

NEED FOR PHYSICAL DISTRIBUTION IN WAREHOUSE

A good distribution system quite simply means the company has a greater chance of selling its products than its competitors. A company that spreads its products wider and faster into the marketplace at lower costs than its competitors will make greater margins absorb raw material prices rise better and last longer in tough market conditions. The best price product, promotion, and people come to nothing if the product is not available for sale at the points at which consumers can buy. In the FMCG industry in India, companies distribute their low-value, high-volume products to over 1 million retail outlets or points of sale. Generally, if there are more intermediaries involved in the distribution channel, the price of a good may increase. Conversely, a direct or short channel may mean lower costs for consumers because they are buying directly from the manufacturer.



LEARNING OUTCOMES

After studying this lesson the learner:

- defines the meaning of physical distribution in warehouse;
- identifies the need for physical distribution in warehouse;
- lists the components of physical distribution;
- organizes the marketing forces affecting distribution in warehousing.

20.1 DISTRIBUTION

Distribution means to spread the product throughout the marketplace such that a large number of people can buy it. Distribution involves doing the following things:

1. A good transport system to take the goods into different geographical areas.



2. A good tracking system so that the right goods reach at the right time in the right quantity.
3. A good packaging, which takes the wear and tear of transport.
4. Tracking the places where the product can be placed such that there is a maximum opportunity to buy it.
5. It also involves a system to take back goods from the trade.

20.1.1 Physical Distribution

Physical distribution is the set of activities concerned with efficient movement of finished goods from the end of the production operation to the consumer. Physical distribution includes all the activities associated with the supply of finished product at every step from the production line to the consumers. Important physical distribution functions include customer service, order processing, inventory control transportation and logistics, and packaging of materials.

“Physical distribution involves planning, implementing and controlling the physical flow of materials and final goods from the point of origin of use to meet consumer needs at a profit.”

“Physical distribution involves the management of physical flow of products and establishment and operation of flow systems.”

Physical distribution is thus, management of the physical flow of products and management and operation of the flow system. It is a process of managing the movement of the goods. Accounting for nearly half of the entire marketing budget of products, the physical distribution process typically garnishes a lot of attention from business managers and owners. As a result, these activities are often the focus process improvement and cost saving initiatives in many companies.

This chapter introduces students to the concept of physical distribution, its need, mechanisms and factors affecting it. What are channels of distribution, their function, type and how to select the right ones?

20.1.2 Definition

“Physical distribution involves planning, implementing and controlling the physical flow of materials and final goods from the point of origin of use to meet consumer needs at a profit.”

Rodrigue and Hesse write “Physical distribution includes all the functions of movement

and handling of goods, particularly transportation services (trucking, freight rail, air freight, inland waterways, marine shipping, and pipelines), transshipment and warehousing services (e.g. consignment, storage, inventory management), trade, wholesale and, in principle, retail”.

According to William J. Stanton, “Physical distribution involves the management of physical flow of products and establishment and operation of flow systems.” Physical distribution is thus, management of the physical flow of products and management and operation of the flow system. It is a process of managing the movement of the goods.

Stephen Davis - “A product with better distribution will always win over a superior product with poor distribution or customer access. It’s not fair. It’s not right. But it’s reality”.

Physical distribution and the ability to get a product to a consumer quickly and economically has a direct impact on customer satisfaction. By storing goods in convenient locations, and by creating fast, reliable means of moving those goods, small business owners can help assure continued success in a rapidly changing, competitive global market. It includes all those activities which help in efficient movement of goods from producer to consumer, such as transportation, warehousing, material handling, inventory control, order processing, market forecasting, packaging, plant and warehouse location and customer service.

20.1.3 Objectives of Physical Distribution

Physical distribution has two broad objectives viz. consumer satisfaction and profit maximization. Apart from these, there are other objectives too. A satisfied consumer is the biggest asset that a company has. A firm can provide satisfaction to consumers by making available the right quantity of the right goods at the right place and time, at lowest costs. Prompt and dependable distribution enhances consumer satisfaction.

At the same time, by offering better service at a lower price of the product, the firm can attract additional consumers and make more profits. This can be done by improving the efficiency and effectiveness of physical distribution activities, firms can bring in an economy which will have an effect on profit margin i.e. by lowering the physical distribution costs, profit position can be improved.

Apart from these two broad objectives, physical distribution has other objectives as follows:

- To make available the right goods in the right quantity at the right time and right place at least cost.
- To achieve minimum inventory level and speedier transportation.





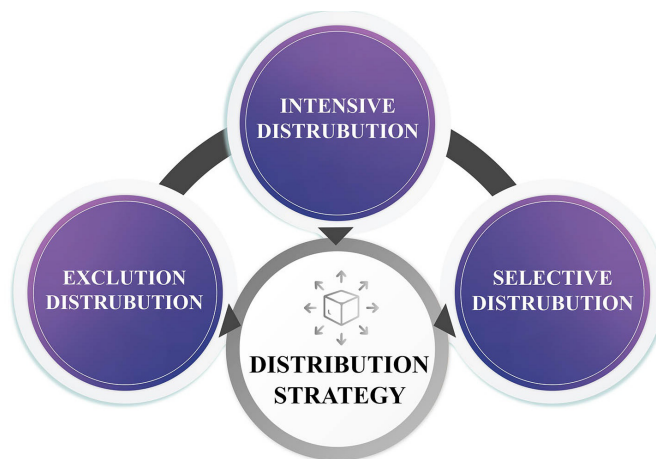
- To establish the price of products by effective management of physical distribution activities.
- To gain competitive advantage over rivals by performing customer service more effectively.

20.1.4 Distribution Strategies

Distribution is the process of making your embedded system available for use by a consumer or a business. Distribution can use either direct or indirect means to put the systems into the customer’s hand. Indirect means employ channels, which are separate but interdependent companies that work together to supply the product to the customer. Table 1 defines three different strategies of distribution; you will probably use either selective or exclusive distribution to deliver your embedded systems to customers.

Table 20.1: Types of distribution

Distribution Type	Definition
Intensive	Generally, retail where products stock in many outlets, e.g., snack foods or magazines
Selective	Manufacturer uses only a few intermediaries to distribute product, e.g., appliances
Exclusive	Manufacturer uses only one reseller/distributor or sells directly to customers



The use of various channels in each type of distribution will be dealt more in the next lesson on channels of distribution.

**INTEXT QUESTIONS 20.1**

1. Define distribution?
2. What do you mean by physical distribution?
3. _____ is a form of distribution
 - a. selective
 - b. formal
 - c. truck
 - d. inclusive



Notes

20.2. NEED FOR PHYSICAL DISTRIBUTION**1. Creating Time and Place Utility:**

Physical distribution activities help in creating time and place utility. This is done through transportation and warehousing. Transportation system creates place utility and makes available the goods at the right place where they are required. Warehousing creates time utility by storing the goods and releasing them when they are required.

2. Helps in Reducing Distribution Cost:

Physical distribution costs account for a major part of the price of the product. If these costs are handled systematically, decrease in costs of product can be there. Proper and systematic planning of transportation schedules and routes, warehousing location and operation, material handling, order processing, etc. can easily bring in cost economies.

3. Helps in Stabilization of Price:

Physical distribution helps in maintaining stable prices. Even customers expect price stability over a period of time, Proper use of transportation and warehousing facilities can help in matching demand with supply and thus ensure stabilisation of price.

4. Improved Consumer Services:

Consumer service in physical distribution means making products in the right quantity available at the right time and right place i.e. place where customer needs.

Physical distribution is important because it comprises the final steps a business takes before



they put their product in the hands of their customer. That's why so many businesses invest in a third-party logistics provider to ensure their physical distribution is handled with care.

The importance of physical distribution to a company can vary and is typically associated with the type of product and the necessity it has to customer satisfaction. Strategically staging products in locations to support order shipments and coming up with a rapid and consistent manner to move the product enables companies to be successful in dynamic markets.

20.2.1 Role for Physical Distribution

Distribution is one of the important marketing mixes. Delivery of satisfaction, standard of living, value addition, communication, employment, efficiency and finance are the major roles and importance of distribution. The distribution of goods is very important to the continuous survival of any company. The role and importance of distribution in marketing and in the whole economy can be discussed as follows:

1. Delivery of satisfaction

Marketing concept emphasizes on earning profit through satisfaction of the customers. Besides market research for the development and sales of goods according to the needs and wants of consumers, the participants of the distribution channel also help producers in production of new goods.

2. Standard of living

Distribution function helps to improve the living standard of the consumers in the society. Proper distribution of necessary goods and services to the consumers easily at the right time does not only satisfy them but also brings change in their living standard. Distribution brings improvement in living standard of consumers through generation of employment, increase in income and transfer of ownership. Hence, it brings positive effects in society.

3. Value addition

The functions of distribution such as transportation, warehousing, inventory management etc. increase the importance of products by creating place utility, time utility and quantity utility. Distribution mix plays an important role to increase the value of the products through delivery of goods in the right quantity, at the right place and at the right time.

4. Communication

Distribution serves as a link between producers and consumers. Producers can make a flow of information and messages to consumers about their products, price, promotion



etc. through channel members. Similarly, they receive information about customers, competitors and environmental changes from channel members.

5. Employment

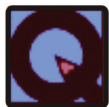
The function of distribution creates employment opportunities in society. Market intermediaries work as direct and indirect sources of employment. Different producers need to supply their innumerable products to consumers. Thousands of distributors, agents, wholesalers, retailers, brokers etc. involved in supplying the products to the consumers. Similarly, many people of the society can get jobs in the transport and warehouses sectors, etc.

6. Efficiency

Producers produce limited types of goods in mass quantities but the consumers demand different types of goods in small quantities. When goods are produced in a mass quantity, they can be obtained at a lower price. Distribution helps to satisfy the needs of consumers by supplying an assortment of different products of different producers. From this, efficiency can be achieved in both production and distribution.

7. Financing

Intermediaries themselves make arrangements to keep reserves and stock of goods. The producers need not make arrangements and manage distribution centers and warehouses. The producers need not do anything except remain busy in production, the timely payment by intermediaries and financial help become more important for smooth operation of production. Similarly, the role of finance is also decisive in mobilizing other means of production.



INTEXT QUESTIONS 20.2

1. What is the need for physical distribution?
2. What is the role of physical distribution?
3. _____ brings positive effect in society
 - a. Distribution
 - b. Transport
 - c. Place
 - d. utility



20.3 COMPONENTS OF PHYSICAL DISTRIBUTION

1. Order Processing

Order processing is the starting point of any distribution activity. Order processing includes activities like receiving the order, handling the order, granting credit. Invoicing, dispatching, collecting bills, etc. Each customer expects that the order placed by him is implemented without delay, and as per the specifications of the order.

Thus, order processing becomes very important. Marketers should make an effort to maintain the order cycle time i.e. the time period between the time of placement of an order by the customer to the time of arrival of goods at his destination. Standard procedure should be laid down for processing of order.

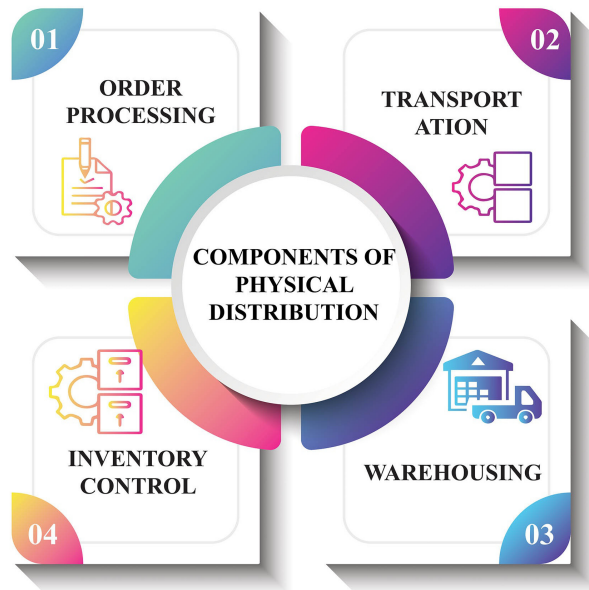


Fig. 20.1: Components of physical distribution

2. Storage and Warehousing

Storage means making proper arrangements for retaining the goods in proper condition till they are demanded by customers. There are many products which are seasonally produced but are used throughout the year, they can be stored and later released.

Similarly, there are products which are produced throughout the year but are seasonally used like umbrellas, fans, heaters, etc. Here also storing plays an important role. Storage reduces the need for instant transportation which is difficult and costly.

Warehousing provides the storage function. Places where the goods are stored are known as warehouses. Goods are stored in warehouses to be released in time of demand.

Apart from storing functions, warehouses also perform other functions like, marketing and assembling the goods.

Two types of warehouses are there- Storage Warehouses and Distribution Warehouses. Storage warehouse helps in storing the goods for a long and medium period of time to ensure matching of supply and demand. Distribution warehouses facilitate assembling the product and redistributing it within a short period of time. They can also be centralized (when located near a factory) or decentralized (when located near a market).

3. Inventory Control

Inventory control refers to efficient control of goods stored in warehouses. Maintaining an adequate level of inventory is very essential for smooth flow of business. Inventory acts as a bridge between the orders of customers and production. They are the reservoir of the goods held in anticipation of sales. Therefore, it needs to be properly managed and controlled. Neither too small nor too large inventory should be maintained.

Former would result in stock out, resulting in lost sales and latter involves heavy investments. Thus, a balance has to be maintained. As Prof. W. J. Stanton states, “the goal of inventory control is to minimize both the investment and the fluctuation in inventories while at the same time filling customer orders properly and accurately.”

Correct anticipation of the product demand is necessary for maintaining the correct level of inventory. Properly estimated demand helps the business firms in terms of cost of inventory, supplying to customers in time and maintaining the production schedule.

Material Handling: Material handling includes all those activities which are associated in moving products when it leaves the manufacturing plant but before it is loaded on the transport. This activity has been in existence for a very long period of time, and now it has developed as a system.

It involves moving the goods from plant to warehouses and from warehouses to place of loading in transport modes. Proper management of material handling helps in avoiding unnecessary movement of goods, avoiding damage to the goods, facilitate order processing and efficient movement of goods,

Material handling is the sub part of the total physical distribution system and helps in reduction in cost and better service to consumers. Effective management of the material handling system leads to the effectiveness of the total physical distribution system and thereby makes it economical.

4. Transportation

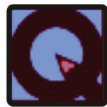
Transportation as a component of physical distribution is concerned with the movement of goods from the warehouse to customer destination. It includes loading and unloading





of goods and their movement from one place to another. In doing so it provides time and place utility. Transport accounts for a major portion of the distribution cost and of the total price of the product.

Being a major cost element, marketers must take keen interest in transportation decisions as it will help in reducing cost and increasing customer satisfaction. Correct form of transportation mode is very essential as it directly affects the price of the product. Proper choice facilitates smooth movement of goods on time and in good condition. The transportation mode therefore needs to be adequate, regular and dependable.



INTEXT QUESTIONS 20.3

1. What are the components of physical distribution?
2. _____ is associated in moving products from warehouse to transport
 - a) Material handling
 - b) inventory
 - c) transport
 - d) Processing

20.4 MARKETING FORCES AFFECTING DISTRIBUTION

1. Factors Related to Products

Product is a prime factor in channel selection. Product-related factors are among most relevant and powerful factors affecting channel decision. Channel must fit the type and nature of the company's products. Such factors include:

- A. Perishability of Product:** Perishable products must be sold and consumed immediately after production. So, for perishable products, normally, direct or short channel is advisable. For durable products, an indirect or multilevel channel is preferable. However, due to availability of rapid means of transportation and advanced cold storage facilities, the perishable product can also be sold by long-indirect channels.
- B. Technical Aspects:** Technical products cannot be used without sufficient information and direct supervision. Even, they need more frequent services. It is advisable to adopt indirect and multilevel channels to assist consumers to use the technical product properly and safely. For simple products, direct channels can be used.
- C. New v/s Existing Product:** Consumers need more information and attention for new products. More efforts and time are required to convince consumers. As a result, a company may opt for an indirect channel to take help of middlemen in this task. For existing products, the company can use direct and/or indirect channels.



- D. Complexity and Risk Related to Use of Product:** Complex and risky products are sold via middlemen as consumers expect more direct supervision and assistance,
- E. Size of Product:** In case of heavy and bulky products, direct or short channel. s more suitable. This is due to difficulties related to physical movement of the product.
- F. Divisibility of Product:** Mostly, indivisible products are distributed directly to customers. Divisible products can be conveniently distributed by middlemen.
- G. Unit Price of Product:** Precious products, like gold, jewellery, certain chemicals, software, etc., are distributed using direct or short channels of distribution. Use of direct and short channels can minimize risk of theft or robbery.
- H. Legal Aspect:** Quite obviously, permitted (legal) products can be distributed by any convenient channel of distribution. But illegal products are distributed by direct channels for secrecy purposes.

2. Factors Related to Company

Company's internal situations have a direct impact on the choice of marketing channel. Manager has to analyze company-related factors to decide the best fit channel(s). Company-related factors include:

- A. Company's Financial Position:** Financially sound companies can maintain separate and well-equipped departments for distribution of products. Such companies can open and manage their own retail outlets and can hire salesmen to manage distribution effectively. They do not require services of middlemen and, hence, can distribute the product directly. But, financially weak companies have to opt for indirect channels to share resources and expertise of channel members.
- B. Product Mix of Company:** A company's product mix consists of product lines and product items in each product line. Many product lines and several product items/ varieties in each of the product lines can enable the firm to offer multiple choices to a large number of consumers. Even, the firm can take advantage of the scale of the economy. In such cases, direct channels are more advisable. Small companies with limited product lines and/or product items should distribute products via wholesalers and retailers, who sell products of many companies.
- C. Desire for Control:** If a company desires to have direct and close control over production and selling activities, direct channels are preferred and vice-versa.
- D. Experience and Expertise:** Successful distribution needs considerable experience and expertise. If a company possesses necessary experience, expertise, and staff, it can manage selling activities on its own. When a company lacks such experience and skills, it has to involve middlemen, and prefers indirect channels.



- E. Facilities and Staff:** Sufficient facilities and capable staff are essential for effective distribution of products. If a company manages needed facilities and staff, direct channels are used, otherwise indirect channels are used.
- F. Company's Past Experience:** A company's past experience can also affect channel decision. When a company has favorable and satisfactory experience to work with middlemen, it may continue working with them. In case, if it is not satisfied with terms and services of middlemen, it would shorten its channel of distribution.

3. Factors Related to Middlemen

Companies consider several middlemen-related factors while deciding on channels. Most common factors include:

- A. Creditworthiness of Middlemen:** Middlemen's credibility is an important criterion to decide on the channel. If middlemen have good reputation and creditworthiness, a company can multiply its gain and, as a result, prefers to involve them in their distribution activities. Creditworthiness is a critical aspect while offering dealerships or franchises for a definite area.
- B. Attitudes of Middlemen:** Positive attitudes of middlemen make companies to involve them in distribution activities. Companies like to select indirect channels with one or more levels. Opposite situation leads companies to select direct channels.
- C. Services Rendered by Middlemen:** Channel decisions depend on the number and quality of services offered by middlemen to customers. When the channel members are ready to provide several services to customers, like home delivery, free repairing, credit facility, installment payment schemes, and other post-sales services, the manufacturers like to involve them in distribution to avail such services to their customers. When middlemen do not provide the useful services to customers, companies prefer direct channels.
- D. Financial Capacity of Middlemen:** Strong financial capacity of middlemen attracts manufacturers. This is due to the fact that a strong financial position benefits both manufacturers and customers. Strong financial position results in speedy recovery of bills receivable, less chances of bad debts, immediate payment, credit facility to customers, and also advanced payment.
- E. Terms and Conditions:** When terms and conditions laid down by middlemen are not favorable, the manufacturers don't like to involve them in distribution activities. They prefer direct distribution channels.



4. Factors Related to Market

Market (consumer behavior) is a crucial factor in channel selection. Main factors related to market includes:

- A. Size of Market:** In case of a large and concentrated market, it is economically affordable for a company to manage its own distribution setup. When the market is small, it is advisable to assign distribution tasks to middlemen.
- B. Geographical Concentration:** When a firm's customers are highly concentrated (living in a nearby area) in a particular region, it can directly deal with customers by using any of the direct channels. But, when my customers are scattered in several regions; it is not convenient to use direct channels. Middlemen can do a better job with less costs.

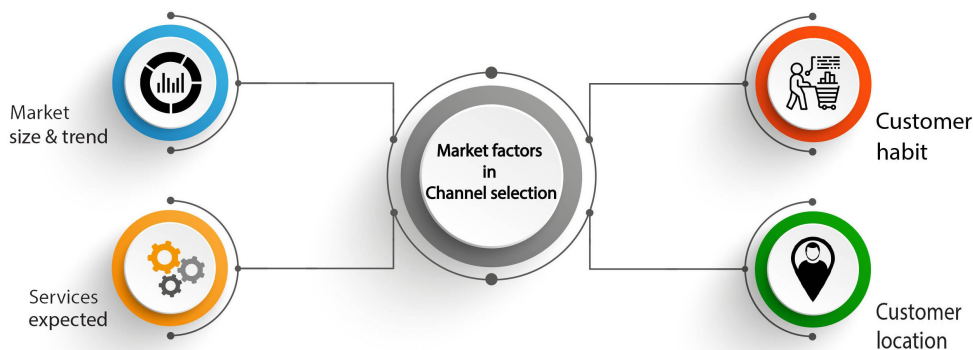


Fig. 20.2: Market Factors in Channel Selection

- C. Services Expected by Market:** Number and types of services expected by the target market, and company's capacity and readiness to meet them are important issues to be considered in this connection. For example, if the market expects a lot of services and the company is unable and/or unwilling to satisfy them, indirect channels are preferred to avail the services from middlemen.
- D. Habits of Consumers:** Distribution channels must be fit with habits of consumers. Manager should find out why. How, when, where and from whom the consumers like to buy. For example, if consumers are habituated to buy a little quantity frequently from nearby retailers on credit, a company must involve retailers (along with wholesalers) to avail products at all the places where consumers reside.
- E. Current Market Trend:** Firm's distribution system must be compatible with the recent market trend. Trend includes a number of variables like policies and practices of giant national and multinational companies, functioning of departmental stores and corporate retailers, cyber marketing and network marketing, business partnering with banking, insurance, and other service providers, customers' awareness, and so on.



5. Factors Related to Competition

Current and anticipated competition affects the company's decision on marketing channels. Relevant competition-related aspects must be analyzed while selecting the channel. Competition-related factors include:

- A. Intensity of Competition:** When there exists a severe competition in the market, a company must consider competitor's distribution strategies and practices while selecting marketing channels. In case of less competition, a company choice will be independent of competition.
- B. Response and Reactions of Competitors:** Reactions and response of the close competitors must be taken into account while deciding on the distribution channel. A company must select such channels that can help avail competitive advantages.
- C. Company's Competitive Position in Market:** A leading company can design its own distribution network. It can select a specific channel of distribution as per its requirements. But the follower companies have to follow the market leader. Their choice depends on the leader's practice.

6. Factors Related to Environment

Marketers have to consider the overall business environment while deciding on a marketing channel. Domestic and global environmental forces have direct or indirect impact on company's activities and operations. Main environmental forces that affect channel decision include:

- A. Economic Condition of Country:** Country's economic condition affects a firm's operations. In economically poor countries, short or direct channels are used to sell products at low prices. In developing and developed countries, normally, indirect channels are used to distribute products.
- B. Phases of Trade Cycle:** Phases of trade cycle, like recession, recovery, prosperity, etc., indicate the country's economic condition. Normally, in the prosperity stage, long and indirect channels are used due to the need for mass distribution and willingness of people to pay high prices for the product. Direct and short channels are more suitable when the economy is passing through a recession phase as direct and short channels keep the selling price low.
- C. Legal Provision:** Government policies and legal provisions have direct or indirect implication on a firm's distribution activities. Managers must identify relevant provisions affecting distribution activities and, accordingly, an appropriate channel(s) should be selected. Taxes, charges, administrative procedures, restrictions, and other issues are worth noting in this regard.



D. Availability of Facilities: Availability, costs, and quality necessary facilities play a decisive role in channel selection. Facilities like transportation, communication, warehousing, banking, insurance, supporting government agencies at national and international level, degree of harmony among states of the country, and relations among nations at large affect firm's channel decisions.



INTEXT QUESTIONS 20.4

1. What major categories of forces affect distribution?
2. Differentiate cycle and lead time?
3. _____ is not a phase of trade cycle
 - a. Recession
 - b. Prosperity
 - c. Recovery
 - d. Responsiveness



WHAT YOU HAVE LEARNT

Physical distribution: Physical distribution is the group of activities associated with the supply of finished product from the production line to the consumers. It creates 'time' and 'place' utility, which maximizes the value of products "by delivering them to the right customer at the right time and right place".

Role of distribution: Delivery of satisfaction, standard of living, value addition, communication, employment, efficiency and finance are the major roles of distribution.

Components of physical distribution: Order processing, storage and warehousing, inventory control, material handling and transportation

Marketing forces affecting distribution: Factors related to products, company, markets, middlemen, environment and competition are considered for selection of physical distribution.

**KEY TERMS**

Distribution	Product	Company
Market	Mode of transportation	Storage
Order Processing	Material Handling	Packing
Competition	Trade cycle	Recession

**TERMINAL EXERCISE**

1. Define distribution
2. Give an objective of distribution
3. What are the major types of distribution?
4. What is recession period
5. What is order processing
6. How to control inventory?
7. What is the importance of distribution to customers?
8. Explain trade cycle
9. Give the company factors affecting distribution
10. How middlemen affect the distribution
11. Brief about the need and objectives of physical distribution
12. Explain the role and importance of distribution
13. Describe the components of distribution
14. How to manage distribution considering cost and time factors
15. Explain the marketing forces affecting distribution



ANSWERS TO INTEXT QUESTIONS



Notes

20.1

1. Distribution means to spread the product throughout the marketplace such that a large number of people can buy it.
2. Physical distribution is the set of activities concerned with efficient movement of finished goods from the end of the production operation to the consumer. Important physical distribution functions include customer service, order processing, inventory control transportation and logistics, and packaging of materials.
3. Choice a.

20.2

1. Need of PD
 - a. Creating Time and Place Utility
 - b. Helps in Reducing Distribution Cost
 - c. Helps in Stabilization of Price
 - d. Improved Consumer Services
2. Role of PD
Delivery of satisfaction, Standard of living, Value addition, Communication, Employment, Efficiency and Financing

3. Choice a.

20.3

1. Components of physical distribution includes order processing, storage and warehousing, inventory control and transportation
2. Choice a.

20.4

1. Under marketing forces affecting distribution, factors related to products, company, markets, middlemen, environment and competition are considered for selection of physical distribution.

MODULE - 4

Warehouse Management



Notes

Need for Physical Distribution in Warehouse

2. Cycle time indicates the level of responsiveness of production. Lead time, however, is the time it takes for an order to be fulfilled after production; it includes preparation, packing, and delivery. Lead time indicates the level of responsiveness of distribution. Taken together, cycle and lead time indicate how well your company produces and delivers its embedded systems.

3. Choice d.



DO AND LEARN

Take the examples of FMCG goods and perishable commodities that have to be distributed from the warehouse to the retailers for use by consumers. Make two groups of your class and find out how the physical distribution to be carried out efficiently for the two types of goods selected considering the external forces affecting distribution.



ROLE PLAY

Ram and Krishnan are friends and both do business. Ram deals with processed food products and Krishnan is the producer of handicraft products. One day they met each other in a restaurant and discussed the issues in their product physical distribution to reach the consumers using different channels. Now, continue their discussion on the above subject.

Ram: Krishna can you tell me how you plan your inventory so that consumers always get your product

Krishna: