PhysicallDistribution

Last stage of production is consumption and consumers are called customers; Hence, Products are produced to provide it to the consumers. But, middlemen’s are involved to fulfill the gap between the producers to the consumers. Producers produce the product and sell it to the agent for wholesaler sells it to the retailer and consumers purchase it from the retailer to use it. Some products involve less number of middlemen’s. The product which involves large number of middlemen’s profit or say commission are included in the products selling price, which increase the product price. And the products which doesn’t involves middlemen’s its selling price is of less difference with cost of production because only producers includes their profit in the production cost. The medium used for transferring the products from the producers to the final consumers or a industrial seller is called distribution medium. Distribution channels are systems of economic institutions through which a producer of goods delivers them into the hands of their users. Producer and final consumer both are included in distribution media. Hence, under this channel those middlemen come who work as coordinator between the producer and consumer. The institutions who doesn’t transfer the ownership of product but provides only services then they are not included in distribution medium. Like Bank, Transport institutions, warehousing etc. “Any
sequence of institutions from the producer to the consumer, including one or any number of middlemen, is called a channel of distribution. Every producer seeks to link together the set of marketing intermediaries that best fulfill the firm’s objective. This set of marketing intermediaries is called marketing channel (also trade channels and channel of distribution). What middlemen offer is distribution, produced product is available on right time, at the right place and in the right quantity. “It is a path traced in the direct or indirect transfer of title to a product as it moves from a producer to ultimate consumer or industrial users.”

**Distribution System:**

The structure of a marketing channel describes the arrangement and linkage of its members. Three distribution systems are used to transfer the goods from production place to final consumers. These are:

1. Direct Distribution System,
2. Indirect Distribution System,
3. Double Distribution System,

**Direct Distribution system:**

The producer can sell directly to the customers without the help of intermediaries. Some of the important examples where direct distribution channel is used through opening retail shops, through mail order business, through traveling salesmen.
Manufacturer itself works as the middlemen to transfer the goods to the consumer. These mediums of manufacturers are its own shops, Depo, Branches, Representatives Etc. Mainly these are divided into 5 parts:

(a) **Mail Order House:**

The seller contacts the buyer through some form of advertising. The seller advertises his goods through the press and by sending leaflets, cards and catalogues giving all necessary particulars about the goods. Orders are received from customers by pot and the goods are dispatched usually by V.P.P. (Value Payable Post) or Registered Post. Delivery is made by the postal peon on payment of the amount due which is sent by the post office to the seller. Sometimes, goods may by sent by railway parcel and the railway receipt may be forwarded by the seller to the customer by post, usually by V.P.P. In any case post office plays a pivotal role in mail order business.

In case of the mail order business the selling function is performed without the intervention of personal salesmen. Therefore, it is obvious that not all types of goods can be suitable articles for retail selling by mail. Goods of well-known brands are the most suitable articles for mail order business. Usually chemicals, patent medicines, footwear, jewellery, leather goods, watches, ready-made clothes, fountain pens, toilet goods and book etc. are sold by mail. Thus leading general mail order houses like Sears Roebuck and Co.,
Montgomery Ward & Co., and others (in the U.S.A.) were started after 1870.

(b) Automatic Vending Machine Selling:

Automatic vending makes use of machines. Coin-operated, self-service machines make a wide assortment of products available, such as cigarettes, hosiery, insurance policies, hot food and beverages, such machines as supply candy, chewing gun, soft drinks, and coffee are purchased in areas of heavy traffic, where such machines are installed as near offices, service stations hotels and shopping areas. Now in India such machines are being installed at important railway stations for issuing tickets.

The owners have to develop special packs to suit the machines. The machines must present attractive appearance and must be reliable in its operation. The machines are frequently used to supply a certain service to the employees and to get right time business by the retails store. They eliminate the use of sales personnel’s and small space is needed for their installation. But they need frequent servicing and repair to keep vending machines functioning.

(c) Door-to-Door Selling:

It means that either the producers or retailers sell directly to the consumers by visiting their homes. Such selling requires travel and personal contact and substantial costs are involved in recruiting, maintaining and managing sales staff large enough to transact profitable business. Rugs, draperies, milk and dairy
products, cosmetics, bakery products, household cleaning materials, housewares etc., are sold through these retailers. The door-to-door selling attracts the consumers because it offers ease and convenience of buying at home and to get the personalized services of the retailers.

Further, it provides an opportunity for the most aggressive forms of retailing selling, besides the chances of demonstrating the product in the consumer’s home⁹.

**d) By Telephone System:**

Direct system sells through telephone. This system is used specially in America. Under this method customers gives order by telephone to the producers sends the order at the house of customers and customers pays for transport expenses also. Under this method consumers get the product in less time and pays extra charge of transport¹⁰.

(e) Sale by Opening Retail Shops:

Sometimes manufacturers establish their own retail stores to sell their products direct to the consumers. Manufacturers of perishable goods such as ice-cream and bakery products sell their products through their own retail shops because such goods must reach the consumers quickly. Manufacturers may sell directly to the consumers by establishing their own retail shops when they want to keep in touch with consumers demands and fashion trends, such as clothing’s, or when their products needs specialty selling as in care of sewing machines.
(f) Sale at the Manufacturer’s Plant:

Under this method it is the consumer who comes to the manufacturer. Consumers call at the factory to buy goods required by them, for example, consumers go to the bakery to purchase bread, biscuits and other bakery products\textsuperscript{11}.

**Indirect Distribution System:**

Indirect distribution system means distribution of goods through middlemen or intermediaries. The whole process of indirect channel of distribution:

1) Producer Retailer Consumer
2) Producer Wholesaler Consumer
3) Producer Wholesaler Retailer Consumer
4) Producer Agent Middlemen Wholesaler Retailer Consumer

In this figure several flow functions take place through distribution channels which symbolizes the path for movement of title, possession, promotion and payment for goods and services. Pension, title and promotion flow forward right from the producer to the ultimate consumer through intermediaries. But, the agent is, infact, a warehousing middleman who represents the manufacturers or the regular wholesaler in seeking a market for the manufacturer’s output. Payment flows move backward from the consumers to producer.
Figure (1): Producer    Retailer    Consumer

Channel is preferred where the purchasers of goods are big retailers like departments stores, chain stores, super markets, shopping centers (In sub-urban areas), consumer co-operative stores etc. some of the Indian Companies like D.C.M. and Bata shoe Company use this channel by establishing their own retail stores. This channel is also suitable in the case of perishable products.

Department Stores:

It has been defined as the type of retail organization which deals in a wide variety of merchandise grouped into well defined departments under central control. A Departments store is a huge retail shop situated at a central place in the city, divided into a number of small shops or departments each dealing with one or two lines of goods and specializing in those lines. All such departments or specialty shop’s are under one roof and under one management and control. Such a kind of huge retail organization, many a time looking like a miniature township, is usually owned by a big company as it requires huge capital. Thus, a unit of sales organization assumes a very bit size under a department store. The department store is, therefore, a mere collection of shops all under the same palatial building, each shop dealing in a particular line of retails trade. This kind of shopping is often offered to as one-stop ‘shopping instead of increasing sales by opening branches to ell the same goods (multiple pre shops), a business can as well sell different kinds of goods in the same building.
Chain have been interpreted as a group of two or more reasonable similar stores in the same kind or field of business, under one ownership and management, merchandised wholly or largely from central merchandising head quarters, and supplied from one or more distributing warehouses or directly from the manufacturer or orders placed by the central buyers\textsuperscript{16}.

**Multiple shops:**

A multiple shop system is a network of a number of branches situated at different localities in the city or in different parts of the country. In India such organizations are not so common as Europe and America. The multiple shops mean the opening or shops at different places by a trading unit whether it is a company, a partnership, or a sole trader. To make it more clear, multiple shops are the retail units with a different variety of goods of an individual manufacturer, for example Bata Shoes and Usha Machines. The only aim of such organization is to specialize in the trading of particular merchandise. Multiple shops are opened in different cities in competition to departmental stores\textsuperscript{17}.

**Super Markets:**

These are large, self-service stores that carry a broad and complete line of food and non-food products. They have central check out facilities. A departmentalized-retail establishment having four basic departments, viz., self service grocery, meat produce and dairy plus other household departments and doing maximum business. It may be entirely owner operated or have some of the
departments leased on a concession basis\textsuperscript{18}. A super market is a novel form of retail organization specializing in necessaries and convenience goods. Usually it concentrates on all food articles, groceries, meat, fruits, vegetable and tinned products. Non-food items sold by these stores should satisfy a few conditions. Firstly, it must be widely used and must appeal to general consumers. Secondly, non-food articles most be a branded product, i.e., pre-sold to customers through intensive advertising. Thirdly, it should be a low-priced article. In India Super Markets have been started in all the big cities like Delhi, Bombay, Calcutta, Madras and Other state capitals ‘Efforts are being made to start such markets in other big towns. Its characteristic are: the large volume of sales. The open display of goods, selection of goods by customers themselves and the absence of credit facilities and services like free home delivery. Packaging is of great importance in case of goods sold in supermarkets. As salesmen are not used for effecting sales. Packaging must be attractive, must indicate the price and weight of the goods contained in the packages and make (brand) and grades of the products\textsuperscript{19}.

**Discount House:**

These are large stores, freely open to the public and advertised widely. They are self-service and general merchandising stores. They carry a wide assortment of products of well known brands of hardware’s, appliances, housewares, home furnishing, sporting goods, clothing, toy, automotive services, garden supplies etc. They compete on low price basis, and operate on a relatively low mark-up
and a minimum number of customer service. They range from small open show room to catalogue type order offices to full line limited service, and promotional stores. They buy their merchandise stocks both from wholesale distributors and directly from manufacturers.

Discount houses saw great prospects in a low-margin, high turnover type operation, with very few services but big price cuts. They could reduce their operation expenses to about 15% of sales while department stores and limited line stores had operating expenses upto 35% of sales20.

**Consumers Co-operative Stores:**

A consumer co-operative is a retail business owned and operated by ultimate consumers to purchase and distribute goods and services primarily to the members. These stores are associations organized by consumers to obtain their requirements and the benefits of large-scale trading. Co-operatives stores are financed by the members of the society in the form of shares of small denominations. The trading profits are shared by the members on the basis of their contribution to the society. They also get some remuneration in the form of bonus for the purchases made during the period in question. It is because of this reason that these institutions flourish and every possible effort is made by them to increase profit. The principles to encourage such retail organizations are: to advocate open membership, democratic control, cash purchases at market rates, payment of limited interest
on capital invested by members a fair return of their share through dividends proportionate to their purchases\textsuperscript{21}. 

Channel is preferred in distributing industrial goods which further used for production. The terms industrial distributor is commonly utilized in the industrial market to refer to those wholesalers who take title to the goods they handle. The wholesalers are involved in the marketing of small accessory equipment and operating suppliers, such as building, supplies, office supplies and small hand tools. These two channels discussed are the indirect shortest channels and are known as one level channel. Wholesaler may by-pass retailer when there are large and institutional buyers e.g., industrial buyers, government, consumer co-operatives, hospitals, educational institutions, business hoses, etc.

It is the longest indirect channel where products are produced by a large number of small companies, a unique middlemen – the agent performs the basic function of bringing buyer and seller together. This channel is used by those firms who cannot afford to develop a sales force of their own. A firm with diversified product mix may find it more appropriate to adopt a variety of distribution channels. Agents are used in such industries as canning and frozen food packing.

In these industries, many producers supply a large number of geographically scattered wholesalers. The agent wholesaling middlemen, often called a manufacturer’s representative, also sere
as an independent sales force in contacting the wholesale buyers, usually, the manufacturer pass on the risk of marketing the goods to the selling agents and he concentrate only on production\textsuperscript{24}.

**Double Distribution System:**

When a producer applies both direct and indirect distribution system then, it is called as double distribution system with the help of double distribution system producers gets benefits of both the distribution system. At the present time for expansion of marketing process this type of distribution system is beneficial and it is becoming necessary for the producers. The producer’s following both the distribution system. They face a very big problem of market segmentation. It becomes difficult for the producer that which market should follow the direct distribution and which market should follow indirect distribution system. And double distribution system is followed to expand the distribution system.

Pradeshik Co-operative Dairy Federation follows both direct and indirect as double distribution system. Distribution of liquid milk and milk product. Liquid milk is distributed under the direction of federation in big cities and metro cities of Uttar Pradesh. This work is performed by local diary unit r unions. As it is cleared in above discussion that liquid milk and milk products are sold under the brand name “Parag”. For this work local unit or diary union appoints an agent. Liquid milk is supplied to agent and agent sells it to the customers. Agent gets commission for this work. Liquid milk distribution system can be shown as follows:
Dairy Unit or Union

Agent

Consumers

Consumer’s positive and negative activities are justified by agent. This method is effective for liquid milk sell and beneficial for consumers. Its main reason is that this method is under control of Dairy Unit or Unions. Agent’s irregularity can be easily find out and can be procured. Secondly, agent is bound to sell liquid milk at the price fixed by the federation. This way consumer is not exploited. Thirdly, a consumer has to pay less charge for milk. If any other distribution system is followed then the consumers are exploited. Point should be noted that some time and in some place agents takes more price than which was determined by the federation. As it is rare but it happens. So, to prevent this type of work. Federation should investigate the agent personally and after satisfying the agent he should appoint an agent.

Milk product distribution system differs from the distribution of liquid milk. The milk product reaches to consumer through one of the following distribution channels.

(1)Stockiest Sale
(2)Commission Agent Sale
(3) Clearing and Forwarding

**Stockiest Sale:**

Wholesalers are individuals or business firms who will sell products to be used primarily for resale or for industrial use. The wholesaler is a bulk purchaser with the object of resale to retailers or other traders after breaking down this bulk in smaller quantities and if necessary repacking the smaller lots suitable for his customers, viz. retailers.

Stockiest sale is three tier-system having two intermediaries viz. under this system two mediators are used for sale between manufacturer (Dairy Union) and Consumers they are stockiest and retailers. They invest their own capital for selling the product. It can be shown by the following way:

Manufacturer → Stockiest → Retailer → Customers

**Commission Agent:**

A Commission agent is a middleman who buys and sells goods for his employer (principal) in return for a commission. He buys and sells in his own name but he does not take the risk of the trade. He gets a fixed commission and all the risks involved in the business he transacts are left to be born by the principal. A commission agent has an expert knowledge of the commodities in which he is trading, keeps close contact with the producers and possesses precise knowledge of the trends of the market\(^\text{25}\).

As it is discussed before that liquid milk marketing system follows an commission agent. Even milk product also uses
commission agent to distribute the products mainly 20 grams pack of butter, milk cake, cheese, curd etc. This system is also used in distribution of 100-500 grams pack of butter, ghee and skimmed milk powder, mainly this system is used for the milk products which are more perishable in nature.

**Clearing the Forwarding Agent:**

These are persons employed to collect, deliver and otherwise forward goods on behalf of others. These agents are particularly important in the export and import trade. Forwarding agents receive goods from the exporters and arrange for the shipment of these goods to their destinations. Clearing agent receives goods from abroad on behalf of the importers at the port of importation, examine their quantity and quality and make arrangements for their warehousing or transportation to the places of the importers.

The advantage of these agents lies in the fact that they can collect various packages consigned to the same town or district from different consigners into one consignment and thus transport them at lower freight rates. Their expert knowledge and promptness are beneficial to the merchants and manufactures. The commission they charge for their services is also smaller than those charged by other agencies.

Except in Uttar Pradesh and Delhi all other states follows the clearing and forwarding distribution system. With this system of distribution Dairy federation does not have to do unnecessary expenditure for the establishment of Godowns. In present time,
total produced of butter and ghee of (100-500 grams pack) and 5% of total produced are distributed by this distribution system.

It is important in relation to distribution that where Pradeshik Co-operative Dairy Federation’s regional marketing office is situated there distributors are appointed for different cities by Dairy federation’s marketing office. And distributor’s supplies milk product to the sellers of its area. The state or area which doesn’t comes generally, under the direct control of regional marketing office there commission agent is appointed and then through commission agent, product is provided seller through the distributor’s for sale. It is necessary for these mediators to work effectively so, that centralized production marketing system performs smoothly. And for selecting distributors it is necessary to be very careful.

**Physical Distribution:**

Physical distribution involves the handling and moving of raw materials and finished products from producer to consumers, often an intermediary. Its objective is to “put the product within an arm’s length of desire”. By administering its physical flow from the organization to the customers at the time and place where they want them at a reasonable cost. So, physical distribution management is “the process of strategically managing the movement and storage of materials, parts and finished inventory form suppliers, between enterprise facilities and to customers”. Physical distribution objective as getting the right goods, to the
right places, at the right time, for the least cost. There are two dimensions to physical distribution process, the flow of information form the producer to the consumer or the user. In both these retailers and wholesalers are usually involved. The tow dimensions are inter-related, though information flow generally triggers the material flow into motion. “Physical distribution is the science of business logistics where by the proper amount of the right kind of product is made available at the place where demand for it exists. Viewed in this light, physical distribution is the key link between manufacturing and demand creation.

Hence, physical distribution involves planning, implementing, and controlling the physical flow of materials and final goods from points of origin to points of use of meet customer needs at a profit. It is not only a cost, it is a patent tool in competitive marketing. Companies can attract additional customers by offering better service or lower prices through physical distribution improvements. Companies lose customers when they fail to supply goods on time. Major activities that are normally grouped together in an integrated approach to physical distribution management are transportation, inventory, warehousing and order processing.

Physical distribution is a marketing terms to describe the broad range of activities concerned with efficient movement of finished products from the end of production line to the consumer. In some cases its also includes the movement of raw materials from suppliers to the production plant. Its management has assumed great importance as it alone can reduce the cost of transport,
storage, material handling, and order processing and holding of inventories. These are the basic building blocks of a planned physical distribution system. Marketers are giving special attention to physical distribution because it can assume a competitive level of serving the demand while holding down the total cost of distribution as much as possible. The total cost approach, the idea of cost trade office, the systems approach and avoidance of suboptimisation of costs are the principle supporting concepts of the modern physical distribution system. The physical distribution system refers to the portion of a logistics system concerned with the movement of product from the seller outward to the customer or consumer. The system includes: storage and warehousing, traffic and physical handling, order processing, transportation, inventory control and information monitoring\textsuperscript{29}.

**Transportation:**

It is an essential element of physical distribution. It consists of moving products from the plant or warehouse of the seller to the receiving facilities of the buyer. The main parties in transportation are carriers and shippers. Carriers are companies whose primary objective is to bring transportation services to others. Thus, the Western Railway or any other railway system, Indian Airlines, or Indian Shipping Company or the Jaipur Golden Transport are all carriers. Shippers on the other hand, are those organizations and individuals for whom the carriers provide transportation services\textsuperscript{30}. 

In a sense physical distribution system is nothing but a network of activities consisting primarily storage at multiple points inter-connected by a series of transport links in the machinery of distribution. Transportation is the crux of the physical distribution. It is sometimes called the Gordian knot of physical distribution management. Trade and transportation are related deeply with each other. Transportation is important because it helps in sending goods from the Production place to the final consumer and even also raw materials to the production place also. Marketing activities are affected by transportation also. Area of market remains limited for the producers if transport facilities are also limited. In present time, products are send not only to local, and national areas but also to International areas too. But, in past due to the lack of transport products area was limited to local areas only. Transportation also helps in centralization and specialization also. As a result, natural resources are full utilized as it is send by the help of transport to the consumption place. Along with this labor division is also possible as they can easily transfer by one place to another. And by full utilization and labor division. Production increased at a large scale\textsuperscript{31}.

The products which are perishable in nature are sending to one place to other by the help of fastest transport facilities to the consumers. If transport cost is more, market cannot be expanded. So it is said that transport expenses also affects the marketing work. Transport is the physical means whereby goods are moved from the points of production to the places where they are required.
for consumptions. It lies at the very root of the whole marketing process. It gives place and time utility to goods, because goods which are not at a place and time where and when they are wanted have no meaning for any one. Transport is indispensable for the assembling and dispersal of raw materials and goods. Transport provides the growth and distribution of wealth, develops distant markets of the world, encourages specialization and division of labour and helps in marketing better use of labour and capital\textsuperscript{32}. 
Transport

Land Transport

Thelas
Bullock Carts
Tangas
Rikshwas
Motorcar

Water Transport

Pathways

Railways

Pack-animals

Inland water Transport

River Transport

Canal Transport

Coastal Shipping

Ocean Transport

Overseas Shipping

Source: Sinha, J.C., and Mugali, V.N., A text book of Commerce
Modes of Transportation:

(1) Land Transport

(2) Water Transport

(3) Air Transport

Land Transport:

In the 21st century also, for smooth running of production, exchange and distribution land transport is necessary. From ancient time only land transport are utilized and has great importance. Old religious book like Mahabharata, Ramayana etc. also used land transport for their distribution. At time of Britishers and Mugal’s also land transport was used and Britishers have developed roads for their distribution purpose. Land transport works as cooperative part with the working of marketing land transport involves Pathways, Roads, Tramways and Railways. Firstly, Pathways are still of very significant use for transport. It involves: Head loads and pack animals.

In hilly tracts and forests where even animals cannot reach, human being is the only source of transport. Goods are taken from one place to another on the head or back of human being. In village’s milk curd are carried on “behangis” or head for sale from house to house. Use of coolies in large numbers to carry loads with in rural and urban areas is a common practice even today.

Animals like horses, pony, mule, donkey, ass, ox, buffaloes, camel, elephant, yak, sheep etc. are still used in backward areas for
transport purposes. These animals were good purpose for transport of small quantities of grains, firewood etc. During rainy season, when roads are damaged, they are very helpful. Donkey is in common use as pack animal in Rajasthan and some parts of Northern India. Small ponies and sheep are used for carrying goods in Kashmir and other hilly tracts. Elephant is the most important means of transport for carrying timber. The yak is used for trade between India and Tibet. Camel, the only means of transport in the desert areas, is actually called the “ship of desert”. Camel cart is of four wheeled wooden enclosure which is mostly used in some regions of Punjab, Rajasthan and the Western districts of Uttar Pradesh for the Transportation of fruits and vegetables from the transportation of fruits and vegetables from the villages to the nearby towns. The advantages of these pack animals is that they can pass through narrow tracts and even muddy roads on which vehicles cannot be used.

Road:

Transport by Road is the oldest branch of the transport system. With the coming of motor cars and trucks road transport has been revolutionized. It is becoming more and more popular. In a country like India, it is all the more important. Road is to play a decisive role in raising the standard of living of the people. Seventy per cent of population is residing in our villages. Thus majority of the consumers, both real and potential, are in the rural areas. To
tap this source of demand for the products of our growing industries roads are the best means of transport. It also offers quick solution of unemployment problem. It has been estimated that investment of rupees one crore in roads would create 12,000 new jobs\textsuperscript{34}. The means of Road transport may include the following:

**Bullock Carts:**

It is the most common means of transport used for the transportation of goods from villages to the market. Not less than seventy per cent of total volume of freight traffic in India is in the rural area which is carried by bullock carts.
Thelas:

They are two or four wheeled vehicles driven by human beings in the cities. They are commonly used to carry goods from the platform of the railway station to the tongas; rickshaws etc. They are also used for carrying articles from the city market to the buyer’s residence.

Reckshwas:

In some cities cycle rickshaws and auto-rickshaws are very convenient from of transport. They are easily available and cheap. They carry 2 to 3 passengers. About 3 mounds of goods at cheaper rates can be cad by a cycle-rickshaw. As its working expenses are very negligible, it is popular for local and short distance transport.

Tongas, Tumtums etc:

Tongas, Tumtums and other carriages driven by horses are not common in rural areas. But in urban areas their services are still appreciated. Much of the transport required by textile industry in Manchester is still provided by carriages drawn by horses. For daily small loads these house driven vehicles are more suitable and economical than motor trucks35.

Motor Trucks:

Motor Trucks have steadily increased their share of transportation and new account for 20 percent of total cargo ton-miles. They account for the largest portion of intercity
transportation. Trucks are highly flexible in their routing and time schedules. They can move merchandise door to door, saving shippers the need to transfer goods from truck to rail and back again at a loss of time and risk of theft or damage. Trucks are an efficient mode of transportation for short hauls of high value merchandise. Their rates are competitive with railway rates in many cases, and trucks can usually offer faster services\textsuperscript{36}.

**Tramaways:**

This form of transport is very suitable for carrying traffic in large cities during peak house. Because of its large carrying capacity it is in a better position to cope with the heavy rush of traffic charring certain rush house.

**Railways:**

Until the coming of the motor transport, railways had the monopoly a the land transport. In fact, railways, has been the “pioneer of modern mechanical transport”. It once revolutionized the transport of goods the world over. In India, though initially it brought disaster to indigenous industries railways helped in minimizing the occurrence of famines, commercialized agriculture and stimulated the growth of factory industry. Today, it is our principal means of transport and is responsible for the carriage of 80 per cent of the goods traffic and 10 per cent of the passenger traffic\textsuperscript{37}.

**Water Transport:**
Water transport is cheaper than various modes of land transport. Large amount of capital expenditure required for the construction of roads or railways truck is not necessary in case of water transport, with the exception of canal transport. In fact, water transport is the cheapest form of transport for heavy goods and bulk cargoes not requiring quick delivery. Water transport involves two means of transportation they are inland water ways and ocean transport.

**Inland Water Ways:**

Rivers are suitable for small boats and steamers. Thus, these are the highways given by nature for the use of human race. In the pre-railway days navigation by rivers was highly developed. There were several thousand miles of navigable waterways in the country. The Inland Water Transport Committee (1957) inland water transport has a great part to play in the transport system of our country.

Canals are the artificial waterways constructed for the purpose of navigation or for navigation and irrigation both. What has been said about the fate of the river transport in India applies equally to the canal transport.

**Ocean Transport:**

Ocean transport or shipping is of vital importance for the trade between nations. It emerged as the most important means of transport after the discovery of the sea rout to India and the settlement of colonies in America, Africa, Australia and Asia. It has
proved instrumental in bringing different parts of the world closer. It has been rightly called the “unifier of the world”. Usually ocean transport is divided into: Coastal Shipping and Overseas Shipping.

**Coastal Shipping:**

Coastal shipping is an important means of transport for all those countries whose borders touch the shore. It is an cheap and speedy form of transport. It serves definite areas. It is the most flexible and economical means of transport, particularly for the movement of coal and other bulky and heavy cargoes important in times of war or emergency.

**Overseas Shipping:**

Overseas shipping is of two types. They are the liners: liners are those ships which follows defined routes with fixed places and times of call. A liner is primarily meant for carrying passengers and mails, and carries relatively small amount of cargo. Its specially is speed and luxurious facilities to customers. Some liners are known for their largest size, finest services and fastest speed. And another I Tramps are those ocean going ships which have no set or routes or fixed time tables to be followed. They go anywhere and anytime they find cargo. They sail only after they get full load or one the condition that payment would be made for the unfilled space as well. It can be compared or similar to motor car or taxi, Tramps is particularly suitable for carrying grains and such other seasonal products in bulks.\(^{38}\)

**Air Transport:**
Sea transport continues to dominate International trade and will do so far the foreseeable future, but an increasing amount of the world’s trade is being carried by air. Air transport is the latest addition to the means of transport. It is a gift of the 50th century to the world community. The first flight in the air was made in 1903 which lasted for only twelve second and covered a distance of 120 ft. This was the beginning of an experiment. Aeroplane as mean of transport came to be used after the first world war. It enjoys an important advantage over rail, roads and Inland water transport systems. It does not require huge amounts to be invested in the construction of the prepared way as in case of the railways Line or road or canal. Atmosphere is the free gift of nature. Therefore, no property rights can come in the way of its use by the aircraft which can fly under the sky within the air space of the countries without any hindrance\textsuperscript{39}.

Transport is an important marketing work for P.C.D.F. like other producer; federation also needs two ways transport facilities. Firstly, to convey liquid milk from milk committee to plants and after that to transmit the liquid milk and other milk product to customers. Union working area is divided into two on the basis of products. First sale of liquid milk and, second sale of milk product. Sale of liquid milk is generally done by local customers. So, for that road transport is an important source. In this way, road transport is used in bringing liquid milk from milk committee. For this mini trucks are used and federation hires these trucks. Mini trucks are used to convey the milk and milk product to agents selling centers.
For the sale of milk other transport like Tata 407, Mahindra F.C. and Meta Door are used more than Mini Trucks Per day charge of Tata 407 is Rs. 320 and Rs. 220 of Mahindra F.C. and Meta Door is paid by Dairy Unions. Dairy Unions provides 1 liter diesel on per 8 kilo meter and 1 liter mobile on per 300 kilo meter to Tata 407, Mahindra F.C. and Meta Door’s. All Mini Trucks drivers expenses are bleared by the truck owners. There will be one milk loader with the drivers. Milk loader of Tata 407 is given Rs. 30 per day and milk loader of Mahindra F.C. and Meta Door is given Rs. 25 per day that will be its wages.

Incentives are also given to transport owner except the rent. Some Tracks staff’s bus, marketing manager’s and General Manager’s cars, Training, School Jeep etc. are used on hire other than Mini Trucks by Dairy Unions. And also other than these Dairy Unions also uses some Tranks, school bus, field work transport etc. If some staff goes some where for the work of Dairy Union that staff is paid traveling allowances and Daily allowances of Railway transport and General Manger and Managing Director gets Airways Traveling Allowances.
Cost of Transport:

Table 5.1: Transport Expenses of P.C.D.F.

<table>
<thead>
<tr>
<th>Year</th>
<th>Transport Establishment (in lack)</th>
<th>Loading Unloading (in lack)</th>
<th>Total Expenses</th>
<th>% of Increase</th>
<th>Index No. 1990-91</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-91</td>
<td>11.66</td>
<td>3.54</td>
<td>15.2</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>1991-92</td>
<td>10.16</td>
<td>2.38</td>
<td>12.54</td>
<td>-17.5</td>
<td>83</td>
</tr>
<tr>
<td>1992-93</td>
<td>0.81</td>
<td>3.68</td>
<td>4.49</td>
<td>-64.19</td>
<td>29</td>
</tr>
<tr>
<td>1993-94</td>
<td>0.49</td>
<td>3.31</td>
<td>3.80</td>
<td>-15.36</td>
<td>25</td>
</tr>
<tr>
<td>1994-95</td>
<td>1.74</td>
<td>2.98</td>
<td>4.72</td>
<td>24.21</td>
<td>31</td>
</tr>
<tr>
<td>1995-96</td>
<td>3.19</td>
<td>3.07</td>
<td>6.26</td>
<td>32.62</td>
<td>41</td>
</tr>
<tr>
<td>1996-97</td>
<td>3.54</td>
<td>5.58</td>
<td>9.12</td>
<td>45.68</td>
<td>60</td>
</tr>
<tr>
<td>1997-98</td>
<td>-</td>
<td>7.70</td>
<td>7.70</td>
<td>-15.57</td>
<td>51</td>
</tr>
<tr>
<td>1998-99</td>
<td>-</td>
<td>13.44</td>
<td>13.44</td>
<td>74.55</td>
<td>87</td>
</tr>
<tr>
<td>1999-00</td>
<td>-</td>
<td>5.19</td>
<td>5.19</td>
<td>-61.38</td>
<td>34</td>
</tr>
<tr>
<td>2000-01</td>
<td>-</td>
<td>3.82</td>
<td>3.82</td>
<td>-26.39</td>
<td>25</td>
</tr>
<tr>
<td>2002-03</td>
<td>-</td>
<td>3.50</td>
<td>3.50</td>
<td>-8.38</td>
<td>23</td>
</tr>
<tr>
<td>2002-03</td>
<td>-</td>
<td>3.65</td>
<td>3.65</td>
<td>4.29</td>
<td>24</td>
</tr>
</tbody>
</table>

Source: Complied Annual Reports P.C.D.F.’s, Lucknow.

Table 5.1 shows the transport cost of P.C.D.F.’s. It is clear by analyzing this table that there was increase to 0.24 times in between the study period of year 1990-91 to the year 2002-2003. In the year 1990-91 the total transport expenses was 15 lacks. In
which it decreased to 18% in the next year 1991-92. Again in the year 1992-93 it reduced to 64% in comparison to previous year. And it reduced up to the year 1993-94 but again in the year 1994-95 it increased to 24%. As total transport expenses was Rs. 5 lacks and it continuous increase in the year 1995-96, 1996-97 also that was Rs. 6 lacks and Rs. 9 lacks respectively. But in the year 1997-98 it decreased to 16% as transport cost was Rs. 8 lacks. But after that it shows an fluctuating trends but again in next year 1998-99 it increased to Rs. 13 lacks that was 75% increase in comparison to previous year. But after that there was continuous decrease in the study period. In the year 1999-2000, 2000-20001 and 2001-2002 that was Rs. 5 lacks, 4 lacks and 3 lacks respectively and again in the last year of the study period it increased to 4 lacks that was 4%. But from the year 1999-2000 to 2002-2003 it shows the frequent and slightly increase and decrease.

By analyzing this table, it is clear that transport cost of federation shows a fluctuating trend. Some time it reduces and some time it increases in very fluctuating manner. Total transport cost includes two items. Transport establishment expenses and loading and unloading expenses. But in few years like from the year 1997-98 upto the end of study period that was the year 2002-2003, it doesn’t shows the transport establishment expense. By analyzing this table it is clear that federation transport establishment cost is not shown in few years but that is impossible that federation has not done any expenses on the establishment of transport in these years. It means that federation careless in maintaining data relating
to transport are not efficient or is careless. So, they should maintain their data’s very carefully and effectively.

**Storage:**

Storage is an important function in any business. This function involves the holding of goods from the time they are produced until they are needed for consumption. It is an exercise of human skills in the field of handling of goods by which goods are protected from deterioration and surplus is carried over for consumption in future during the period of relative scarcity and demand. Thus, storage, to a business firm, means the keeping of products until they are needed for further processing use or sale\textsuperscript{41}. Storage of goods is necessary for the wholesaler and the retailer as well. Wholesaler has to store goods in adequate quantity to supply the retailers and retailers must hold goods of different varieties to satisfy consumers demand. It is necessary to store goods to avoid violent fluctuations in the price of goods, specially those goods which are produced in particular seasons. When goods are produced at a distance from the consumers, they must be stored near the market as a protection against delays in supply and uncertainties in transportation.

Many goods are produced throughout the year but their demands are seasonal in nature. Such goods must be stored and preserved until they are needed. Ornaments are mostly wanted during marriage season. Ice-cream is generally purchased in largest quantity during rainy season and warm clothing are wanted in the
winter. To enable the factories producing such goods to work throughout the year, goods produced by them in off-season’ must be stored. It is necessary to hold a raw material in store to ensure continues large scale factory production of mass consumption goods. Goods in modern factories are produced not to meet only ready orders from customers but in anticipation of their demand. Therefore, goods once ready in finished form, must be stored until they are demanded. Perishable goods like vegetables, fruits, eggs, butter etc. are stored in cold storage to enable us to consume regularly throughout the yea. Some goods require curing or processing. They must be stored pending such operation, e.g., oilseeds, fish, fruit, canning etc. To earn profit in future storage is done. When goods are not seasonally needed. It is purchased and stored. So that at the time of demand it is sold at higher price.

Goods storage protects goods from many types of losses to which they are subject to through time. No storage, however, can improve the quality of goods or preserve them for long if they are not is good condition when going into storage.

There should be enough strength in the walls and floor to support the weight of the goods to be stored. It should not be susceptible to insects, birds, and rodent, moisture (both ground moisture and unauthorized people. It should be free from excess heat, rapid change in temperature and foreign materials (such as coming in of dust etc.) It should provide for easy entry and exit of goods stored. It should have effective provision for application of insecticides and control of dust.
Goods must be stored in such a way as to serve the best purpose of producer, manufacturer, distributing, agencies and the consumers. Storage should be located near the factory of the source of supply. Location of the store is much dependent on the nature of the goods stored. Fruit and vegetables are of more perishable nature and therefore, the place for their storage should be on the terminal markets near consuming centers.

**Marketing and Storage:**

Storage and warehousing are important and inseparable parts of the marketing in general and agricultural marketing in particular. Their importance in providing scientific storage in regulating the flow of goods to markets, for obtaining easy credit facilities and helping the government in its price support schemes, have been well-established and widely recognized in all advanced countries.

Along with the profit by sale and purchase by storage it also provides transport facilities also. There is less wastage of goods by storage facilities. Storage is also related with finance. An important service rendered by the warehouse man in the issuing receipts for the good received. These receipts can be used as collateral for loans. When goods are placed in a warehouse they are available for loans not possible while they are still a part of owner’s general assets. Receipts are issued are physically placed in the store and surrendered to the warehouseman before taking delivery from storage. Warehouse-keeper advances money to the owner on the
security of the goods deposited in his warehouse. The amount equal to goods kept in warehouse is used to take loan from the warehouse keeper equal to that amount. And as the loan is paid, the securities of goods are adjusted. If payment is not done by owner of goods then the warehouse keeper can sale the goods kept in warehouse to recover its loan amount. This type of facility is provided in India. Loans are provided by State Bank of India and other banks on the basis of receipts issued by central warehousing corporation and state warehousing corporation.

Some of the products are only produced in some fixed season but are used in every season. This type of products need warehouse facility. So that products price can be controlled warehouse is to store this large stock of surplus products. Goods which are in surplus are stored, preserved and made available for meeting the demand when their supply is relatively less-warehousing equalizes supplies from one time to another. Thus, fall in the prices of goods when their supply is at its pack and rise in their prices in the slack season are avoided. Therefore, prices of such goods whose supplies are irregular are stabilized. So we can say that, financial expenses, prices and transport cost etc. are reduced with the help of storage in marketing functions. Transport expenses can also be reduced by storing more goods because more goods because more goods reduces the cost of transportation. Storage also helps in raw materials marketing.

**Kinds of Warehouse:**
The Word storage means holding the stock of goods for a relatively longer period as the goods are not immediately in demand. Warehousing involves more than storage. Warehouses perform many of the usual function of wholesalers. With the evolution of storage requirements different kinds of warehouses have now engaged. They are as follows:

(1) Private Warehouse,
(2) Public Warehouse,
(3) Bonded Warehouse,
(4) Refrigerated Warehouse,
(5) Household Warehouse,

**Private Warehouse:**

Private warehouses are those which are owned by large business houses or wholesalers for the storage of their own stock. They are privately owned, care constructed for the use of the owners who may be manufacturers, wholesalers or retailers. Because of the heavy cost of construction, private warehouses are found in mush smaller number than public warehouses. There may or may not be separate or an independent building situated near the main market. Manufacturers also own their private warehouses so as to store raw materials till they are needed for further transmission to factory or mill\(^{46}\).

Public warehouses may be owned by a dock authority, wharfingers or any members of the public. Legally, owner of these
warehouses is in the position of a bailee in charge of goods stored. He is lawfully bound to take as much care of the goods as he would take of his own goods. He also enjoys a lien on the goods for his charges or fees. Public warehouses are a great help to small manufacturers who cannot afford to construct their own private warehouses for the storage of their goods. Even large manufacturers also stores for economical distribution of their products\(^47\).

**Bonded Warehouses:**

Bonded warehouses are those warehouses which are licensed by the government to accept imported goods for storage before the payment of custom duties by the importers of such goods.

Importers are required to pay customs duties on the goods imported by them. Without making payment of duties they cannot remove these goods form the dock. However, by securing special permission of the customs authorities they can keep such goods in certain licensed warehouse even before the payment of import duties. But stored goods in thee warehouses cannot be removed before the payment of import duties has been made. The owner of these warehouses has to give an undertaking that duties will be collected before goods are removed from the warehouse. Such warehouses are called “Bonded Warehouses” and goods stored therein are said to be “in a bond”. Goods are placed continuously under guard. By storing their goods in the bonded warehouses importers gain some control over their goods even before they have
paid duties on them. These warehouses may be owned by the dock authorities or be privately owned. They have to work under the close supervision and control of the customs authorities. A strict watch is kept on these warehouses by the customs authorities.

**Refrigerated Warehouses:**

These are the warehouses which provide cold storage facilities and thus specialize in storing certain products such as apples, eggs, poultry and fresh meat, fresh and frozen fruits, butter, cheese and other Dairy products. All these products are highly perishable and may easily deteriorate in quality, if exposed to varying temperatures in ordinary warehouse. By keeping them in cold storage they can be held for relatively long period. By keeping them in cold storage they can be held for relatively long period. By providing refrigerated space for the storage of these products they can be stored during the peak season of their production or supply and can be released in the market according to the demand from time to time. This has the effect of price stabilization for the marketing of these products.

Cold storage is the art of keeping perishable goods for a longer time in refrigerated space which is artificially cooled. Cold storage facilities help to even out the supply of perishable commodities to the market. Cold storage has widened markets, developed agricultural commodities, lowered marketing costs, raised prices to producers, lowered prices to consumers and has made a large variety of fruits and vegetables accessible to consumers during all
the seasons. Cold storage facilities have facilitated modern way of life\textsuperscript{49}.

**Household Warehouses:**

This type of storage is temporary in nature and used for the safety of furniture, rugs, furs, painting, tapestry etc. which may be spoiled by dust, rust, mice or from other miscellaneous causes. Some of the reasons of its development are “high rentals incidental to growth of cities, separation of families through divorce, braking up of homes after death, the increase of the habit of travel, the man who would rather board than keep house and uncertainty of future plans or various reasons\textsuperscript{50}.

Milk and milk products are also stored by Pradeshik Co-operative Dairy Federation’s. Liquid milk is perishable goods. Hence, comparatively to other goods it needs more attention. Generally, liquid milk and milk products cannot be kept anywhere. For this type of goods they need cold storage houses. Secondly, hired cold storage house. Federation used two types of cold storage for storing milk and milk products. Firstly their own cold storage house. Generally, in own cold storage only liquid milk is stored and in hired cold storage milk products are kept. But in present, there is lack of cold storage. And hired cold storage are expensive because it will be expensive to convey the milk products from production unit to hired cold storage in cities. Hence, federation should make it sown cold storage. As destroying of cold storage is also an main problem. But, this problem can be sought out by taking proper care
and proper maintain of cold storage. The department responsible for maintaining cold storage should be efficient and try their best to maintain the cold storage of federation.
**Conclusion:**

It is clear from the analysis that physical distribution, transportation and storage are an important work of Pradeshik Co-operative Diary Federation. By performing these functions federation convey its products easily to their customers. Federation distribution work can be divided into two parts that are, liquid milk distribution work and milk product distribution work. The distribution system used in conveying the goods to customers are direct distribution system Under direct distribution system producers himself sell its products to customers by their own middlemen’s. In this uses, mail order houses, automatic vending machine, door-to-door selling, by telephone system, sale by opening retail shops, and sale at the manufacturer’s plant. Under indirect distribution system producers uses middlemen’s. In this system representatives, wholesaler, retailers are included. Under this system, producers sells its products to representatives, representatives sells it to wholesalers, wholesaler sells its to retailers and at last retailer sells it to customers. When both direct distribution and indirect distribution system are used then this type of distribution is called double distribution system. Pradeshik Co-operative Dairy Federation uses double distribution system. Distribution of liquid milk is done under the direction of federation in Uttar Pradesh cities, all Metro-Cities and in Delhi also. This work is held by local dairy unions. Dairy units and dairy unions convey their produce to their agents under federation directions for distribution it. For this work dairy union appoints an agent and
determines commission of the agent also. Any activities held by consumers whether it is positive or negative is received by agents, Liquid milk is sold at the rate which is determined by the federation which avoids consumer exploitation. Except this, distribution system fanny other distribution system are used then consumers exploitation possibilities increases. It should be noted that sometime and somewhere agent takes unwanted rate for sale of liquid milk by customers. Stockiest, commission sale, or forwarding and clearing agents are used to sale the milk products. Physical distribution plays an important role in marketing function of Pradeshik Co-operative Dairy Federation’s. Physical distribution components are transportation, storage and warehousing. Transportation as the part of Physical distribution also plays an important role in marketing field of Pradeshik Co-operative Dairy Federation. The modes of transportation are road transport, water transport and airways transport. Road transportation is road transport, water transport and airways transport. Road transportation includes headload, bacchanals, thelas, bullock carts, tongas, rickshaws, motor cars, tramways and railways. Water transportation includes Inland water transport under which river transport which includes coastal shipping, overseas shipping of liner, tramp and tankers are used. In Indian under air transport includes International Air Corporation, Foreign Air service and Indian Air Corporation works. Like other products federation also need two ways transportation. First, to convey liquid milk from milk committee to plant and second, to convey milk and milk products to
customers. Unions, areas of work are divided on the basis of two. Firstly, liquid milk sale generally to local customers for which road transport are suitable sources. In this way, road transports are used in transmitting the liquid milk from milk committees. So, mini trucks are used. These trucks are hired by federation. This helps in conveying the milk and milk products at agent’s selling central mini trucks used for dairy marketing works are paid on the basis of size of the mini trucks. If some staff of federation goes out for the work of unions or federation then they’re provided traveling allowance railways and airways and daily allowances also. Air ways are used only by the General Manager and Managing Director. There was a frequent fluctuation in the study period of transportation cost of Pradeshi Co-operative Dairy Federation. In the study period from the year 1990-91 upto the year 2002-2003 transportation cost has been increased to 0.24 times only. In the year 1990-91 total transport cost was Rs. 15 lack but it reduced in the year 2002-2003 upto Rs. 4 lack from analyzing the table 5.1 we can say that transport establishment expenses are nil from the year 1997-98 upto the end of the study period that is 2002-2003 because the are well sufficient. So, there is no need to establish transportation.

Storage also plays an important role in marketing function along with the distribution system and physical distribution system. Storage relates to the collection of goods or products which can be secured and also can be utilized whenever needed in future. Perishable goods are stored according to scientific methods based storage in present time. So that goods uncertainties can be avoided.
The importance of storage is to maintain balance between the demand and supply. This helps in reducing fluctuation in prices of the products and consumer are being saved by exploitation. Some products are produced only in some specific season but are utilized in every season. So, that type of products should be stored, like wheat, rice, cereals etc. Some products are produced in every season but re consumed in specific season like, cooler, fan, heater, woolen cloth etc. So they should also be stored. Storage are also done to earn profit in future, when goods are not in demand it is purchased in abundances and when demanded are sold at higher price. Storage reduces transportation cost also. Transportation cost are reduced if goods are send collectively and viz. versa. Transportation cost will be more of goods are send in less quantity.

Warehouse is necessary to store goods. For storing goods public warehouses, private warehouses, bonded warehouses, refrigerated warehouses and household warehouses are used. Private warehouses are those which are owned by large business houses or wholesalers for the storage of their own stocks. They are privately owned. Public goods and cooperatives goods are not stored in private warehouses. A public warehouses is one which operates to store goods of any number of the public in return for a storage fee or charge. These are held to be public utilities. They are licensed by the government. Bonded warehouses are those warehouses which are licensed by the government to accept imported goods for storage before the payment of customs duties by the importers of such goods. But goods stored in these warehouses cannot be removed
before the payment of import duties has been made. Without making payment of duties they cannot remove these goods from the dock. Refrigerated warehouses are those which provide cold storage facilities and thus specialize in storing certain products such as apples, eggs, poultry and fresh meat, fresh and frozen fruits and vegetables and butter, cheese and other dairy products. All these products are highly perishable and may easily deteriorate in quality, if exposed to varying temperatures in ordinary warehouses. Cold storage is the art of keeping perishable goods for a longer time in refrigerated space which is artificially cooked. Household warehouses is temporary in nature and used for the safety of furniture, rugs, furs, paintings, tapestry etc. which may be spoiled by dust rust, rats, mice or from other miscellaneous causes.

Federation also uses cold storage facilities because milk and milk products are perishable in nature, So they need a old storage artificial cooled space to secure the milk and milk product. Some of the cold storage used by federation is their own and some cold storage is hired by others.
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