CHAPTER 2

RETAIL SUPPLY CHAIN

2.1 INTRODUCTION
Which business considers every individual as a customer? Which business accounts for less than 10% of the worldwide labor force and is still the single largest industry in most nations? What is common between Wal-Mart, Amazon, and the small kirana stores that dot your neighborhood? The answer is retailing, the last link in the chain of production, which begins at the extracting stages, moves through manufacturing and ends in the distribution of goods and services to the final consumer.

2.2 WHAT IS RETAILING
Retailing is defined as a conclusive set of activities or steps used to sell a product or service to consumers for their personal or family use. It is responsible for matching individual demands of the consumer with supplies of all manufacturers. The word ‘retail’ is derived from the French word retaillier, meaning ‘to cut a piece off’ or ‘to break bulk’.

A retailer is a person, agent, agency, company, or organization which is instrumental in making the goods, merchandise, or services to reach the ultimate consumer. Retailer performs specific activities such as anticipating customer wants, developing assortments of products, acquiring market information, and financing. A common assumption is that retailing involves only the sale of products in stores. However, it also includes the sale of services like those offered at a restaurant, or by car rental agencies. The selling need not necessarily take place through store. Retailing encompasses selling through the mail, the internet, door-to-door visits, any channel that could be used to approach the consumer. When a manufacturer like Dell
Computers sells directly to the consumer, they also perform the retailing function.

2.3 CHARACTERISTICS OF RETAILING
Retailing can be distinguished in various ways from other businesses such as manufacturing. Retailing differs from manufacturing in the following ways:

- There is direct end user interaction in retailing.
- It is the only point in the value chain to provide a platform for promotions.
- Sales at retail level are generally in smaller unit sizes.
- Location is a critical factor in retail business.
- In most retail business, services are as important as core products.
- There are a larger number of retail units compared to other members of the value chain. This occurs primarily to meet the requirements of geographical coverage and population density.

2.4 ACTIVITIES PERFORMED BY RETAILERS
Retailers undertake various business activities and perform functions that add value to the offering they make to their target segments. Retailers provide convenient location, stock, and appropriate mix of merchandise in suitable packages in accordance with the needs of customers. The four major activities carried out by retailers are:

1. Arranging an assortment of offerings: An assortment is a retailer’s selection of merchandise. It includes both the depth and breadth of products carried. Retailers have to select the combination of assortments from various categories. The assortments must include substitutable items of multiple brands, SKUs (stock keeping units), and price points. They should be distinguished on account of physical dimensions and attributes.
2. **Breaking quantity:** Breaking quantity means physical repackaging of the product by retailers in small units sizes according to customer’s convenience and stocking requirements.

3. **Holding stock:** To ensure the regular availability of their offerings, retailers maintain appropriate levels of inventory. Consumers normally depend on the retailers directly to replenish their stock at home. Therefore, retailer on periodic basis, maintain the required levels of stock to meet the regular or seasonal fluctuations in the demand.

4. **Extending services:** Retailer provides multiple services to immediate customers and other members of the value chain. The set of services extended by particular retailers may be part of their core product offerings or delivery, after sale-service, and information regarding new products to their customers, thereby making the shopping experience convenient and enjoyable.

2.5 **TYPE OF RETAILERS**

It is said that in spite of being a growing industry, organized retail sector accounts for close to only four percent of the retailing industry in India. So, the organized retailers are trying innovative models and formats to woo the customers. Consumers are seeking variety, convenience and quality while shopping, be it grocery, clothes, food, music or even books. To match the consumers needs and demands, the retailers have come out with various store or retail outlet formats. The paragraph below describes various types of retail formats.

A) Retail formats based on type of products are as follows:

1) Food products

2) Hard goods ("hard-line retailers") - appliances, electronics, furniture, sporting goods, etc.
3) Soft goods - clothing, apparel, and other fabrics.

B) There are the following types of retailers by marketing strategy.
1. Department stores – They are very large stores offering a huge assortment of "soft" and "hard goods; often bear a resemblance to a collection of specialty stores. A retailer of such store carries variety of categories and has broad assortment at average price. They offer considerable customer service. For example: Food World in Bangalore.

2. Discount stores – They tend to offer a wide array of products and services, but they compete mainly on price, offers extensive assortment of merchandise at affordable and cut-rate prices. Normally such retailers sell less fashion-oriented brands.

3. General merchandise stores - A hybrid between a department store and discount store.

4. Supermarkets – They sell mostly food products.

5. Warehouse stores - warehouses that offer low-cost, often high-quantity goods piled on pallets or steel shelves. Warehouse clubs charge a membership fee.

6. Variety stores or "dollar stores" - They offer extremely low-cost goods, with limited selection.

7. Demographic - Retailers that aim at one particular segment (e.g., high-end retailers focusing on wealthy individuals).

8. Mom-And-Pop or Kirana Stores: This is a retail outlet that is owned and operated by individuals. The range of products are very selective and few in numbers. These stores are seen in local community often
are family-run businesses. The square feet area of the store depends on the store holder.

9. Specialty Stores: A typical specialty store gives attention to a particular category and provides high level of service to the customers. A pet store that specializes in selling dog food would be regarded as a specialty store. However, branded stores also come under this format. For example if a customer visits a Reebok store , he finds just Reebok products in the stores.

10. Convenience Stores: They are essentially found in residential areas. They provide limited amount of merchandise at more than average prices with a speedy checkout. This store is ideal for emergency and immediate purchases.

11. Hypermarkets: They provide a variety and huge volumes of exclusive merchandise at low margins. The operating cost is comparatively less than other retail formats. A classic example is the Metro™ in Bangalore.

12. Supermarkets: This is a self service store consisting mainly of grocery and limited products on non food items. The supermarkets can be anywhere between 20,000-40,000 square feet. Example: SPAR™ supermarket.

13. Malls: They have a range of retail shops at a single outlet. They endow with products, food and entertainment items under a roof. Example: Sigma mall and Garuda mall in Bangalore, Express Avenue in Chennai.

14. Category Killers or Category Specialist: By supplying wide assortment in a single category for lower prices a retailer can "kill"
that category for other retailers. For few categories, such as electronics, the products are displayed at the centre of the store and sales person will be available to address customer queries and give suggestions when required. Other retail format stores are forced to reduce the prices if a category specialist retail store is present in the vicinity. For example: Pai Electronics™ store in Bangalore, Tata Croma.

15. E-tailers: The customer can shop and order through internet and the merchandise are dropped at the customer's doorstep. Here the retailers use drop shipping technique. They accept the payment for the product but the customer receives the product directly from the manufacturer or a wholesaler. This format is ideal for customers who do not want to travel to retail stores and are interested in home shopping. However it is important for the customer to be wary about defective products and non secure credit card transaction. Example: Amazon and Ebay.

16. Vending Machines: This is an automated piece of equipment wherein customers can drop in the money in machine and acquire the products. For example: Soft drinks vending at Airports.

C) Some stores take a no frills approach, while others are "mid-range" or "high end", depending on what income level they target.

Other types of retail stores include:

1. Automated Retail stores: Such stores are self service, robotic kiosks located in airports, malls and grocery stores. The stores accept credit cards and are usually open 24/7. Examples include Zoom Shops and Red box.
2. Big-box stores: It encompasses larger department, discount, general merchandise, and warehouse stores.

3. General store - A store which sells most goods needed, typically in a rural area;

Retailers can opt for a format as each provides different retail mix to its customers based on their customer demographics, lifestyle and purchase behaviors. A good format will lend a hand to display products well and entice the target customers to spawn sales.

With the emergence of many retailers in the market place it is all the more necessary that specific forms of distribution or channel services are adopted. Prior to consumption, the retail product has to be both available and accessible – i.e. a good supply chain distribution system has to be worked out by the retailer. In the following paragraphs we will examine the various facets of supply chain management in retailing. We start with defining the meaning of the terms supply chain management and retail logistics. Apart from understanding the various merchandise flow, we will conclude this section with discussions addressing certain specific issues such as quick response delivery system and online logistics management.

2.6 MEANING OF SUPPLY CHAIN MANAGEMENT

The supply chain or distribution logistics encompasses all the activities and exchanges involved in extracting, processing, manufacturing and distributing goods and services from raw materials through to the end consumer. It also requires the retailers to take a holistic view of these activities and adopt innovative approaches to meet customer needs with greater efficiency. In the traditional distribution network, retailers sell merchandise which the manufacturers conceive and wholesalers supply. In this linear set up it was a left-to-right progression, wherein the customer
stood passively, at the receiving end of the chain. But today, the customer is more demanding and choosy because he is being wooed by many organized retailers who are putting all efforts to enhance customer value through establishing sophisticated logistics management systems.

Figure 2.1 indicates the various components in the traditional supply chain channel and the manufacturer, stockist and retailer have to build up a chain of facilitating services so as to ensure that the right product reaches the final customer. Here the manufacturer is dependent on the intermediaries to offer qualitative services throughout the chain, maintain low costs and then deliver goods/services to customers.

![Fig. 2.1: The Traditional Supply Chain](image)

Another supply chain channel is the ‘Limited Channel’, when a retailer works directly with the producer and can eliminate wholesaler and the extra cost involved in this part of the chain. There are certain retailers like Durian furniture who deal directly with the supplier and created limited supply chains.

Another supply chains alternative is the direct channel, where the product or service is directly sold by the producer or retailer like the Country Club resorts, Citibank credit cards. Here by using different direct sales promotion techniques, such as direct mailing or internet services or telemarketing and
so on the channel is kept direct and extra charges and commission are just eliminated. So some of the savings can be passed on to the customer, who can benefit from the lower prices.

Irrespective of the type of channel flow, apart from the flow of physical goods, there are other types of flow for the supply chain to be successful. These could be: physical flow, ownership flow, information flow, payment flow and promotion flow. Irrespective of which method of distribution is used, good logistics and supply chain management techniques have to be used to ensure the smooth movement of merchandise till it reaches the hands of the consumers.

To survive in the competitive environment, retailers are making new modern logistics system to ensure optimum service for the supply of goods to the consumer and thus achieve high levels of customer satisfaction and service at acceptable costs. Christopher M. [17] has defined logistics as follows:

*Logistics is the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost effective fulfillment of orders.*

As per this definition all those involved in marketing (marketers, wholesalers and retailers) have to procure, store and transport the goods in a cost effective manner.

**2.7 RETAIL LOGISTICS**

In retailing, customer expectation of retail service delivery is very high. No amount of service enhancement or added incentives will be a substitute for
empty shelf. Modern retailers are using sophisticated and complex infrastructure so as to meet the customer’s ultimate measure of retail service-availability of goods or services. But all this involved cost, so the retailers have to provide retail service in an efficient manner and achieve productive gains through using retail logistics. David Gilbert [27] has defined retail logistics as follows:

*Retail logistics is the organized process of managing the flow of merchandise from the source of supply to the consumer –from the producer/manufacturer, wholesaler/intermediary through to the warehouse, and transport to the retail units until the merchandise is sold and delivered to the customers.*

The retail logistics will include the following functions:

- Physical movement of goods
- Holding of these goods at stock keeping units.
- Holding of stock in sufficient quantities to meet the demand from the end customer.
- Management and administration of the distribution system.

All retailer activity should be oriented to add value for the customer. This may not be possible if while trying to seek efficiency in the supply chain, the cost is passed on to the customer. So while trying to manage retail logistics, retailers have to workout on how activities are to be organized so as to take cost out of the supply chain completely as well as deliver better value for customers, at the same time. Thus in today’s market place, there are a few drivers for supply chain management:
Consumers are having increased expectations of value addition, are sensitive to response time, reliability, cost consciousness and information.

Consumers are seeking retailers whose supply of merchandise ensures decreased lead times and costs.

There is a shift in the attitudes of retailers who are accepting the need for integration and sharing space and costs with complementary retailers.

Thus, Supply chain management (SCM) as an evolution from logistics management focuses on movement, storage and inventory issues. So if one were to extend the definition of logistics management to an activity, one can define SCM as:

"the design and operation of the physical, managerial, informational and financial systems needed to transfer goods and services from vendor to customer in an effective and efficient manner [62]."

Simply stated SCM is an end-to-end process in merchandise planning and movement, right from inventory planning, movement, warehousing and storage through till the merchandise reaches the hands of the consumer.

2.8 MERCHANDISE FLOWS

Logistics with reference to supply chain management is very comprehensive and strategic and includes customer relationship management, inventory management, and vendor relations. When we talk of the physical flow of merchandise, it could flow from vendor to distribution center (DC) to stores or alternatively the merchandise flows from vendor directly to stores.
We will start with the flow 1, when merchandise flows from the vendor to the DC. A distribution centre (DC) usually carries out several functions which are given below:

1) Management of transportation to facilitate merchandise flow from vendor to distribution centre.
2) Recording receipt of merchandise at the distribution centre and checking to ensure it is in order.
3) Storing and/or cross docking – Vendors may either store merchandise at the distribution centre or they may ship merchandise prepackaged in the quantity required at each store.

The retailer can use either the push or pull logistics strategy. Push logistics strategy is a strategy in which merchandise is allocated to stores on the basis of historical demand, the inventory position at the distribution centre and the stores need. Pull logistics strategy is in which orders for merchandise are generated at the store level on the basis of demand information or data obtained at the point-of-sale (POS) terminals.
When the flow 2 (Figure 2.2) takes place, the merchandise is transported from distribution centers to the stores. If the retailer has chain of stores, management of such outbound transportation may become complex and they (DC) may have to use sophisticated routing and scheduling computer system. Reverse logistics is another issue for which the retailer has to be prepared. Reverse logistics is a back flow of merchandise through the channel, from the customers to the stores, distribution centre and vendor for customer returns. Reverse logistics system can be expensive because the items returned may be damaged and the original shipping carton missing or items shipped back may be in small quantities. Nevertheless, special handling needs have to be adhered to.

2.9 SPECIFIC LOGISTIC ISSUES IN RETAILING
Retailers are reacting to the competitive environment by changing the way they distribute merchandise. For this, retailers have to address certain specific issues in logistics. These can be broadly referred to as quick response delivery systems, online logistics management or logistics of electronic retailing and outsourcing logistics functions.

1) QUICK RESPONSE DELIVERY SYSTEMS
Quick response (QR) delivery systems are inventory management systems designed to lower the retailer’s lead time for receiving merchandise, resulting in lower inventory investment, improving customer service levels and thus reducing logistics expenses. The QR system has been derived from Just-in-time initiative undertaken by manufacturers and adopted for retailing. Thus quick responses delivery system represents the nexus of information systems and logistics management.
2) ONLINE LOGISTICS MANAGEMENT OR LOGISTICS OF ELECTRONIC RETAILING

Logistics for fulfilling online or internet order is very different from distribution of merchandise to stores. Thus retailers have to install a fully integrated information system which is able to handle properly the distribution of merchandise from DC to stores and to customers placing order via their website.

3) OUTSOURCING LOGISTICS FUNCTIONS TO THIRD PARTIES

Outsourcing means obtaining a service from outside the organization which in the past was done by the firm itself. In order to streamline their operations and make more productive use of their personnel and assets, retailers sometimes prefer to outsource logistical functions, if these can be performed better or are less expensive when carried out by third party logistics company.

2.10 SUPPLY CHAIN MANAGEMENT IN INDIAN RETAIL SECTOR

Supply chain management is a strategy of including the number, location, size of warehouse, distribution centers and partnership with suppliers, distributors, and customers. It also includes creating communication channels for information and operational improvements such as cross docking, direct shipping, and third party logistics. This strategy has great relevance in retail industry as the Indian retailing industry is at an inflection point, and set to enter a new growth trajectory with rising household consumption and entry of corporate entities. With more than US$ 30 billion in investments slated in the modern retail sector of India, it becomes imperative to develop a better understanding of the key challenges in the supply chain and logistics management.
In India, retail has its deep roots since long time. Unorganized retailing is by far the prevalent form of trade in India – constituting 96% of total trade, while organized trade accounts the remaining 4% and expected to increase to 20% by 2011. A study by McKinsey’s shows that 40% of fresh produce in India gets wasted till it reaches the consumer from farmland. There is lack of consumption figures which makes the task of farmer and small manufacturer difficult. Due to supply chain peculiarities, Indian agribusiness is not very competitive despite availability of rich & abundant natural resources. Indian farmers have low risk taking ability, low investment, low productivity, weak market orientation, low value addition and low margin. Additions to it there are traders, commission agents, wholesalers, number of intermediaries which lead to cost addition and significant quality drop and value loss. More intermediaries add to the inefficiency in the chain leading to wastage and drop in the quality of the product. Due to this consumer price is 3-4 times the farm gate price. A typical retailer works with a margin of 10% - 15% and a distributor works with a margin of 6% - 8%. Such margins, which are lower than international standards for product distribution makes it a low cost operation and also very inefficient. There are considerable gaps in the transportation and storage network of the country. Third party logistics provides, a mainstay in any well developed supply chain, are largely non existent in India. There is also very little sharing of supply network infrastructure among leading Indian retailers. The most significant challenge in developing a smooth supply network is the lack of adequate infrastructure, particularly road infrastructure, reliable power supply, insufficient investment in alternative modes of transport, a well connected cold chain and warehousing infrastructure. Lack of technology usage, a fragmented supplier base and a multi-layered tax structure pose significant challenges to the evolution of a
streamlined supply networked. Local, regional, and national regulations pose major hurdles for retailers in obtaining permissions to establish supply chain infrastructure.

Retailing is the technology intensive industry. Successful retailers work closely with their vendors to predict consumer demand, shorten lead times, reduce inventory holding and save cost. Using internet to source products and check availability of stock among stores of retail chains has been effective and cuts down on wastage by vast amount. This would again result in supply chain getting leaner and vertically integrated. Quality control is important in case of fresh produce since buyers regularly face problem in monitoring the freshness, safety and shelf life.

Each facet of supply chain management in retailing poses very different challenges hence in-depth understanding of this sector would provide deeper insight into the requirement of organized retailing for making supply chain effective. Hence, competitive strategies in supply chain management will help Indian organized retail sector to enhance performance via improved customer service and lower costs. Some of these strategies are as follows:

1) **ECR (Efficient Consumer Response):** It focuses on the customer as the driving force of the system. It involves evaluating inefficiencies throughout the entire supply chain to create improvements on every level. Indian retailers can take a leaf out of developed countries and start working on consumer’s feedback to provide better service rather than just keeping them in their records.

2) **Reverse logistics:** It involves removing slow moving, damaged or spoiled goods from stores and shipping them back to suppliers to make room for products that will sell. This system is used for non-perishable non-food items.
3) **Electronic point of sale (POS):** Achieving the goals of ECR and overseeing increasingly complex logistics systems requires efficient use of technology. This combined with electronic POS allows stores to continue track what is on shelves and what products are being purchased allowing each store to customize inventory. Grocers are meting the challenge by carefully tracking POS data. It also allows perishable tracking that will be useful in customer loyalty programs.

4) **3PL (Third party logistics):** Getting product to stores. It will depend on the requirements of the goods: temperature, size, inventory turn. Some supermarket chains are also relying on shared user transportation systems to reduce costs, increase efficiencies and decreased number of waiting trucks. Indian retailers can work towards outsourcing their logistics requirements to 3PLs or 2-3 retailers can join hands to isolate transportation costs as an area for major cost savings.

5) **4PL (Fourth party logistics):** It is responsible for collection, coordination and management of information in order to decide on the most efficient supply chain, leaving asset management for 3PLs providers. 3PL rely on 4PL for information management and logistics. 4PL are contracted to manage supply chain information, especially in cross border activities.

6) **Transportation and storage technologies:** Food quality is also feeling a positive impact from improvement in refrigeration technology. Shippers track products as they move. Automated loading & unloading and packaging that allows for efficient movement through the transportation systems create improvements in time.
7) **RFID:** Radio frequency identification tagging will help create “smart shelves” that know when to be restocked, intelligent camera based scales could measures fruits and vegetables and In-cart scanners that may eliminate the need to unpack groceries from the cart.

8) **Floor sensor technology:** will be able to measure where people walk and how fast they are stepping. This information is useful for evaluating what people find interesting in the store and what they avoid.