UNIT 19 MATERIALS MANAGEMENT AND ITS ORGANISATION

Objectives

After reading this unit, you would be able to:

- discuss material management activities, functions and organizational structure;
- discuss the need of a logistics organization, different forms of organization and organizational positioning; and
- discuss the alternatives to the organizational structure.

Structure

19.1 INTRODUCTION

Materials Management is an organizational concept whose primary objective is to integrate and manage the sourcing, flow, and control of materials using a total systems perspective across multiple function reports to a different executive, which can result in each function or activity pursuing conflicting organizational goals and objectives. A Materials Management structure traditionally separate materials functions to report to an executive responsible for coordinating the entire inbound materials process, and also requires joint relationships with suppliers across multiple tiers. The Materials management executive can design and manage a system that meets a firm's performance objectives at the lowest total cost.

The greatest organizational growth of the supply chain management concept occurred during the mid-1960s to late 1970s. However, that the materials concept began during the period and the origins of materials management date back to the 1800's

During the 1970s, most firms experienced shortage of vital materials as well as rising materials price. Firms embraced the materials concept as a means to coordinate diverse material functions and to control material-related costs, quality, and supply. A concern to same purchasing professionals was that the creation of a material that purchasing naturally assumes a lower position when management creates an executive materials position. Furthermore, if a non-purchasing professional heads the materials position, this reduces purchasing importance with in the organizational structure even further.

Regardless of the background of the materials manager, most firms today recognize the importance of Materials Management. Firms that develop a coordinated approach to materials management show a greater interest in the control of material costs. This can only increase the importance of purchasing with in the organizational hierarchy because of purchasing influence on cost and quality.

The Material's Manager must constantly balance tradeoffs between the functions making up the materials organization. What does managing tradeoffs mean? Consider, for example, material control (often part of purchasing) and inbound transportation. Materials control tries to maintain raw material and work-in-process inventory levels as low as possible while still meeting production schedules, which allows a firm to minimize high inventory carrying costs

It is not difficult to see why companies support the Materials Management concept. The materials management approach provides tangible benefits to an organization. These benefits include

- Providing greater direct control over material costs
- Developing Personal awareness of the total system approach instead of a narrow and restrictive functional approach.
- Opening channels of communication and stimulating the sharing of ideas among the various material functions.
- Supporting the career paths of talented personnel by providing then the means to develop well-rounded expertise. The material concept supports the movement of personnel across functional boundaries.
- Developing greater operating efficiencies as material functions work together to create material systems, coordinate procedures, and streamline the movement of material and data among themselves.
- Encouraging an overall synergistic effect as functions cooperate towards common goals.

The management of all inbound, production, and outbound activities is materials logistics management or total systems management. In this exhibit, a materials manager is responsible for all inbound and materials control functions to the point where work-in-process becomes finished-goods inventory. The physical distribution manager is responsible for moving, storing, controlling, and distributing finished goods to field warehouses and the final customer. The actual point separating materials management and physical distribution often becomes blurred. For example, a manager responsible for the storage and movement of work-in-process inventory is probably responsible for the initial movement and storage of finished goods, often the case when finished goods and in-process inventory exist in the same facility. Materials logistics management is the control of material throughout the entire pipeline. While conceptually appealing, few firms have an executive position specifically responsible for the entire material system for supplier to end customer.

19.2 MATERIALS MANAGEMENT ACTIVITIES AND FUNCTIONS

One way to understand materials management within an organization is to list the basic activities of a materials executive, which have been enlisted as follows:

- Anticipate a firm's purchased materials requirements
- Source materials with the best qualified supplier
- Introduce new materials into the organization

- Monitor and control the status of materials as a current asset throughout the process of it's working in the organization

By considering the board activities of the materials manager, it becomes easier to visualize the activities that occur naturally as part of materials management. These areas are next discussed, and are given as follows:

Functions of a Marketing Manager
• Purchasing
• Inbound Transportation
• Inbound quality control
• Receiving and Storage
• Materials Control
• Production Planning and Scheduling

Purchasing

Most organizations include purchasing as a major function within the materials structure. The difference for purchasing in a materials structure involves the reporting hierarchy. Earlier research indicated that Purchasing Manager reported to the Materials Manager in almost 70% of the firms organized under the materials management concepts. In the remainder of the firms with Materials Managers, Purchasing Manager reported to another executive.

Inbound Transportation

Most larger firms have a specialized traffic and transportation function, because of transportation's importance along with the large volumes in money terms, required for the purchase of transportation services. For some firms, transportation is the single largest category of purchasing-related costs, especially for highly diversified firms. While a firm may have minimal common purchase requirements between its operating units, opportunities usually exist to coordinate the purchase of transportation service.

Firms that organize under the materials management concept naturally place the transportation function under the materials umbrella. These firms recognize the need to control inbound materials shipments as tightly as they control outbound shipments to customers. Allowing a supplier to arrange for inbound transportation does not provide the cost control or coordination a purchaser requires to manage in its inbound materials pipeline.

Inbound Quality Control

Quality control has taken on increased importance during the last 15 years. Almost all firms recognize the importance of the supplier toward achieving quality goals and the need to emphasize prevention rather than detection of quality problems. As a result, the quality emphasis has shifted from detection during receipt of production to early prevention, in the material sourcing process. This requires a strong awareness concerning a supplier's role in the quality process. Progressive firms work directly with suppliers to develop proper quality control procedures and processes.

Receving and Storage

All inbound material must be physically received before production. In a non-just-in-time environment, material must also be stored or staged, awaiting final use. Receiving and storage is usually part of the materials management function because of the need to control the physical processing and handling of inventory.

Receiving and storage includes a variety of task. For example, a firm must process incoming receipts usually through a computer terminal, which updates the in-transit file, purchasing files, the accounts payable system, as well as any other systems requiring receipt information. Other tasks include the possible inspection of the materials and its storage awaiting final production. Materials handling is also a critical part of the receiving and storage process, including movement with in a facility along with any movement between facilities during the production process. All materials movement requires tight control.

Materials Control

The terms materials control and inventory control are often interchangeable. Within some organization, however these terms have different meanings. The materials control group is responsible for controlling materials releases to suppliers for inbound shipments. This includes generating the materials release, contacting a supplier directly concerning changes, and monitoring the status of inbound shipments. Materials control activities are some times the responsibility of the purchasing department, particularly in smaller organization.

In large organizations however, purchasing and materials control are often separate. Purchasing evaluates and selects sources of supply will materials control determine the actual order release quantities and shipment schedules to supports production. In this case, tactical duties (Material control) strategic purchasing duties are separate.

The inventory control group is responsible for determining the inventory level of finished goods needed to support customer requirements, emphasizing the outbound physical distribution side of the organization. Within the prospective, inventory control is part of the distribution process and is not technically part of materials management.

Production Planning and Scheduling

This activity involve determining the aggregate levels of production for a family of items along with a time-phase, detailed schedule of production. While the production plan is not a sales forecast it relies on forecasts for input. Because manufacturing is responsible for carrying out of the production plan, production planning and manufacturing stay in close contact with each other.

It is not unusual for the manufacturing executive to be responsible for production planning and scheduling, particularly if a firm does not employ the materials management concept. For firms with a materials manager position, however , 77% reported that production planning reported directly to the materials manager. This is a higher percentage than any other materials function, including purchasing.

Production planning and scheduling is a highly sophisticated process. The detailed production planning process is not within the scope of a purchasing textbook. Figure 19.1, explains the Total Materials Management System

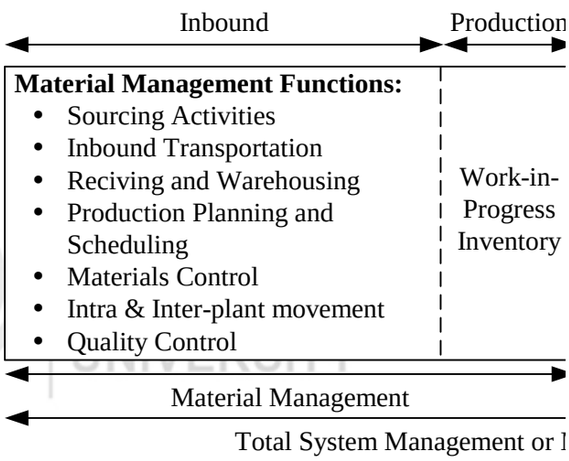

Figure 19.1: Total Mate

19.3 MATERIALS MANAGEMENT ORGANIZATIONAL STRUCTURE

The actual functions under the materials umbrella can vary widely between firms. Also, the reporting level of the materials management executive can be higher or lower than shown here. Materials executives are generally higher in the organizational hierarchy today than 15 years ago because of the increased importance of the materials function, especially for firms with large material budgets. The materials executive often reports directly to the executive vice president or president. In figure 19.2, the vice president of materials management is responsible for production planning and scheduling, traffic, purchasing and operations. In this example, materials quality reports directly to purchasing, which is common given the relationship between supply base management and materials quality. The director of operations is responsible for receiving and storage, materials controls, and materials handling. This illustration shows only one possible materials structure. Many organizations now have purchasing vice president, whose responsibilities extend beyond those of the Materials manager.

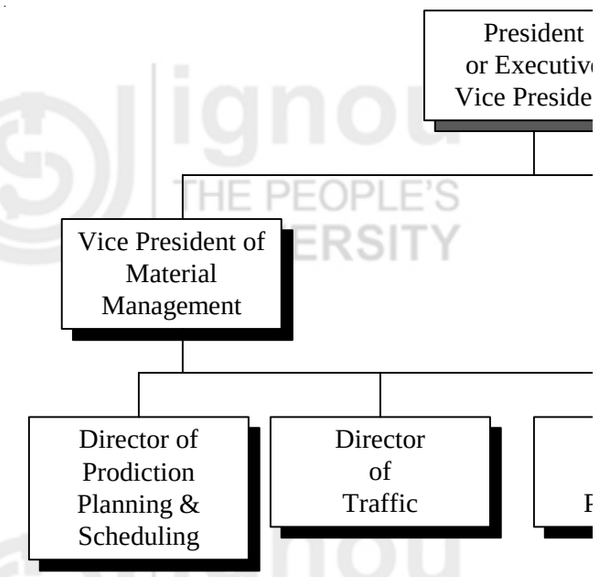

Figure 19.2: A Typical Materi

The Materials function is now equal in importance to manufacturing and marketing in many organization. Historically, purchasing, usually reported to manufacturing, as it still does in some manufacturing firms today, particularly those without a Materials executive. However, most firms now recognize the need for an independent purchasing and materials function free of outside influence. While purchasing must support manufacturing, it should do so by placing personnel directly at manufacturing facilities. These personnel locally report directly to purchasing personnel with only a dotted-line reporting relationship to manufacturing management.

In recent years, organizations have evolved from the concept of Materials management, which refers to an integrated set of functions within an organization spanning inbound and outbound logistics, to the concept of supply chain management (SCM).

Lower inventories throughout the chain, shorter cycle times, improved planning, and lower costs. While Materials management is often discussed in theory, very few organizations are able to achieve this level of integration and success. One reason for this—the difficulty in developing the level of trust required to share information with so many parties—will remains a challenge for purchasing and logistics managers in the future.

19.4 LOGISTICS ORGANIZATION

The focus of this unit is specifically on the organizational structure required for the management of the Materials Management function. The discussion is separated into four parts.

- First is organizing the logistics efforts. Concern here is why a logistics organization is needed.
- Second are the choices that are available with the management. These are the formal to the informal organization forms as well as the placement of the organization form with in the company's organization structure as a whole.
- The third concerns the management of logistics across different organizations.
- Finally, we will look at the alternatives to the organizational structure that have the purpose of operating a supply channel, namely, outsourcing some or all of the logistics efforts through strategic logistics alliances, logistics partnerships, and logistics third-party providers.

19.4.1 Need for Organization Structure

Logistics is a virtual activity that must carried out by virtually every type of firm or institution. This means that some organizational arrangement, whether formal or informal, will have been made to handle product and service movement. What then is the need for any specific consideration of organization structure?

Conflict resolution

A traditional form of organization that many have adopted is to group their activities around the three primary functions of finance, operations, and marketing. From a logistics point of view, this arrangement has resulted in a fragmentation of the logistics activities among these three functions whose primary purposes are somewhat different from those of logistics. That is, responsibility for transportation might be placed under operations, inventory divided among the three functions, and order processing placed under either marketing or finance. Yet marketing's primary responsibility may be to maximize revenue, operations responsibility may be to produce at the lowest per-unit cost, and finance's responsibility may be to minimize the capital costs so as to maximize return on investment for the firm. These motivational cross-purposes led one executive some years ago to wisely observe.

If permitted to run free, a salesman and his manager would promise his customer impossible delivery service from a plant or distribution center. On the other hand, the production manager, if permitted, would request that all orders be accumulated for long periods to reduce the cost of setups, and allow more time to plan economic materials procurement quantities.

Such conflict of purpose can result in a logistics operating system that is sub optimal—so much so that the efficiency of the firm as a whole may suffer. For example, marketing may desire fast delivery to support sales, whereas manufacturing, if it has the responsibility for traffic, may desire the lowest cost routing. Unless steps are taken to achieve compromise across the functional lines, the most advantageous logistics cost service balance is not likely to be realized. Some organizational structure for the coordination of decision making of separate logistics activities is needed.

Management

Providing some organizational structure to logistics activities also defines the necessary lines of authority and responsibility to ensure that goods are moved accordingly to plan and that preplanning is carried out when needed. If the balance between customer service and the costs to produce the service are critical to the operation of a particular firm, someone should be placed in charge of overseeing product movement. In effect, someone has to manage logistics. Whereas such areas as order processing, traffic, and warehousing may be individually supervised for good control, a manager is often required to coordinate their combined operations. Only a manager has the scope to balance these operations to achieve the highest level of efficiency.

19.4.2 Importance of Organization to Logistics

The attention that can be given to logistics organization and to the organizational arrangement depends on the nature of logistics in the firm. Although every firm or institution conducts logistics operations to some degree, logistics matters are not equally important to all. A firm that spends a small fraction of its total operating costs on logistics and/or believes logistics customer service levels are not of great importance to customers is not likely to give logistics any special organization attention. However, for many consumer-product firms, food firms, and chemical firms in which logistics costs may average 25 percent or more of the sales revenue, the opposite is true.

In addition, the need for a given type of organization depends on how logistics costs are incurred and where service needs are the greatest. The organizational form may center around materials management, physical distribution, or both (logistics).

Extractive industries are characterized by firms that produce basic raw materials, mainly for use by other industries, characterize extractive industries. Examples of such firms are those engaged in lumbering, mining, and agriculture. Logistics operations involve the securing of a wide variety of goods needed in the extractive operations. Capital equipment and supplies for operations are typical of such purchases. Purchasing and transportation are the primary supply-side logistical activities. Outbound products typically have a limited diversity, relatively low value, and are shipped in bulk. Controlling shipping in terms of mode selection, routing, and equipment utilization is a major concern. Therefore, the firms in these industries are likely to have very visible materials management departments.

Service industries mainly concern themselves with supply-side logistics activities. Firms in this industry convert tangible supplies into service offerings. Hospitals, insurance companies, and transportation companies are good examples of service firms. A variety of product items are purchased, many of which are critical, from suppliers that are geographically dispersed. These items are entirely consumed in producing the service. Purchasing and inventory management are primary logistics activities to be managed, with slightly less concern about transportation since many of the supplies are received under a delivery pricing arrangement. Logistics costs can be significant to such firms, but the associated activities take place on the supply side of the firm. Organization for logistics centers on materials management, with typically little recognition given to any physical distribution activities.

Firms that purchase goods mainly for resale characterize marketing industries. Typical members of this industry are distributors and retailers. Firms in this industry do little to change the form of the product. Major concerns are with selling and logistics activities. Typically such firms purchase many items from many suppliers that are geographically dispersed. These items are resold in diverse combinations and in small quantities, usually within a limited geographically area. Purchasing, inbound traffic,

inventory control, warehousing, order picking, and shipping characterize operations. Organization for the management of logistics is significant and usually will involve both materials management and physical distribution activities; however, greater emphasis is likely to be given to a strong physical distribution organization since many of the inbound supplies are priced by suppliers on a delivered basis.

Manufacturing industries are characterized by the firm that purchased a wide variety of items from many suppliers for the purpose of transforming them into items of relatively high value. There is substantial logistics activity, both on the supply side and the distribution side of these firms. Organization design includes both materials management and physical distribution.

19.4.3 Organizational Choice

When the need for some form of organizational structure has been established, there are basic choices from witch a firm may select. These can be categorized as:

1) Informal,
2) Semiformal
3) Formal

None these types dominates among firms, nor is one type more popular than another for firms of like characteristics. Organizational choice for any particular firm is frequently a result of evolutionary forces operating within the firm. That is, the logistics organizational firm is often sensitive to the particular personalities within the firm, to the traditions regarding organization, and to the importance of logistics activities.

The Informal Organizational Form

The major objective for logistics organization is to achieve coordination among logistics activities for their planning and control. Given a supporting climate within a firm, this coordination may be achieved in a number of informal ways. These typically do not require any change in the exiting organizational structure but rely on coercion or persuasion to accomplish coordination among activities and cooperation among activities and cooperation among those who are responsible for them.

For firms that have designated separate areas of responsibility for such key activities as transportation, inventory control, and order processing, an incentive system can sometimes be created to coordinate them. Whereas the budget, witch is a major control device for many firms, is often a disincentive to coordination, it can sometime be turned into a mechanism for effective coordination. The budget may be a disincentive because a manager of transportation, for example, would find it unreasonable to incur higher-than-necessary transportation costs in order to achieve lower inventory costs. Inventory costs do not fall within the transportation managers budget responsibility. The transportation manager's performance is measured by how transportation costs compare with the budget.

One possible incentive system to encourage cross-activity cooperation is to establish a number of cross charges or transfer costs among the various logistics. Consider how a transportation selection decision might be made when it indirectly affects inventory levels, but the transportation decision maker has no motivation other than to seek the lowest possible transportation costs.

Another incentive is to establish some form of cost-savings sharing arrangement. All managers of the separate logistics activities that show conflicting cost patterns could poll their cost savings. A predetermined schedule could be established to divide the savings for redistribution to salaries. There is incentive for cooperation because the

greatest potential savings comes about when cooperation leads to a balancing of activities having conflicting cost patterns. There so-called profit-sharing plans have had limited success among firms, but a new firms have used them effectively.

The use for coordinating committees is another informal approach to logistics organization. These committees are made up of members form each of the important logistics areas. By providing a means through which communication can take place, then coordination may result. For companies in which there is a history of coordinating committees, the committees' form can be quit satisfactory. Dupont is one example of a company famous for its effective management by committee. Although committees seem to be a simple, straightforward solution to the coordination problem that do have a shortcoming in that they generally have little power to implement there recommendations.

Chief executive review of logistics decisions and operations is a particularly effective way of encouraging coordination. Top management has the necessary position in the organizational structure to easily observe sub optimal decision making with in the organization. Because subordinate managers in the logistics activity areas are responsible to top management, top management's encouragement and support of coordination and cooperation among these interventional activities goes a long way toward achieving the organizational calls with out a formal organizational structure.

The Semiformal Organizational Form

The semiformal organization form recognizes that logistics planning and operation usually cut across the various functions with in a firms organizational structure. The logistician is then assigned to coordinate projects that involve logistics and that cover several functional areas. This type of structure often called a matrix organization, and it has been especially popular in the aerospace industry. The concept has been adapted to logistics system management.

In a matrix organization, the logistics manager has responsibility for the entire logistics systems but does not have direct authority over the component activities. The firms traditional organizational structure remains intact, yet the logistics managers shares the decision authority and accountability with the activity area manager. Expenses for the activities must be justified by each functional department as well as by the logistic program, which is the basic form of cooperation and coordination. (see figure 19.3).

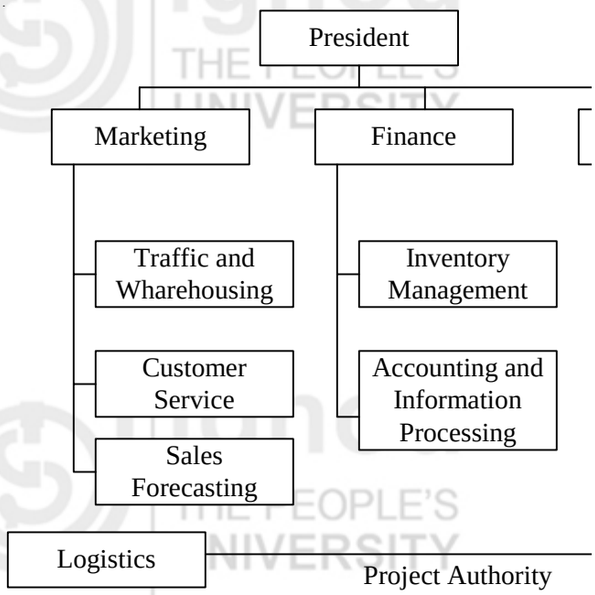

Figure 19.3: Logistics Matrix Orga

Although the matrix organization can be a useful organizational form, we should recognize that the lines of authority and responsibility became blurred. Conflicts may arise that cannot be easily resolved. However, for some firms this choice is a good compromise between a completely informal form and a highly structured one.

The Formal Organizational Form

The formal organization is one that establishes clear lines of authority and responsibility for logistics. This typical involves (1) placing a manager in a superior position relative to logistical activities, and (2) placing the managers authority on a level in the organizations structure that allow effective compromise with the other major functional area of the firm (finance, operations, and marketing). This elevates and structures logistics personal in a form that promotes activity coordination. Firms seek the formal organizational arrangements prove ineffective or when greater attention is to be given to logistics activities.

Practitioners frequently remind us that there is no such thing as a typical organization for logistics. Organizational structure is customized to individual circumstances within a firm. However, we can develop a generalized formal organization that may good sense in terms of the principals of logistics management and also appears, in at least partial form, in enough firms to use it as a model.

This formal design accomplishes several important ends. First, logistics is elevated to a position in the organization where it is managed with the same authority as the other many functions. This helps to assure that logistic activities receive the same attention as marketing, operations, and finance. It also sets the stage for the logistic manager to have an equal voice in resolving economic conflicts. Having logistics on a par with the other functional areas creates a balance of power that can be for the economic good of the firm as a whole.

Second, a limited number of subareas are created under the chief logistics officer. The categories are established with a separate manager for each and are managed as a distinctive entity. Collectively, they represent the major activities for which managers are typically responsible. Why exactly five areas? Only as many areas are created as technical competencies require. It might seem desirable to combine, say, transportation and inventory activities into a single area because their costs are naturally in conflict and better coordination could be achieved. However, the technical skills required in each area are substantially different, so finding management for the combined areas having both type of skills are difficult . It is often more workable to keep such activities under a separate manager and rely on the logistics manager to establish coordination through the informal or semiformal organizational types previously discussed. Similar arguments can be offered for the other activity areas. Therefore, the formal organization structure is a balance between minimizing the number of activity groups to encourage coordination while separating them to gain effectiveness in the management of their technical aspects.

19.4.4 Organizational Positioning

Organizational choice and orientation are the first considerations in organizational structure. Next comes the positioning of logistics activities for their most effective management. Positioning basically concerns where to place these activities in the organizational structure. This is determined by such issues as: (1) decentralization versus centralization, (2) staff versus line, and (3) large company size versus small.

Decentralization Vs. Centralization

One of the continuing controversies in organization is whether activities should be grouped close to top management or dispersed throughout the divisions of the larger firms. For example, a major electric company had a number of products divisions,

such as industrial electrical equipment, nuclear power, small appliances, major appliances, and lamps. A centralized organization groups logistics activities at the corporate level for the purpose of serving all product groups, as shown in Figure 19.4. On the other hand, the decentralized logistics organization puts the responsibility for logistics at the product group or division level. A separate decentralized logistics organization is established to serve each division.

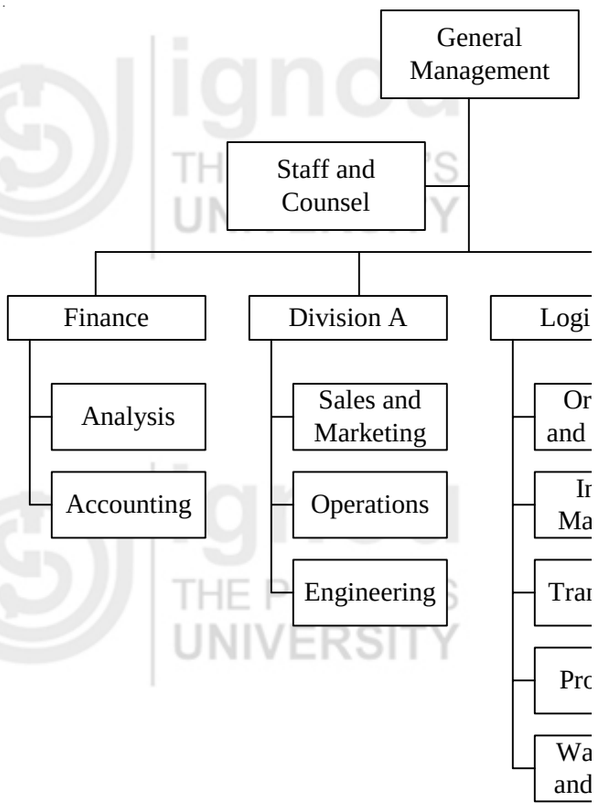

Figure 19.4: Centralised Logistics Orga

There are some obvious advantages to each type, and a number of firms create organizational forms that blend both types to seek their combined advantages. The principal reason for the centralized form is to maintain close control over logistics activities and to benefit from the efficiencies associated with the scale of activities that can occur by concentrating all logistics activities for the entire corporation under a single director. Consider the traffic activity as an example. Many firms own private truck fleets. Utilization of the equipment is the key to efficiency. By having centralized control of all traffic activities, a firm might that the forward haul of one division's products might be the back haul for another. These movements can then be balanced, whereas under a decentralized organization they might be overlooked. Similar efficiencies can be gained through shared warehousing, shared purchasing, and shared data processing.

Decentralization of organization often allows quicker and more customized logistics response to customer needs than the more removed, centralized organization. Decentralization makes a great deal of sense when product lines are distinctly different in their marketing, logistics, and manufacturing characteristics, and when few economies of scale can be found. An generalized example of a Decentralized Logistics organization is given in figure 19.5.

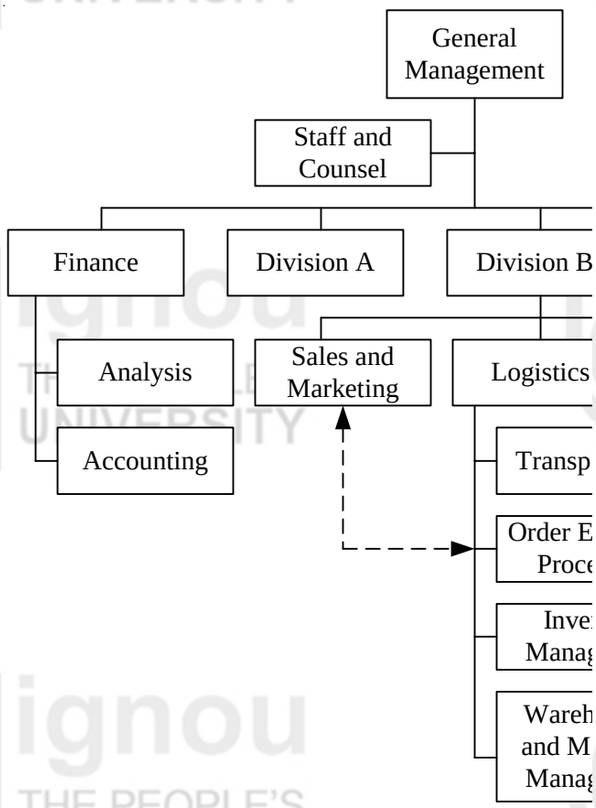

Figure 19.5: Generalized Example of a Decentra

Rarely can we expect to find either a purely centralized or purely decentralized design. For example, although there is managerial interest in divisional and even regional autonomy among the operating units of the firms, technical advances such as computerized data processing have made it more efficient to have centralized order processing and inventory control. Such conflicting trends help to explain the diversity of organizational forms in practice.

Activity 1

Discuss two or three most important benefits of Centralized organizations Vs Decentralized organizations and Decentralized organizations Vs Centralized organizations, using examples to support your choice.

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Staff vs. Line

A number of firms do not create organizations that have direct or line responsibility over goods movement and storage. They find it more satisfactory in their circumstances to establish an advisory, or staff, organization for logistics. The logistician in this case is placed in a consulting role to the other line functions such as marketing and operations. An advisory organization is a good alternative when: (1) a line organization would cause unnecessary conflicts among the existing personnel, (2)

logistics activities are less critical selling, producing, and other activities, (3) planning is relatively more important than administration, and (4) logistics is treated as a shared service among the product divisions.

The staff type of organization may be attached to any of the functional areas at a centralized or decentralized level. Frequently, however, the logistics staff is located near top management is geographical location and on the organization chart. Because the logistics staff is in an role more indirect authority can be given to logistics by this type of organizational positioning in fact, some corporate level logistics staff wield more authority than many division-level line organizations.

Large vs. Small

Most of the attention given hears has been to the large, multidivisional firm. What about the small firm? We should recognize that the small form has just as many logistics problems as the large firm. In some ways, logistics activities are more important because the small firm does not befit from volume purchases and volume movements as does the larger firm. Organizationally, the small firm has some form of a centralized organization because, for practical purposes , no product divisions exits. Also, logistics activities are not as likely to be clearly defined and structured as in the larger firm.

19.4.5 Inter-ogranizational Management

So far, we have noted the organizational problems associated with realigning the activities of the firm to achieve more meaningful economic trade-offs and the problems associated with managing activities at the interface between functional areas. Both of these managerial problems are internal to the firm. Because the supply and distribution policies of any one firm in the channel of distribution can effect the performance of other firms in the channel, the question is raised as to whether there might be some advantage to viewing the channel as a single entity, or "super organization," and managing it to the benefit of all members involved. This proposition is probably not new, but the processes involved are little understood. As Stern and Haslett have noted.

"The management of complex organizations has undergone considerable scrutiny the students of administrative processes. But only a small body of literature has been devoted to the management of inter-organization systems, entities whose objectives transcend those of single organizations defined by legal boundaries."

If effective organizational processes can be developed to deal with logistics matters external to the firm, the firm stands to gain in a way not otherwise possible.

19.5 THEORY OF THE SUPER ORGANIZATION

The super organization is a group of vertically related but legally separate firms that share a common interest in the individual decisions made by each. For example, a pricing decision of a carrier will influence the decision of a user on how much service to purchase. This purchase decision, in turn, influences the pricing decision. Normally, each firm would make its decision while pursuing individual goals. If profit maximization is the goal, making the purchase and price decisions individually not only leads to sob optimal profits for the firms, taken collectively, but also can result in sub optimal profits for the individual firms. Management of the super organization will be a relatively easy task if the cooperative efforts yield proportionately greater returns to each member. The situation is self-motivation for the members, and the only need is to become aware of the possibility and benefits of cooperation. However, if the benefits of cooperation (pool) with one or a few of the channel members, equitably distributing

the benefits and dispersing among the member information about the effect of cooperation will be needed.

Managing the conflict

The object of managing the super organization is to establish the conditions so that each member of the coalition may benefit from his or her cooperation. Managing the super organization is not the same as management within the firm. The reliance is more on bargaining and tacit arrangements structural relationships. This type of management is generally little understood and is a subject for much further research. However, the direction for management seems clear. First, methods need to be established for providing relevant information among the super organization members. Second, there needs to be some method for distributing the gains achieved from cooperation. Third, there needs to be the application of a strategy for conflict resolution.

Relevant information

An adequate information base in the super organization is needed for at least two reasons. First, in order for each firm to adjust its controllable variables so that optimum channel profits are achieved, knowledge of the economic factor inputs to the decision problems facing the other members, as well as accounting information on the level of profits accruing to each member. Second, an adequate information system also reduces the uncertainties among the autonomous members and contributes to their continued voluntary cooperation. An inter member information system could be established, but assuring adequate and accurate information among the membership is difficult because of the weak lines of accountability. Also control within the super organization depends much on how governmental antitrust agencies may view such vertical integrative arrangements as on the willingness of members to relinquish a degree of autonomy to the coalition.

Distribution of profits

Equitable redistribution of the profits achieved through cooperation by the coalition is important. Under the revised pricing policy, channel profits are at their highest level but the change in profits is not distributed equitably among the member. That is, both buyer and carrier stand to gain more than when acting indecently. However, the seller stands to lose. The seller would lack incentive to cooperate since he can profit more by acting alone. He might drop the coalition, and the members would likely return to their autonomous state. If a method for the redistribution of profits, possibly in proportion to the profit levels that are likely to exist under the situation where all members act along, were established, each could be satisfied, since he first recovers the profit level he would have gained from acting along in addition to sharing in the additional profits achieved through cooperation. All members are likely to remain in the coalition since all derive benefit from this. However, establishing a profit redistribution method that will keep all members acting in concert may be elusive, and fair implementation tends to act against continued group cooperation.

Strategies for Conflict Resolution

Actually achieving a redistribution of profits may require more than appropriate accounting procedures.

These chiefly are:

Bargaining: Negotiating among the members if one party is prepared to give up something in order to achieve some of its objectives.

Diplomacy: Using ambassadors or envoys to affect compromise among members.

Membership: Exchanging personnel among member firms to lead to better understanding and compromises.

Ideology: Using information, propaganda, and educational activities to get members to think about managing inter organizational conflicts.

Third-party intervention: Using a neutral person to resolve conflict.

Frazier and Summers have suggested a somewhat different set :

Information exchange: Use discussions to try to alter the target firm's behavior.

Recommendations: A suggested strategy whereby the source firm predicts that the target firm will be more profitable by taking a specific action or set of actions.

Promises: The source firm pledges to provide the target firm with a specified reward for compliance with the source's stated desires.

Threats: The source firm communicates to the target firm that it will apply negative sanctions should the target firm fail to perform the desired action(s).

Legalistic strategies: legal contracts and/or informal binding agreements between the parties either require or suggest that the target firm perform a certain action.

Requests: The source firm merely informs the target firm of the action(s) it would like the target firm to take without mentioning or directly implying any specific consequences of the target firm's subsequent compliance or noncompliance.

None of these methods can guarantee conflict resolution or force a particular channel member to perform in a manner that will benefit the channel as a whole. However, they should provide some guidelines for realizing the opportunities that lie dormant in managing the logistics channel among firms.

19.6 TEAM APPROACH AS A PART OF THE ORGANIZATIONAL STRUCTURE

Firms are showing an increased willingness to use cross-functional teams to arrive at critical decisions or to implement major projects. Cross-functional teams consist of personnel from various functions brought together to achieve a specific task. The most common team tasks involving purchasing are evaluating and selecting suppliers, developing cost-reduction ideas, and supporting new product development. When implemented properly, the team approach results in improved performance and organization decision-making because it encourages group interaction across different functions. Problem solving is faster as the team assumes responsibility for problems and works together as an integrated unit. This approach supports the development of innovative methods to address traditional task and to "cut through the red tape" the team approach can also result in the breakdown of restrictive communication barriers between functions. Cross-functional teams represent a new form of an organizational structure, as firms search of better ways to complete.

Currently, the major use of cross-functional teams in purchasing is to evaluate and select suppliers for key items. A team will visit and rate potential suppliers against various performance areas. The team evaluates a supplier's quality, financial stability, product and process technology, delivery, and management strength. A team composed of functional experts should arrive at better decision then an individual acting alone.

Another application supporting the use of teams is new product development. The team approach for new product development represents a radical departure from the traditional new product development process. With the cross-functional approach, team members begin work simultaneously to reduce the total concept-to-customer product development time. The time difference between the traditional approach and the team approach can result in a competitive advantage to a firm. Firms now recognize the importance of introducing new product before there competitors.

19.7 ALLIANCES AND THIRD-PARTY PROVIDERS

As an alternative to total ownership of the logistics capability and the need for an extensive logistics organizational structure, some firms choose to share their logistics capability with other firms or to contract for the logistics activities to be performed by firms specializing in providing such services, called third-party providers. Many firms are recognizing that there are strategic and operating advantages to be gained from logistics partnering. Some of the general benefits are:

- Reduced cost and lower capital requirements
- Access to technology and management skills
- Improved customer service
- Competitive advantage such as through increased market penetration
- Increased access to information for planning
- Reduced risk and uncertainty

Of these, a potential reduction in operating expense ranks at the top of the benefits, with possible improvement in customer service also being a primary concern. The primary risk to the firm is the loss of control over logistics activities that may result in the potential advantages never being realized.

To some extent, firms have been outsourcing a portion of their logistics activities for many years. Every time a firm calls up UPS or a common carrier, or uses a public warehouse to store its goods, it is partnering with an outside firm to handle part of the supply chain activities. How extensive the relationship is between the firm and its outside partners is a matter of degree. The relationship may be based on single events to long-term contractual arrangements to shared systems of a strategic alliance.

Deciding whether to perform the logistics function in-house or to seek other arrangements is a balance of two factors: how critical logistics is to the success to the firm and how competent the firm is in managing the logistics function. The strategy to follow depends on the position in which the company finds itself.

A company that has high customer service requirements, significant logistics costs as a proportion of total costs, and an efficient logistics operation administered by competent personnel, will likely find little benefit to partnering or outsourcing logistics activities. Logistics activities are best performed in-house. Wal-mart is a company that, because of its superior supply channel, has these characteristics. On the other hand, for those for those companies where logistics is not center to strategy and a high level of logistics competency is not supported within the firm, outsourcing the logistics activities to third-party providers may well lead to significant cost reductions and customer service improvements. Dell computer consider its core competencies to be marketing and manufacturing of high-technology pc hardware rather than logistics. This direct marketing firm contracts with several third-party logistics providers to coordinate distribution firm in geographical areas.

Where logistics is critical strategy but logistics management competency is low, finding a firm with witch to partner may provide significant benefits. A strong partner

may provide facilities located in existing and new markets, a transportation capability, and administrative expertise not available within the company. Conversely, where logistics is not especially critical to strategy but managed by capable personnel, managers may want to be aggressive by taking the lead in seeking partners to share the logistics system. Thus reducing the company's cost through increased volume and the economies of scale that result.

Alliances

It is quite natural for a firm that is heavily invested in transportation equipment, warehouse, inventories, order-processing systems, logistics technology, and administrative personnel to question whether this investment might be shared with other firms to reduce its own costs. Conversely, being conscious of the high costs of logistics, a firm may seek to partner with another firm that has excess logistics capacity, strategic facility locations to markets, desirable technology, and outstanding administrative capabilities that the firm seeks to shave. Of course the firm may have certain skills and capabilities that are desirable to other firms. Forming a logistics alliance, or partnership, may benefit both parties. The firm that does not desire to build a high degree of management competency in logistics may also seek an alliance with a stronger logistics partner to strengthen its own competitive position.

A logistics alliance is built on trust a sharing of information that aids logistics performance, and specific goals to achieve a higher level of logistics performance than can be achieved alone, operating ground rules for each partner, and exit provisions for alliance termination. The benefits to be derived from a logistics alliance have already been noted. If these benefits are so obvious why is it that there are so few alliances that there are so few alliances that actually have been created? The answer may lie in the concerns that a potential partner has about the alliance when supply channels are to be merged. Chief among these concerns may be the following.

- Loss of control over the logistics channel.
- Fear of being "written out of the logistics picture."
- Increased concern about logistics failures and no direct way to handle them for their customers.
- Adequate checks and balances may not be able to be identified to the satisfaction of the partner.
- Difficulty of identifying the economies to be achieved as compared with the partner's current logistics.
- A reporting system that does not match that of the partner, or one that is inadequate to reduce uncertainty.
- Difficulty of identifying the benefits to be shared, especially when the partner has some ownership in the logistics system.
- There may simply not be enough trust to try such an arrangement.
- Partners may not be viewed as equals where one partner's requirements may take precedence over another's.
- Difficulty in seeing how trusts good faith, and cooperation can be achieved in such an arrangement.
- Too few examples to show how such alliances work well in other companies.

Logistics alliances are fragile. They can be difficult to form and they may dissolve easily. However, the potential benefits of them encourages management to continue to explore ways of making them work.

Contract Logistics

For years, companies have been using the services of other companies to support their worn logistics activities. Common carriers provide trucking and rail services, public warehouses provide storage services, and specialty firms provide freight bill auditing and accounting services. In recent years, mainly since the deregulation of transportation, logistics companies have emerged that provide a full-service logistics capability. That is, they can handle the entire logistics operation for a client company for a contract price. They have variously been referred to as third party providers, integrated logistics companies, and contract logistics specialists. Although there has been significant growth for these logistics service providers, the companies using them do so sparingly. Eighty five percent of the companies using outside services spend less than 20 percent of their logistics budgets on them.

Compared with alliances, contract logistics companies sell services rather than form partnerships that benefit from the synergism between the members of the alliance. They hold themselves out to provide high level solutions to logistics problems.

A primary motivation for a company to outsource some or all of its logistics activities is that third provider is more efficient because logistics is its primary business and logistics is not the core competency of the buying firm.

19.8 ORGANIZING FOR GLOBAL SOURCING

Firms organize for purchasing internationally in a variety of ways. As a firm pursues global sourcing, how it structures itself can greatly influence its success in worldwide sourcing markets. An international structure is a function of several variables. These variables are dynamic; a relatively unimportant variable today can become important at a later date as competitive and economic conditions change.

Factors Affecting the Global Sourcing Structure

Organizations are often structured by product line or the characteristics of major customer market segments. Consider, for example, a high-tech electronics manufacturer. One business unit may be responsible for military production and sales, another unit for the manufacture of electronic components to the computer industry, while a third business unit manufacturer and markets consumer electronics. Each unit has a different market focus and product line. Accordingly, each exists almost as its own business with individual support functions. A decentralized organizational structure is a fairly common approach for firms with highly differentiated product lines or market segments with few common characteristics. (Refer Figure 19.6).

How does global sourcing fit within a centralized purchasing structure In the centralized purchasing organization, commodity managers are responsible for commonly purchasing items throughout the organization. The international purchasing manager work along side the commodity managers, and report to the corporate executive responsible for purchasing. These offices support the international buying requirements of the commodity managers and division or plant buyers.

The centralized structure allows the domestic buyer and Commodity manager to concentrate on the activities they perform best. Commodity managers develop corporate contracts for commonly used company wide items. These contracts strive for superior performance in quality, delivery and access to supplier technology through out the organization. The division or plant purchasing managers concentrate on identify capable domestic supplier for the items for which they are responsible. The international purchasing offices search their region of the world to identify potential foreign sources.

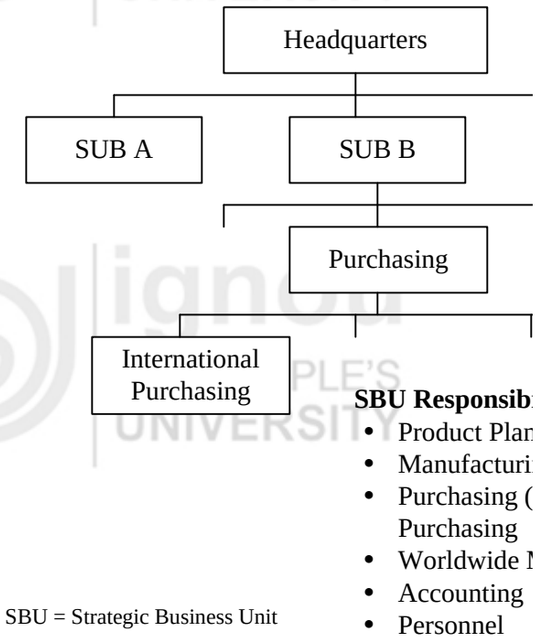

Figure 19.6: International Sourcing in I

Resources and Capability Required

A number of other factors influence how a firm structures its global sourcing efforts. If global sourcing requires large amount of time and resources, then this encourages a firm to establish a certainly coordinated approach. Further more, global sourcing requires specialized capabilities on the part of a buyer. To overcome these potential constraints, a firm might create a centralized international sourcing office, to provide international expertise at one location and contribute to cost efficient sourcing throughout the organization. As just discussed, a firm might even establish centrally managed foreign buying offices throughout the world.

Successful use of corporate international buying offices requires responsiveness to the purchase needs of buyers at all levels of the organization. Buyers will avoid using the international purchasing office if they perceive it is unresponsive to their needs. Also, purchasing personnel at the business unit or plant level may not gain international experience with a centralized international buying structure, and may never develop a worldwide purchasing perspective. Despite the potential disadvantage, the volume of international purchasing along with the capabilities required for foreign buying influence how a firm organizes for international purchases.

19.9 SUMMARY

A businesses continues to be affected by dynamical customer requirement, they must become more adept at responding to change. New markets, rapid advances in communications, and new sources of bran wear and skilled laborer corporation became the standard in the 1950s. Senior managers are struggling to a adept to the 21st century progress that is rapidly taking shape. Thriving in the fast-paced environment of today requires a new kind of company and a new kind of CEO. This requires.

- Open information channels, with email and financial reporting systems that bring everyone into the loop.
- Diversified management, which brings young managers around the world for three-month two-year stints.

As organizations continue to make these changes, purchasing managers must learn to acquire new skills, become more flexible, and continually improve their capabilities. The 21st century will undoubtedly be full of uncertainly and risk. Will the idea of change may be frightening to many purchasing managers, it is also exhilarating to be on the frontier of these changes. The next century is going to be a time when the successful purchasing manager is a thinker and a risk taker, not a bureaucratising managers must lead these changes, and be on the forefront in re-tooling their skill sets and capabilities.

The basic issue in logistics organization is how to achieve coordination or cooperation among activities, functions, and firms so that logistics plans can be implemented effectively. Organization should facilitate optimum logistics performance and is, in general, guided by total cost concept, except when customer service or information strategies dominate. The organization should be considered on three levels. Grouping relevant activities together and managing them collectively as a logistics function has received the greatest attention. In certain cases, the payoffs have been great as a result of this activity realignment. Much less considered have been the problems of inter functional and inter organizational cooperation. The potential benefits may far exceed those from direct activity management. However, achieving cooperation among functions with in firm and among firms beyond their legal boundaries, when cooperation is likely to be largely voluntary, is a highly complex organizational problem. Undoubtedly in the future, logistics organization at all levels will choose cooperation as a general theme for organizational effectiveness rather than simply selecting formalized organizational structures that create as many coordination problems as they resolve.

As an alternative to performing all logistics task in-house and, therefore, needing extensive logistics organization, many firms have sought to out source logistics activities or to form logistics partnership and share their logistics systems with other firms. Advocates have argued that such a strategy can lead to reduce costs and improved customer service, while allowing the firm to focus on its core competencies. Those opposing the strategy cite loss of control of the logistics activities and a resulting deterioration in customer service.

19.10 SELF ASSESSMENT QUESTIONS

1) What does it mean when we say a firm has organized according to the materials management concept?

2) What advantages of organizing a purchasing department into specialized sub units? What are the disadvantages? How can a firm overcome these disadvantages?

3) Give an example of an organization that has benefited tremendously by Global sourcing with the help of a Global organization.

4) Explain why a firm would want to develop an Organization Chart for Logistics

5) Explain the difference between a Line and a Staff organization structure for Logistics.

6) Why are Customer Service, Packaging and Production scheduling considered to be inter-functional management activity? How can they be managed effectively within a functionally organized firm?

19.11 REFERENCES AND SUGGESTED FURTHER READINGS

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