases with a general purchasing agent and four buyers operating under him. Plants A, B, and C each has a purchasing agent who is responsible to the plant manager as well as to the central purchasing agency. The degree of responsibility of the plant purchasing agents to each of these superior officers will depend largely on the administrative policy of the company; the greater the degree of independence with respect to branch or divisional operations, distinctiveness of product, inventory control, and profits, the greater will be the degree of responsibility of the plant purchasing agent.²⁰

Central control of the branch purchasing office in the staff division type of organization is chiefly in the formulation of general policy, the setting up of material standards, and centrally negotiated contracts for common requirements, against which delivery orders are issued from the various purchasing offices according to need. Other controls are systematic reports, standard costs that are subject to adjustment to meet varying local conditions, and the imposition of certain limitations, such as a dollar value limitation on the size of the purchase order which may be placed without special authorization, or a restriction upon the type of purchases that may be made by the local purchasing agent.

²⁰Ibid., p. 83.

Heinritz states that from the standpoint of practicable operations, a workable procedure can be established under each of these types of organizations. The weight of opinion and practice, however, favors having the branch plant purchasing officer accountable to the general purchasing agent rather than to the plant manager, although the practice is not universal and varies in degree of use from plant to plant.²¹

Lewis states, similarly, that many concerns have found that the most satisfactory type of organization is one in which a local purchasing officer is placed in each factory with a general procurement official established in the executive office.²² In such instances, the local officials will have the following responsibilities:

1. To make a careful study of local requirements.
2. To be intimately acquainted with factory conditions in order to act promptly in case of production emergencies.
3. To place orders only against contracts drawn on vendors approved by the home office.
4. To comply with the procurement policy laid down by the general procurement officer.²³

²¹Ibid., p. 80.

²²Lewis, op. cit., p. 35.

²³Ibid., p. 36.

The general procurement officer, in turn, is responsible for much broader problems. Lewis states:

On the theory that he knows how and where to get reliable information concerning price movements, he presumably is in a better position than the local officer to forecast price trends. He must decide such questions as reciprocity and the revision of bids in the light of the company's general policy. It is his responsibility to place contracts against which individual plants may draw and to authorize an approved list of vendors. In short, his duty is that of establishing a policy, an organization, and a procedure which will best serve the varied needs of the company as a whole.²⁴

The Production Handbook sets up the following requirements for the successful operation of centralized-localized buying:

1. The general purchasing agent will establish policies, procedures, basic forms, record-keeping methods, and other fundamentals necessary for uniformity throughout purchasing and adequate central control, and will delimit the authority and the range of buying of each local purchasing agent.
2. All local transactions will be reported at once to the central office, duplicates of contracts, and perhaps periodic summary reports of activities, being sent there.
3. Local commitments must remain within the purchase budgets of the respective plants as to the amounts for each material, and the total monthly expenditures.
4. A limit may be placed upon the amount which the respective local purchasing agents may expend upon one purchase order.
5. Special purchases, excessive-quantity purchases, and any other deviations from the range of authority given to the local purchasing agents must have the approval of the central office.

²⁴

Ibid.

6. The local situation as to requirements, stocks, etc. and data on local vendors, markets, prices, etc. for important material and supplies bought locally will be reported by each branch purchasing agent to the central headquarters.
7. Local purchasing agents will draw orders to ship against contracts placed by the central purchasing department covering the needs of two or more plants.
8. The plan should be kept flexible. Different local buying authority or assignments may be given at different times, as markets or conditions shift or change.²⁵

Criteria for Evaluation of Type of Purchasing Organization of a Company with Branch Plants

The foregoing discussions have presented the views of a number of authorities in the field of purchasing with respect to desirable purchasing organizations for companies operating a number of branch plants. A summary of the principles and procedures recommended should be helpful in evaluating organizational arrangements found in the selected oil companies to be considered in Chapter III. Accordingly, these fundamental considerations will now be synthesized and condensed.

1. A central purchasing agency formulates general purchasing policies, sets specifications, and purchases supplies common to two or more plants.

2. Staff division purchasing agents issue delivery orders according to the needs of the plants on contracts made by the central purchasing office; and they purchase supplies from local sources, and small items and emergency needs.

²⁵Ibid., 37.

3. The central purchasing office is responsible for long-time contracts, general stock items, equipment, and policy agreements.

4. The staff division agents are responsible for the flow of materials to their plants, for keeping purchase and stock records, and for administration of the local purchasing office.

5. Controls on branch purchasing agents comprise systematic reports, standard costs, and monetary limits on the amount of money which may be spent for local purchases without authorization from the central purchasing agency.

6. The type of organization used should be flexible in order to care for unforeseen emergencies or changes in marketing conditions.

7. The trend in purchasing organizations indicates that responsibility of the plant purchasing agent to the central purchasing agency is more desirable than the dual responsibility to the plant manager and the central production agency.

CHAPTER III

SURVEY OF PURCHASING ARRANGEMENTS OF A NUMBER OF SELECTED OIL COMPANIES

Information regarding organizational arrangements for purchasing was gathered by means of a questionnaire presented personally or mailed to twenty-five major oil companies operating in the Southwest. These particular companies were selected for a number of reasons. In the first place, the study is primarily concerned with the degree of centralized purchasing in firms with geographically separated branches. The major oil companies, as a general rule, are this type of firm and all the branches handle many common items. Because of the competitive nature of the oil business, each of the companies must operate in an efficient manner. The oil industry in the Southwest includes branches of nearly all major oil companies, and an investigation of the degree of use of centralized purchasing in these companies should be interesting and valuable.

The questionnaire was constructed to secure information regarding factors and conditions affecting purchasing arrangements, and regarding the responsibility for purchasing

decisions.¹ A series of questions were included which developed information concerning the plant locations, the type of purchasing organization, and the type of materials purchased at local plants along with the kinds of material generally available there. The second phase of the questionnaire developed information concerning the responsibility for purchasing stock items, long term contract items, special materials and supplies, and equipment.

All the data from the questionnaire were tabulated and combined into one master table in order to show the complete picture of the relationships existing in the purchasing organizations, and the responsibility for purchasing decisions in the selected oil companies. This table is presented at the beginning, to facilitate further analysis.

As shown in Table 1, the first thirteen questions deal with factors and conditions affecting the type of purchasing organizations used by the oil companies. Of the twenty-five companies surveyed, twenty responded. Eighteen of the companies, it is indicated, have central purchasing agencies, and thirteen of these eighteen firms also have local purchasing agents in branches. The companies without central purchasing agencies, it is obvious, have local purchasing agents at each branch plant. These data afford an opportunity to

¹Questionnaire included in Appendix of Study, pp. 68-78.

TABLE 1

FACTORS AND CONDITIONS AFFECTING PURCHASING ARRANGEMENTS
IN THE SELECTED OIL COMPANIES AND RESPONSIBILITY
FOR PURCHASING DECISIONS

Company		Factors and Conditions Affecting Purchasing Arrangements *																						
		Are Plants Geographically Separated?	Do Plants Handle Similar Products?	Do Plant Requirements Differ?	Is There Central Purchasing Agency?	Does Central Purchasing Agency Buy Items Common to All Plants?	Do Branches Have Local Purchasing Agencies?	Which Material's Bought Locally?	Emergency	Special Supplies	Which Items Purchased Locally have Monetary Limits?	Stock Items	Special Supplies and Materials	Equipment	Which Items Subject to Sharp Market Fluctuations	Raw Materials	Supplies	Equipment	Which Items Available Locally?	Raw Material	Supplies	Equipment	Do Local Groups Have Considerable Latitude in Purchasing for Certain Field Operations?	
A		O	X	X	X	X	O																	
B		X	X	X	X	X	X	X	X															
C		X	X	X	X	X	X	X	X															
D		X	X	X	X	X	X	X	X															
E		X	X	X	X	X	X	X	X															
F		X	X	X	X	X	X	X	X															
G		X	X	X	X	X	X	X	X															
H		X	X	X	X	X	X	X	X															
I		X	X	X	X	X	X	X	X															
J		X	X	X	X	X	X	X	X															
K		X	X	X	X	X	X	X	X															
L		X	X	X	X	X	X	X	X															
M		X	X	X	X	X	X	X	X															
N		X	X	X	X	X	X	X	X															
O		X	X	X	X	X	X	X	X															
P		X	X	X	X	X	X	X	X															
Q		X	X	X	X	X	X	X	X															
R		X	X	X	X	X	X	X	X															
S		X	X	X	X	X	X	X	X															
T		X	X	X	X	X	X	X	X															

*x - Yes
O - No

TABLE 1--Continued

Responsibility for Purchasing Decisions *

Stock Items				Long Term Contract Items				Special Materials and Supplies Not in Stock				Equipment												
Specification What to Buy	How Much to Buy	When to Buy	Choice of Supplier	Reciprocal Agreements	Specification What to Buy	How Much to Buy	When to Buy	Choice of Supplier	Reciprocal Agreements	Specification What to Buy	How Much to Buy	When to Buy	Choice of Supplier	Reciprocal Agreements	Specification What to Buy	How Much to Buy	When to Buy	Choice of Supplier	Reciprocal Agreements					
PUE	P	P	P	P	PUI	PU	U	P	P	PU	PU	U	P	P	PUI	P	U	P	P	P	P	P	P	P
PU	PU	U	P	P	PUE	PUE	P	P	P	U	U	U	P	P	PE	P	P	P	P	P	P	P	P	P
PU	PU	PU	PE	O	PU	PU	P	P	O	U	PU	U	P	O	PUI	P	P	P	O	P	P	P	P	O
U	IE	PI	P	P	U	U	P	P	P	U	UI	U	P	P	P	U	P	P	P	P	P	P	P	P
U	P	PU	P	O	UI	UI	P	P	O	U	E	I	P	O	P	P	P	P	P	P	P	P	P	P
E	PE	F	P	S	P	P	P	P	S	P	E	P	P	S	U	U	P	P	S	P	P	P	P	S
E	P	P	P	P	P	P	P	P	P	P	P	P	P	P	U	U	P	P	P	P	P	P	P	P
E	UI	UI	P	O	UE	UI	UI	P	O	P	P	P	P	O	U	PE	P	P	O	P	P	P	P	O
E	P	U	P	P	U	U	P	P	P	UE	U	K	P	P	PE	P	P	P	P	P	P	P	P	P
UE	U	PU	P	ED	UE	PU	PU	ED	E	U	PU	P	ED	E	E	E	U	P	E	U	P	P	P	ED
PUE	U	PU	P	P	U	U	U	P	P	E	U	U	P	P	E	U	U	P	P	P	P	P	P	P
PUE	PUE	U	P	P	UI	UI	PU	P	P	PUE	U	P	P	P	PUE	P	P	P	P	P	P	P	P	P
UE	UE	PU	P	P	P	P	P	P	P	PUE	U	U	P	P	PUE	U	U	P	P	P	P	P	P	P
PUE	U	PU	P	P	P	P	P	P	P	E	P	U	P	P	E	PUE	U	P	P	P	P	P	P	P
E	P	U	P	P	P	P	U	P	P	E	P	U	P	P	PUE	U	U	P	P	P	P	P	P	P
PUE	PU	PU	P	P	U	U	U	P	P	E	P	U	P	P	PUE	U	U	P	P	P	P	P	P	P
PUE	U	P	P	P	IE	U	U	P	P	UE	P	U	P	P	E	U	U	P	P	P	P	P	P	P
PU	U	P	U	P	E	U	U	P	P	UR	P	U	P	P	PE	U	U	P	P	P	P	P	P	P

*P-Purchasing Department, U-Using Department, E-Engineering Department, I-Inventory Control, O-None, S-Sales Department, X-Executive Department.

study the extent of decentralization, and the responsibilities for purchases assigned to central purchasing agents and to local purchasing agents. In order to make a more careful study, the data are further broken down into a number of smaller tables.

Conditions and Factors Influencing Organizational Arrangements

In analyzing the data in detail, attention is first directed to branch plant locations, products, and materials requirements of the oil companies participating in the survey. Returns from this phase of the questionnaire are presented in Table 2. As shown in the table Items 1, 2, and 7 in the questionnaire were grouped together in this classification. Sixteen of the companies, representing 80 per cent of the respondents reporting, are geographically separated by considerable distance. Eighteen of these companies, or 90 per cent, produce, sell, or manufacture essentially the same product. Fifteen of the companies, or 75 per cent, however, have different requirements and differences in operating conditions among branches that affect materials and equipment. A large majority of the oil companies, therefore, have geographically separated plants which produce or handle essentially the same product, but which have different requirements and differences in operating conditions that effect the procurement of materials.

TABLE 2

PLANT LOCATIONS, TYPE OF PRODUCTS, AND VARIATION
IN MATERIALS AND REQUIREMENTS AMONG BRANCHES
OF THE SELECTED OIL COMPANIES PARTICIPATING IN THE SURVEY*

Item	Number		Per Cent	
	Yes	No	Yes	No
Are most of your plants geographically separated by considerable distance?	16	4	80	20
Generally speaking, do most of your branch plants produce or manufacture essentially the same product?	18	1	90	5
Does each branch have different requirements and differences in operating conditions that effect materials in their procurement?	15	4	75	20

*Data taken from Table 1 of the study, p. 35.

Type of Purchasing Organizations Used
by the Companies

The type of purchasing organizations used by these selected oil companies for the procurement of materials is shown in Table 3. Items in the questionnaire included in table are Nos. 4, 5, and 3. As shown in the data, eighteen of the oil companies, or 90 per cent, indicate that they have a general purchasing office established at the executive office, and that this purchasing office buys items which are common to all the plants.

TABLE 3

TYPES OF PURCHASING ORGANIZATIONS USED IN THE SELECTED
OIL COMPANIES PARTICIPATING IN THE SURVEY*

Item	Number		Per Cent	
	Yes	No	Yes	No
Is there a central or general purchasing office established at the executive office?	18	2	90	10
If there is a central purchasing department, does it buy items which are common to all the plants?	18	2	90	10
Is a local purchasing officer placed in each branch office?	13	7	65	35

*Data taken from Table 1 of the study, p. 35.

As shown in the data in Table 3, thirteen of the respondents, 65 per cent, state that there is a local purchasing officer placed in each branch office, while seven or 35 percent, state that the central purchasing office procures materials for the plants. The majority of the oil companies, therefore, are shown to have a centralized purchasing organization modified by local purchasing officers in each branch office.

Further information regarding centralized and local purchasing policies of the oil companies was obtained from

responses to Item 13 in the questionnaire. Individual responses show numerous variations within the general pattern just presented, and they are quoted as follows:

1. All of our material and equipment is purchased by our central office.
2. All equipment is purchased by the central office; other material is locally purchased.
3. All materials with value over \$50 are purchased by the central purchasing office; materials costing less than this are locally purchased.
4. Pipe, large equipment, and automobiles are purchased by the central office; general supplies up to value of \$500 are purchased locally, with no limit on cement, mud, and lumber.
5. All items regularly carried in stock and special items are purchased by the central office; miscellaneous supplies and emergency items are purchased locally.
6. Capital equipment and warehouse stock items are centrally purchased; others, locally.
7. All major items are purchased at the central purchasing office, while maintenance items, with a limit of \$50 may be purchased locally in areas without a warehouse.
8. All heavy equipment is centrally purchased; other materials are locally purchased.
9. Capital investment equipment is centrally purchased; balance of supplies, locally purchased.
10. Approximately 50 per cent of supplies are locally purchased.
11. Expediency demands that most items of supplies be purchased locally. Some office supplies are furnished from the central office.
12. Equipment, pipes, etc. are purchased by central office; 75 per cent of supplies bought locally.

13. Pipe fittings necessary in the installation of equipment in the field purchased locally; heavy equipment, centrally purchased.²

Seven of the respondents did not answer Item 13 in the questionnaire. These were the oil companies which did not have local purchasing agents but bought all materials except emergency supplies through the central office. An analysis of the comments listed indicates that major items of equipment and supplies are usually procured by the central purchasing agencies of the companies, with the local purchasing agents, where such officials are used, procuring miscellaneous supplies and emergency items.

Data in Table 3 present in more detail the conditions governing local purchasing by the selected oil companies. Items 8, 6, and 9 of the questionnaire are included in the table. As shown in the table, all of the oil companies provide for the purchase of emergency supplies at the branch plant. Where the company does not have a branch purchasing agent, some official, generally the branch manager, has the authority to make needed emergency purchases. The majority of the companies, however, place a monetary limit on the emergency supplies that may be bought without authorization from the central agency. Thirteen of the companies, or 65 per cent, have a monetary limit on supplies and materials not in stock; five, or 15 per cent, have a monetary limit on stock items which may be purchased locally; and ten companies

or 50 per cent, limit the amount of funds that can be spent for equipment locally.

TABLE 4
CONDITIONS GOVERNING LOCAL PURCHASING BY THE SELECTED
OIL COMPANIES PARTICIPATING IN THE SURVEY*

Item	Number		Per Cent	
	Yes	No	Yes	No
Which purchasing situations are handled locally?				
Emergency	20	0	100	0
Special Purchases	4	16	20	80
Which items purchased locally are subject to monetary limit?				
Stock items	5	15	25	75
Special Supplies	13	7	65	35
Equipment	10	10	50	50
In certain field operations do local groups have considerable latitude in purchasing operations?	12	8	60	40

*Data taken from Table 1 of the study, p. 35.

In certain field operations, as shown in the data in Table 4, twelve of the respondents, or 60 per cent, state that the local groups have considerable latitude in purchasing operations. These are expenses arising from needs that cannot be foreseen or provided for in advance.

An analysis of the data in Table 4 indicates that all companies provide for the purchase of emergency supplies by

branch plant officials, but that the majority of these purchases are for special supplies and materials not in stock, and have a monetary limit. Considerable latitude is provided for local purchase of items where the need cannot be foreseen in advance.

Conditions affecting the purchasing of raw materials, supplies, and equipment are shown in the data in Table 5.

TABLE 5
MARKET CONDITIONS AFFECTING THE PURCHASING OF RAW MATERIALS, SUPPLIES AND EQUIPMENT BY THE SELECTED OIL COMPANIES*

Item	Number		Per Cent	
	Yes	No	Yes	No
Generally speaking, sharp market fluctuations are characteristic of which of the following items?				
Raw Materials	3	17	15	85
Supplies	9	11	45	55
Equipment	7	13	35	65
Which of the following items are generally available at branch or local points?				
Raw Materials	5	15	25	75
Supplies	20	0	0	100
Equipment	7	13	35	65

*Data taken from Table 1 of the study, p. 35.

Only three of the companies, or 15 per cent, as shown in the data in Table 5, report that sharp market fluctuations

are characteristic of their supplies of raw materials. Nine of the companies, or 45 per cent, state that their supplies are subject to sharp market fluctuations, and seven, or 35 per cent, say the same for equipment. These fluctuations, it is obvious, prevent any long term contracts for these different items of materials.

Some of the oil companies contacted maintain all phases of both production and marketing of products, while others have refineries or field operations. In the companies participating in the survey, only five of them, or 25 per cent, have raw materials available at branch or local points. All of the companies, or 100 per cent, have supplies at branch plants, while seven, or 35 per cent, report equipment at such locations.

An analysis of the data in Table 5 indicates that in over 50 per cent of the companies there are no sharp market fluctuations in raw materials, supplies or equipment that prevent purchasing in advance to any extent. The greatest fluctuation is indicated in the price of supplies. All of the local plants have supplies available locally, while few of them have equipment and raw materials available.

The companies were also asked to list the major categories of raw materials not available locally, but only four listed such items. Four of these respondents, or 20 per cent, listed chemicals as unavailable while one, or 5 per cent, reported that instruments, machinery, and pipe were

unavailable locally in the case of each of these categories. All other respondents failed to list any raw materials in this category.

The findings from a study of the factors and conditions affecting the purchasing arrangements of the twenty selected oil companies may be summarized as follows:

1. The majority of the plants are geographically separated by considerable distance.
2. Ninety per cent of the plants produce or handle essentially the same product.
3. Seventy-five per cent of the branches of the companies have different requirements and differences in operating conditions that affect materials in their procurement.
4. Ninety per cent of the companies have a central or general purchasing office established at the executive office.
5. All of the companies with a central purchasing agency make contracts for items common to all the plants at the central headquarters.
6. Sixty-five per cent of the oil companies have local purchasing officers in branch plants.
7. Analysis of comments by respondents indicates that major items of equipment and supplies are purchased by the central purchasing agencies and miscellaneous supplies and emergency items by local branch purchasing agents.
8. All of the companies provide for the purchase of emergency supplies at the local branches, but the majority

have monetary limits to the amount which can be purchased without authorization from the central purchasing agency.

9. The majority of the oil companies, 60 per cent, give local groups considerable latitude in purchasing operations in certain field operations, those that cannot be foreseen in advance.

10. In over 50 per cent of the oil companies, no sharp market fluctuations are reported that would prevent advance purchasing of supplies and materials.

11. All of the oil companies maintain supplies at the branch plants, but very small percentages keep equipment and raw materials at such locations.

A study of these findings yields the following major conclusions:

1. The majority of the oil companies participating in the survey have geographically separated plants and have a centralized-localized purchasing type of organization.

2. Marketing conditions are favorable in the majority of the companies for advance buying of items common to all the plants.

3. The indicated trend in the purchasing arrangements of the companies is for centralized purchasing of stock items and major equipment, and for local purchasing of emergency supplies and materials not in stock, with a monetary limit for the amount purchased without central authorization.

Responsibility for Purchasing Decisions
Within the Oil Companies in Procur-
ing Various Types of Materials

Materials needed by oil companies vary in nature. There are stock items, long contract items, special materials and supplies not in stock, and equipment to be purchased. In studying the type of arrangements used in purchasing procedures, attention was given to the question of who makes the purchasing decisions for these various items. Are they all bought by the purchasing agent or do other departments of the company have a voice in the matter? Data from the second phase of the questionnaire answer these questions.

An analysis of the writings of Lewis, Heinritz, and other authorities indicates that the principal decisions to be made in purchasing are the following: (1) specifications of what to buy, (2) how much to buy, (3) when to buy, (4) choice of supplier, and (5) reciprocal agreements. The degree of centralization can be gauged by the extent to which these decisions are concentrated under purchasing agencies. One point to be considered, however, in the analysis of data is that determination of specifications of what to buy is not a basic purpose of the purchasing agency; a purchasing arrangement could still be considered centralized even though the purchasing agency does not participate in that decision. The purchasing agent often makes suggestions concerning the specification but basically this is not one of his functions.

In Table 1 data were presented showing the responsibility for purchasing decisions by all departments of the individual companies: purchasing, inventory control, engineering, and others. Some of the respondents indicated joint responsibility among departments for purchasing decisions while others indicated single responsibility. The degree of centralization in purchasing arrangements can be studied through data showing which departments of the companies have responsibility for procuring various types of supplies.

Responsibility for Purchasing Decisions of Stock Items.--

Data in Table 6 are presented to show the department of the companies which are responsible for purchasing decisions of stock items. As shown in the data, there is a decided lack of uniformity among the companies for placing responsibility for purchase of this type of materials. In determining specifications of what to buy, six of the companies divide the responsibility between the purchasing, engineering, and using departments and the same number make the engineering department alone responsible. Three place responsibility on the purchasing and using departments, two, in the using and engineering departments, and only one, in the engineering department alone. The engineering department, it is indicated, is consulted in the majority of instances regarding specifications of what to buy.

TABLE 6

AUTHORITY FOR PURCHASING DECISIONS FOR STOCK ITEMS
IN THE SELECTED OIL COMPANIES*

Decision	Department Responsible for Decision **												
	P	PUR	PUE	PI	PU	PE	U	UI	UE	EI	E	O	N**
Specifi- cation of What to Buy	1	0	6	0	3	0	2	0	2	0	6	0	0
How Much to Buy	6	0	1	0	4	1	5	1	1	1	0	0	0
When to Buy	6	0	0	1	8	0	0	1	0	0	4	0	0
Choice of Sup- plier	18	0	0	0	0	1	1	0	0	0	0	0	0
Recipro- cal Agree- ments	14	0	0	0	0	0	0	0	0	0	0	2	6

*Data taken from Table 1 of the Study, p. 35.

**P--Purchasing Department

PUE--Purchasing, Using, and Engineering Department

PUI--Purchasing, Using, and Inventory Control Department

PI--Purchasing and Inventory Control Department

PU--Purchasing and Using Department

PE--Purchasing and Engineering Department

U--Using Department

UI--Using and Inventory Control Department

UE--Using and Engineering Department

EI--Engineering and Inventory Control Department

E--Engineering Department

O--Others

N--None

As shown in the data in Table 6, six of the companies leave the decision of how much to buy to the purchasing department, five, to the using department, four, to the

purchasing and using department, and one to the purchasing, using, and engineering departments, the purchasing and engineering departments, the using and engineering departments, the using and inventory control departments, and the engineering and inventory control departments, respectively. The majority of the companies, it is shown, leave the decisions regarding the amount of stock items to be purchased either to the purchasing or using departments, or to some joint determination in which one of these departments participates.

Eight of the companies let the purchasing and using departments jointly determine when to buy stock items; six leave this matter to the purchasing department, and four, to the engineering department. The majority of the companies, it is seen, leave the decision either to the joint department of using and purchasing or to the purchasing department alone.

Eighteen of the companies place responsibility for choice of supplier in buying stock items in the purchasing department, while one places it jointly with the engineering and purchasing departments and another with the using department alone. Six of the respondents stated that their companies made no reciprocal agreements in buying stock items, and the fourteen who make such agreements leave the decisions to the purchasing departments.

Analysis of the data in Table 6 indicates that the companies vary purchasing decisions for stock items among departments of the company in respect to what is to be bought, how

much is to be bought, and time of purchase. Greater uniformity is shown in choice of supplier and in the making of uniform agreements. The engineering department, it is indicated, is dominant in specifications of stock items, while the purchasing and using departments are dominant in determination of "when to buy" and "how much to buy." The purchasing department is dominant in the choice of supplier and reciprocal agreements.

Responsibility for Purchasing Decisions for Long-Term Contract Items.--Responsibility for purchasing decisions within the company departments in the purchase of long term contract items is shown in the data in Table 7. Nine of the companies leave the decision regarding specifications of long contract items to the engineering department, and six place responsibility on the purchasing department. One respondent stated that his company did not buy long contract items, and the others placed responsibility jointly between the purchasing, using, and engineering departments in various ways.

In six of the companies, the purchasing department decided how much to buy, while in four instances the choice is left to the joint decisions of the purchasing and engineering departments and the same number to the purchasing and inventory control departments in the companies. Nine of the companies leave the decisions regarding when to buy to the purchasing departments and six leave them to the using departments.

TABLE 7

AUTHORITY FOR PURCHASING DECISIONS FOR LONG TERM CONTRACT
ITEMS IN THE SELECTED OIL COMPANIES**

Decision	Department Responsible for Decision **												
	P	PUI	PUE	PI	PU	PE	U	UI	UE	EI	E	O	N**
Specifica- tion of What to Buy	6	1	1	0	1	0	0	0	1	0	9	0	1
How Much To Buy	6	0	1	4	0	4	2	1	1	1	0	0	0
When to Buy	9	0	0	0	3	0	6	1	1	0	0	0	0
Choice of Supplier	20	0	0	0	0	0	0	0	0	0	0	0	0
Reciprocal Agreements	14	0	0	0	0	0	0	0	0	0	0	2	4

*Data taken from Table 1 of the Study, p. 35.

**P--Purchasing Department

PUE--Purchasing, Using, and Engineering Department

PUI--Purchasing, Using, and Inventory Control Department

PI--Purchasing and Inventory Control Departments

PU--Purchasing and Using Department

PE--Purchasing and Engineering Department

U--Using Department

UI--Using and Inventory Control Department

UE--Using and Engineering Department

EI--Using and Inventory Control Department

E--Engineering Department

O--Others

N--None

As shown in the data in Table 7, all of the companies let the purchasing departments select suppliers. Four companies make no reciprocal agreements for long term contracts,

and fourteen leave such decisions to the purchasing departments. In one instance, the sales department was designated and in another the executive department.

Analysis of the data in Table 7 indicates that the engineering departments of the oil companies dominate in making decisions or long-term contracts concerning specifications of what to buy, while the purchasing and using departments dominate in decisions regarding how much and when to buy. The purchasing department is dominant in determining the choice of supplier and in making reciprocal agreements.

Responsibility for Purchasing Decisions for Supplies and Supplies Not in Stock.--Data on responsibility for purchasing decisions for special supplies and supplies not carried in stock in the oil companies are shown in Table 8. As shown in the table, the engineering department has the responsibility of deciding specifications of what to buy in eight companies, with the purchasing departments, the using departments, and the using and engineering departments, respectively, functioning jointly in nine other companies.

The purchasing departments in eight of the companies and the using departments in six others decide how much to buy, constituting a majority of the companies. The decisions on when to buy are made by the using departments of thirteen companies. Three companies leave this decision to the engineering department, and two to the purchasing departments, but the

using department is predominant. Choice of supplier is left to the purchasing department in all instances. Fourteen companies leave reciprocal agreements to the purchasing agent, while two other companies let the executive and the sales departments jointly make the decisions.

TABLE 8

AUTHORITY FOR PURCHASING DECISIONS FOR SPECIAL SUPPLIES
AND SUPPLIES NOT CARRIED IN STOCK IN THE SELECTED
OIL COMPANIES*

Decision	Department Responsible for Decision **												N**
	P	PUI	PUE	PI	PU	PE	U	UI	UE	EI	E	O	
Specifica- tion of What to Buy	3	0	2	0	1	0	3	0	3	0	8	0	0
How Much to Buy	8	0	0	0	3	0	6	1	0	0	2	0	0
When to Buy	2	0	0	0	1	0	13	1	0	0	3	0	0
Choice of Supplier	20	0	0	0	0	0	0	0	0	0	0	0	0
Recipro- cal Agree- ments	14	0	0	0	0	0	0	0	0	0	0	2	4

*Data taken from Table 1 of the study, p. 35.

**P--Purchasing Department

PUI--Purchasing, Using, and Inventory Control Department

PUE--Purchasing, Using, and Engineering Department

PI--Purchasing and Inventory Control Department

PU--Purchasing and Using Department

PE--Purchasing and Engineering Department

U--Using Department

UI--Using and Inventory Control Department

UE--Using and Engineering Department

EI--Engineering and Inventory Control Department

E--Engineering Department

O--Others

N--None

Analysis of the data in Table 8 indicates that the engineering department dominates in determining the specifications for buying special supplies and supplies not in stock. The purchasing and using departments dominate in deciding when to buy. Choice of supplier is left to the purchasing departments by all the companies. Reciprocal agreements likewise are made by purchasing agents in all instances where such agreements are used.

Responsibility for Purchasing Decisions for Equipment.---

Data on the responsibility for purchasing decisions for equipment within the oil companies are shown in Table 9. As shown in the data in Table 9, six of the companies place the responsibility for specification of equipment in the engineering department while seven other companies include the engineering department in joint decisions with the using department and the purchasing department. Only two companies leave this decision to the purchasing department alone.

Determination of how much equipment to buy is the main responsibility of the purchasing, using, and engineering departments, with eight companies designating the purchasing, seven, the using, and three, the engineering departments. Sixteen of the companies place responsibility for decisions regarding when to buy with the purchasing department, while three make this the responsibility of the using department, with the one remaining combining it between the purchasing and the using department. The choice of supplier was delegated

to the purchasing departments in the buying of other items, but a difference is found in buying equipment: the engineering department in six instances shares the responsibility with the purchasing department and in one instance carries the responsibility alone. Reciprocal agreements are handled in the same way as in the purchase of other items.

TABLE 9

AUTHORITY FOR PURCHASING DECISIONS FOR EQUIPMENT
IN THE SELECTED OIL COMPANIES*

Decision	Department Responsible for Decision **												N**
	P	PUI	PUE	PI	PU	PE	U	UI	UE	EI	E	O	
Specification of What to Buy	2	2	3	0	0	4	3	0	0	0	6	0	0
How Much to Buy	8	0	0	0	2	0	7	0	0	0	3	0	0
When to Buy	16	0	0	0	1	0	3	0	0	0	0	0	0
Choice of Supplier	13	0	0	0	0	6	0	0	0	0	1	0	0
Reciprocal Agreements	14	0	0	0	0	0	0	0	0	0	0	2	4

*Data taken from Table 1 of the study, p. 35.

**P--Purchasing Departments

PUI--Purchasing, Using, and Inventory Control Departments

PUE--Purchasing, Using and Engineering Departments

PI--Purchasing and Inventory Control Departments

PU--Purchasing and Using Departments

PE--Purchasing and Engineering Departments

U--Using Departments

UI--Using and Inventory Control Department

UE--Using and Engineering Department

EI--Engineering and Inventory Control Department

E--Engineering Department

O--Others

N--None

Analysis of the data in Table 9 indicates that the engineering departments dominate in responsibility for specifying what to buy, the purchasing and using departments in how much to buy, and the purchasing departments in which to buy, choice of suppliers, and in making reciprocal agreements.

A composite table of these data on authority for purchasing decisions summarizes the findings as analyzed in Tables 6, 7, 8, and 9. It is presented as Table 10.

The totals in the data in Table 10 are based on a possible 400 points if each respondent had answered each question regarding purchasing decisions relative to each of the different items purchased. By reference to Table 1, this may be comprehended more readily; the product of five decisions on four types of items by twenty companies is the composite total of 400.

As shown in the data, there are 200 instances of where the purchasing decision for the different items was assigned to the purchasing department alone, and the purchasing department shared purchasing decisions in sixty-four more instances, a total of 264 instances out of a possible 400, or 66 and $\frac{2}{3}$ per cent. The data, therefore, conclusively indicate that the purchasing departments of the companies play a major role in the ultimate purchasing decisions. The engineering department plays a dominant

TABLE 10

AUTHORITY FOR PURCHASING DECISIONS IN PROCUREMENT
OF MATERIALS BY THE SELECTED OIL COMPANIES*

Decision	Department Responsible for Decisions **												
	P	PUI	PUE	PI	PU	PE	U	UI	UE	EI	E	O	N**
Specifi- cation of What to Buy	12	3	12	0	5	4	8	0	6	0	29	0	1
How Much to Buy	28	0	2	4	9	7	20	3	2	1	5	0	0
When to Buy	33	0	0	1	12	0	21	4	1	0	7	0	0
Choice of Sup- pliers	71	0	0	0	0	2	1	0	0	0	1	0	0
Reci- procal Agree- ment	56	0	0	0	0	0	0	0	0	0	0	8	16
Totals	200	3	25	5	26	18	49	7	9	1	42	8	18

*Data taken from Table 1 of the study, p. 35.

**P--Purchasing Departments

PUI--Purchasing, Using, and Inventory Control Departments

PUE--Purchasing, Using, and Engineering Departments

PI--Purchasing and Inventory Control Departments

PU--Purchasing and Using Departments

PE--Purchasing and Engineering Departments

U--Using Departments

UI--Using and Inventory Control Department

UE--Using and Engineering Department

EI--Engineering and Inventory Control Department

E--Engineering Department

O--Others

N--None

role in determining specifications, and the using department is influential in decisions concerning how much to buy and

when to buy, but the purchasing department is the dominant one in the final analysis.

CHAPTER IV

EVALUATION OF THE DEGREE OF CENTRALIZED PURCHASING ARRANGEMENTS USED BY THE SELECTED OIL COMPANIES

Criteria set up in Chapter II form a basis for evaluating the degree of centralized purchasing arrangements of a company with branch plants. The purpose of this chapter is to measure the findings from the data presented in Chapter III in terms of the criteria. No hard-and-fast conclusions, necessarily, can be made but trends can be indicated.

Evaluation of the Degree of Centralized Purchasing Arrangements in the Selected Oil Companies

Eighty per cent of the companies participating in the survey, it is shown, have branch plants which are geographically separated. Ninety per cent of these plants handle essentially the same product, but 75 per cent of them have different requirements in operating conditions that affect procurement of materials. Ninety per cent of the companies, in spite of these differences and differing

locations, have centralized purchasing arrangements of some nature, and 35 per cent employ no local purchasing officers in the branch plants. Centralized purchasing, therefore, is used by a large majority of the companies. The degree to which it is used is shown by comparing the data with criteria.

The first criterion developed stated that the central purchasing office, in general, should formulate purchasing policies, set specifications, and purchase supplies common to two or more plants. The data obtained from the respondents in the study show that the companies are in substantial agreement with this criterion in their purchasing policies. General purchasing policies are formulated at the central headquarters of the firms and branch plants follow these policies in the administration of their plants. The majority of the respondents reporting stated that the engineering departments of the companies either set the specifications or participated in the decisions. Supplies are available at all local plants, but the data indicate that these are not purchased to any extent by local branch officials. Emergency supplies are the chief materials purchased.

According to the second criterion, the most efficient way of administering purchasing arrangements in plants with a central purchasing agency and branch firms is for the local agents to issue delivery orders against contracts made by the central purchasing office, purchase supplies from local

sources, and small items and emergency needs. The data indicate that these are, in general, the policies of the companies studied. All of the companies have provisions for the purchase of emergency items, and a majority of them provide for small items with a monetary limit attached. The companies, it is indicated, meet this second criterion vary satisfactorily.

Criterion 3 stated that the central purchasing agency of a company with geographically separated plants should be responsible for long-term contracts, general stock items, equipments and policy agreements. The data presented in Chapter III show that a large majority of the participating companies follow this criterion very closely in their purchasing arrangements. This criterion, also, is satisfactorily met.

The main responsibility of the local division agents, according to Criterion 4, was for administration of the local purchasing office, taking care of records and invoices, and keeping a flow of sufficient materials for operation of their plants. In the main, the data show that the participating companies in the study follow this procedure very closely.

The majority of the companies have monetary limits on the amount of purchases made locally which serve as a control on the local branch officer. This policy is in line with Criterion 5 which sets up such a limitation.

Criterion 6 stated that the type of organization used

should be flexible in order to care for unforeseen emergencies or changes in marketing conditions. While no specific questions were asked in this survey on this phase of purchasing arrangements, some of the respondents in their replies gave some data showing how their companies operate in this respect. Three of the letters received are included in the appendix of the study and reference to them shows some significant data and intra-company relationships:

Letter No. 1 discusses the questions which could not be answered by "yes" or "no" or by sentences. A wide diversity in operations and in products handled or manufactured is indicated. Local purchasing officers are not used, but branch buyers are located strategically in the areas served by the company. Major projects and expenditures are passed on by the executive officers of the firms, and the purchasing of the various materials, supplies, or equipment involved are then in the hands of the Purchasing Department.

Activities of the branch purchasing agents differ according to the needs of the companies in the different areas served. One buyer, it is shown, procures equipment for drilling, while another secures supplies for a large refinery, a carbon black plant, a chemical plant, and a rubber plant. The first buyer has no supervision over warehouses, while the second one not only supervises the buying, but also a large warehouse. The organization of the company, which is

one of the largest represented in the study, is seen to be very flexible and indicates that it is formed to care for all unforeseen emergencies or changes in marketing conditions.

Letter No. 2 describes the purchasing procedures of the company represented. While purchasing procedures were not a part of the survey, the letter does indicate to some extent the nature of the purchasing organization used by the company.

Letter No. 3 describes in detail the purchasing organization of the firm represented. It furnishes many interesting details of the purchasing organization not possible in the short answers to the questionnaire. The three letters together form an interesting case study and show the need for further investigation along this line.

Very little information was developed in the study regarding dual responsibilities of local purchasing agents. The general trend indicated is for the general purchasing agency to determine policies and for the local branch agents to carry out the policies indicated.

The overall conclusion gained from the evaluation of the purchasing arrangements of the companies participating in the survey is that they, in general, meet very satisfactorily the opinions of authorities in the field of purchasing arrangements for centralized purchasing in firms

¹Letters included in Appendix of the study,

with branch plants. Decentralized arrangements to provide for branch needs are the rule, even where there is a highly developed centralized purchasing authority.

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

Conclusions

The following conclusions have been developed from the study of the purchasing arrangements of twenty selected oil companies operating in the Southwestern area of the United States:

1. Some type of centralized purchasing arrangements are being used by a large percentage of the business firms in the Southwest, and especially in those of large industries.

2. There are both advantages and disadvantages of centralized purchasing, but the increased use of this type of purchasing arrangements indicates that the method is efficient and an aid to economical administration.

3. Application of centralized purchasing arrangements to firms with branch plants has developed a number of problems which are being intensively studied.

4. The most-recommended type of centralized purchasing arrangements for firms of this nature is for the central purchasing agency to formulate general policies, set specifications, and purchase supplies for items common to two or

more plants, with local agents drawing supplies against these contracts, keeping the flow of supplies moving to meet plant needs, and administering plant affairs.

5. Eighty per cent of the companies surveyed have geographically separated plants; the companies, therefore, provide an adequate basis for the study of the degree of centralized purchasing used in companies of this nature.

6. Ninety per cent of the participating oil companies have some type of centralized purchasing arrangements.

7. Thirty-five per cent of the companies do not have a local branch purchasing official.

8. In the majority of the companies, the central purchasing agencies formulate purchasing policies, make specifications, and buy stock items, long term contract items, and equipment, while local branch purchasing officials buy for emergency needs and supplies and materials not in stock or from local sources.

9. The majority of the companies place a monetary limit on the amount of goods bought without authorization from the central office.

10. The purchasing arrangements of the companies participating in the survey indicate that a very flexible centralized-localized purchasing arrangement is followed and that the companies are in line with expressed opinions of authorities in the field of purchasing in this respect.

Recommendations for Further Research

The data developed in the study, and especially the explanatory letters received, indicate the need for a more detailed case study of the policies and procedures of plant purchasing in individual companies with branch plants. It is recommended that further studies be made along this line by students and research workers in order to develop data valuable in the study of business economics, and to determine the most efficient and economical ways of meeting the problem.

APPENDIX

DIRECTIONS: Please check the answer or answers that are most applicable to your company's purchasing organization.

1. Are most of your branch plants geographically separated by considerable distances? Yes___ No___
2. Generally speaking, do most of your branch plants produce or manufacture essentially the same products? Yes___ No___
3. Is a local purchasing officer placed in each branch plant? Yes___ No___
4. Is there a general or central purchasing office established at the executive office? Yes___ No___
5. If there is a central purchasing department, does it buy items which are common to all the plants? Yes___ No___
6. Which of the following items purchased locally are subject to a monetary limit? Stock Items___ Long Term Contract Items___ Special Supplies and Materials not in Stock___ Equipment___ None of These___ "Others", please name___
7. Does each branch plant have different requirements and differences in operating conditions that affect materials and their procurement? Yes___ No___
8. Which of the following purchasing situations are handled locally? Emergency Purchases___ Special Purchases___
9. In certain field operations do local groups have considerable latitude in purchasing their needs? Yes___ No___
10. Generally speaking, sharp market fluctuations are characteristic of which of the following items? Raw Materials___ Supplies___ Equipment___

11. Which of the following items are generally available at branch or local points? Raw Materials___ Supplies ___ Equipment___

12. List major categories of raw materials that are not available locally. _____

13. If possible, please give a general statement of policy as to what is purchased centrally and locally.

WHO MAKES THE VARIOUS PURCHASING DECISIONS IN YOUR ORGANIZATION?

(If questions or needed explanations come to mind while checking the blanks, please enter those in the space reserved for comments at bottom of sheet.)

Directions: Please check space which indicates who makes each of the principal decisions for each class of items.
 Example : Checking of first space under "How Much to Buy", would indicate that the Purchasing Department makes this decision for stock items.

Type of Item Purchased and Group Making Decision Regarding It	Purchasing Decision		
	Specification of What to Buy	How Much to Buy	When to Buy Supplier Agreements
1. Stock Items	Purch. Dept.		
	Using Dept.		
	Inv. Control		
	Engrg. Dept.		
	Other (name)		
2. Long Term Contract Items	Purch. Dept.		
	Using Dept.		
	Inv. Control		
	Engrg. Dept.		
	Other (name)		
3. Special Materials and Supplies not in Stock	Purch. Dept.		
	Using Dept.		
	Inv. Dept.		
	Engrg. Dept.		
	Other		
4. Purchase of Equipment	Purch. Dept.		
	Using Dept.		
	Inv. Dept.		
	Engrg. Dept.		
	Other		
5. Please use the space below to give any explanation which will make clearer the arrangement in your organization.			

Letter No. 1

Mr. Jerry Strong
312 Fulton
Denton, Texas

Dear Sir:

Your letter of December 13, 1950 requesting information as outlined in the questionnaires, which you attached, is being answered by means of completing the questionnaires. However, in order to give you a thorough explanation of the methods employed by our Purchasing Department we wish to give you more detailed information in the following paragraphs. Those questions which can not be, in our opinion, answered fully on your questionnaires are being handled as follows:

Question No. 2 - Our company has expanded to the extent that we not only have refineries and gasoline plants, but we are now engaged in the manufacture of such items as carbon black, ammonia, ammonia nitrate, ammonia sulphate, lubricating oils, and many special products.

Question No. 3 - A local purchasing officer is not placed in each branch plant. We do, however, have branch buyers located strategically to take care of various areas. Their duties will be discussed in a later paragraph.

Question No. 6 - We have not filled this in, as we wish to advise that because of the ramification of a company the size of ours we operate in a fashion that major projects and expenditures are first presented to our Operating Committee for approval or disapproval, then are passed to the Executive Committee. If approved by the Executive Committee, they are then authorized projects or expenditures and the Purchasing of the various materials, supplies, or equipment involved is in the hands of the Purchasing Department.

Question No. 12 - Raw materials that are not available locally are of such magnitude that we prefer to list some of the major items that go into our processes. Those that readily come to the writer's mind are caustic soda, soda ash, sulphuric acid, lime, hydrofluoric acid, Fuller's earth.

Question No. 13 - This may be discussed as follows: From our centralized offices in Bartlesville all contracts, blanket orders, and long term commitments are negotiated. Instructions

are issued from time to time insofar as purchasing by our branch buyers is concerned.

In our Bartlesville Office our buying is done by the Purchasing Agent and 10 buyers. Warehousing and material handling falls under the supervision and authority of the Purchasing Agent.

We have branch buyers in Oklahoma City - Borger, Texas - Houston, Texas - Odessa, Texas and Salt Lake City, Utah. The type of buying and the latitude allowed our branch buyers depends somewhat on the type of operation in the area in which each branch buyer is located.

For example, our buyer at Salt Lake City is involved primarily in procuring equipment common to drilling wells, producing oil, equipment for some of our smaller refineries and marketing equipment. No warehouse operation is under the supervision of that buyer. However, our buyer at Borger, Texas not only supervises the buying, but also a large warehouse at that point, as is true at Odessa and Oklahoma City.

At Borger purchases handled in that territory involve a large refinery, a large gasoline treating plant, several smaller gasoline plants, carbon black plants, a chemical plant, and a rubber plant. You can see that the diversification in that area is greater insofar as supplies and equipment are concerned than it is in Salt Lake City.

In Oklahoma City we also have a warehouse, as we do at Odessa. At Oklahoma City there is a small amount of gasoline plant equipment involved and considerable production.

At our Houston, Texas Office the branch buyer does not supervise a warehouse, but acts as our representative on questions regarding the amount of material that should be purchased, source of supply on emergency purchases and any other service that can be rendered to the Production Department and other departments in that area.

Although we have answered your questionnaire, saying that only emergency purchases are made in the field, this is only partially true. There are certain types of material that we do not wish to stock in our warehouses because of the infrequent use, its specialized nature, or for some other good reason. In those cases the purchases are made in the field by our branch buyer.

In regards to the questionnaire, "Who makes the various purchasing decisions in your organization?", we would like to

expand on this to some degree. Insofar as reciprocal agreements are concerned, however, and this applies to all four categories listed in your questionnaire, it is a matter of our working with all departments to determine what is the best procedure to follow insofar as the overall company good is concerned. Although we show in each category that the using department specifies what to buy, if price, delivery, or other factors enter into the purchase the Purchasing Department has a voice in the specifications.

How much to buy under all categories is determined by working with the using department. Conditions of supply, price, etc., are taken into consideration in such discussions and applied to the requirements as furnished to us by the using department. We also have to take into consideration under this heading governmental controls that may limit the amount of materials that we can buy, whether it be for stock, construction, or maintenance.

When to buy is another more or less cooperative decision. However, any factors involving price, delivery or unusual conditions that might exist are usually those with which our department is more familiar and in many instances we request requisitions from the operating departments far in advance of the date they normally would requisition such materials.

You may wonder how the Purchasing Department can select the choice of supplier in all cases, while in most cases the specifications are furnished by the using department. This matter is closely watched to be sure that the specifications are made in such manner that more than one source of supply can be involved. This provides for an element of competition in most of our purchases.

We hope that the above will give you enough information to allow you to understand our method of operating.

Very truly yours,

Letter No. 2

TO Purchasing Agents
FROM
SUBJECT Purchasing Procedure

This is to confirm the basis on which purchase requisitions are handled and to acquaint all concerned with such basis. This represents no change from what has developed over the past several months from repeated discussions and conferences of the purchase order procedure put into effect October 1, 1948. Rather, it states the certain fundamentals which have crystallized.

1. Delivery date required. On receiving the requisition, the purchasing agent who handles first determines whether or not the date specified furnished adequate time to make a considered purchase. If so, there is no problem. If not, the date need be discussed by phone with the requisitioner. If the date is impossible to meet, the earliest possible date need be developed and cleared with the requisitioner. If expensive to meet, the purchase considerations need be explained to the requisitioners, soliciting from him the timing considerations. Agreement should then be reached between the requisitioner and the purchasing agent on that date which is to best over all advantage. Final responsibility for specifying delivery date, within the limit of what is possible, lies with the requisitioner. The purchasing responsibility is (a) to advise the requisitioner what additional expense may be involved and (b) to meet his required delivery.

2. Specifications. On receiving the requisition, the purchasing agent who handles determines whether or not the specifications cited furnish adequate description and latitude for a considered purchase. If so, there is no problem. If not, the specifications need be discussed by phone with the requisitioner.

Specifications may be inadequate to assure the supplier delivering what is essential for the purpose. It is the responsibility to develop more economic possibilities, either by wider specifications or acceptable alternatives, and to call to the attention of requisitioners the purchase advantages of such possibilities.

If specifications are expensive to meet, therefore, the purchase considerations need be explained by phone to the requisitioner, soliciting from him the complementing considerations of requirements for the service intended. Final responsibility for stating specifications lies with the requisitioner what additional expense may be involved and (b) to meet his specified requirement.

3. Awarding the order. Within the limits of timing and specifications established above and what is mechanically practical, orders are awarded on the basis of equal opportunity to and fair judgment between the offerings of all who solicit our business. It is essential that each reliable supplier be advised of our need and accorded an opportunity to quote. It is then essential that the selection be made on the exercise of best judgment as to who offers us most value in combined quality-service-price.

4. Problem Study Quotation Requests. The purpose of such quotations is to develop information for project decision, not to award an actual order. The emphasis, therefore, is on timing, not on economic purchase performance and fairness to suppliers. The purchasing agent who handles will request such quotations on the basis (a) adequate for the purpose both in scope and accuracy and (b) in minimum time. The inquirer's needs, both for accuracy and timing, should be ascertained by phone if it is indicated that an answer within 5% accuracy will be difficult or expensive to develop for him by the second day after receipt of the request.

5. Purchase Order Status. It is the purchasing agent's responsibility to keep the requisitioner advised of the status of the order required by the requisitioner. The Status Notice, therefore, need be forwarded to the requisitioner immediately when any significant change develops in delivery outlook from that specified on the requisition and purchase order. Should it be indicated that the change may require the requisitioner to alter his plans, the purchasing agent will advise the requisitioner by phone (confirming by Status Notice), the two then deciding what if any remedial steps need be taken.

6. Timing. It is essential that constant effort and pressure be exerted by each purchasing agent to achieve the following timing:

- a. Initiate action same day (noon to noon) on all requisitions, problem study requests, quotations, vendors' mail, follow-up requests, and invoice clearance.

b. Emphasize necessity of return-mail replies to quotation requests and requests to suppliers for follow-up action.

c. Emphasize necessity for prompt replies from requisitioners clarifying supplier questions concerning orders.

d. Choose regular mail, air-mail, telegraph, or telephone communication on the primary basis of what is to be gained by promptness and clarity versus the lesser element of cost.

e. Conserve to the maximum degree the time available between requisition and required delivery dates to be used in developing information on use (from requisitioner) and on availability (from potential suppliers) in order to improve the purchase performance.

f. It is mandatory that emergency plant requirements be handled immediately. If emergency circumstances justify, in the considered consensus of requisitioner and the purchasing agent who handles, the following emergency procedure may be followed: authorized requisitioner phones purchasing agent who handles the category in question, explains the emergency and timing required and furnishes requisition number; if necessary, purchasing agent will immediately handle with supplier by phone or wire, furnishing purchase order number; this purchase order folder will be identified to the requisition number and name of requisitioner and held on the desk until the formally approved requisition can be delivered. This purchase order folder will be identified by the purchasing agent writing "Emergency" in large red-pencil across the face and, at the end of the day the formal order is written and mailed, all such folders will be routed to the Manager of Purchases for review. (Since all suppliers have standing instructions from the Purchasing Section not to make deliveries to Ethyl or enter into commitments in behalf of Ethyl without at least an assigned purchase order number, the above procedure will result in less lost time than for requisitioners to attempt to arrange such emergency deliveries direct with suppliers.)

The appended list shows up-to-date identification of purchasing agents, purchase order clerks, "P" numbers, phone numbers, and specialized purchasing fields assigned.

/S/

Letter No. 3

Mr. Jerry Strong
312 Fulton Street
Denton, Texas

Dear Mr. Strong:

I hope you will pardon the delay in replying to your questionnaire of December 13th. My procrastination is due entirely to the holidays.

I find it difficult to answer your questionnaire with a simple yes or no. Therefore, I shall attempt to answer your first seven questions with a statement, to-wit: The operations of the _____ Oil and Gas Company are divided into four divisions geographically, and since we are primarily an operating company concerned with the production of crude petroleum the operations in each division are essentially the same. These divisions tie in with the General Office located in Tulsa from which company policies and major decisions emanate.

With particular regard to Purchasing, in each division office we have a Division Purchasing Department which, of course, ties in with the Purchasing Department in the General Office. These division offices are manned by a Division Purchasing Agent and his staff who procure the services and materials necessary for their respective divisions within certain limits, while the Purchasing Department in the General Office is responsible for the overall policies governing procurement, and at the same time functions in the placing of contracts and orders for larger and more important transactions which are applicable to the overall requirements of the company.

In response to Question No. 8 - Field orders are permissible with a monetary limitation up to \$25.00, except in cases of extreme emergency where the field superintendent has full latitude.

Question No. 9 - Local requirements are channeled into the respective division offices which, of course, have considerable latitude as regulated by company policy.

Question No. 10 - It has been our experience that sharp market fluctuations are characteristic of certain types of raw materials.

Questions 11 and 12 - Supplies for maintenance and operation are generally available at all local points. Raw materials and equipment are not regularly stocked but rather are supplied as required.

With reference to your chart concerning "Purchasing Decisions", supplies for maintenance and operations are maintained in district warehouses and it is the responsibility of the respective field superintendents to see that they are maintained and operated in accordance with general company policy, which outlines the types of materials to be stocked and the size of the inventories to be maintained.

In the General Office we have a Standardization Committee composed of representatives of the Operating, Engineering and Purchasing Departments which passes on specifications applying to the types of equipment used and the standards to be adopted. Such specifications for standards are always broad enough to permit the use of products of two or more manufacturers, which enables the Purchasing Department to take advantage of the competitive angle in its decision as to a supplier.

The foregoing is quite brief, and no attempt has been made to go into detail, however we hope that it will be of some value to you in the preparation of your thesis in which we wish you the best of success.

Yours very truly,

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