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## Study of Role of Supply Chain Management in the Indian Retail Sector

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### **Abstract :**

The Indian retail industry is slowly transforming and taking a new shape and structure. The dominant unorganized retailing started losing its stake in the market and the organized sector is taking its position in the industry. The organized retailers have transformed the perceptions of the consumers and tapping the consumer from the unorganized retailers. The customers look for from today's retailers is ambience, price, variety, assortments and merchandisewhich are addressed accurately by the organized retailers. This paper focuses on the role of supply chain mamangement in the Indian retail sector with special reference to grocery business.

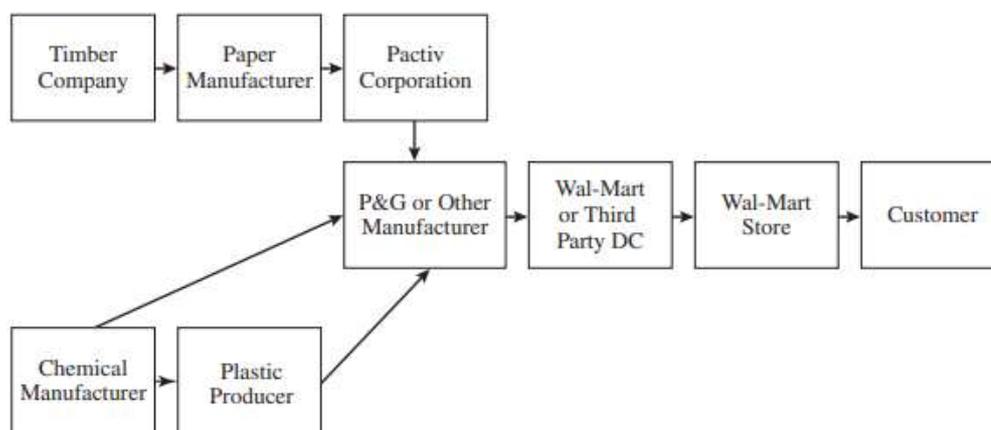
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### **Introduction :**

Supply chains encompass the companies and the business activities needed to design, make, deliver, and use a product or service. Businesses depend on their supply chains to provide them with what they need to survive and thrive. Every business fits into one or more supply chains and has a role to play in each of them. The pace of change and the uncertainty about how markets will evolve has made it increasingly important for companies to be aware of the supply chains they participate in and to understand the roles that they play. Those companies that learn how to build and participate in strong supply chains will have a substantial competitive advantage in their markets.

A supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. The supply chain includes not only the manufacturer and suppliers, but also transporters, warehouses, retailers, and even customers themselves. Within each organization, such as a manufacturer, the supply chain includes all functions involved in receiving and filling a customer request. These functions include, but are not limited to, new product development, marketing, operations, distribution, finance, and customer service. Consider a customer walking into a Wal-Mart store to purchase detergent. The supply chain begins with

the customer and his or her need for detergent. The next stage of this supply chain is the Wal-Mart retail store that the customer visits. Wal-Mart stocks its shelves using inventory that may have been supplied from a finished-goods warehouse or a distributor using trucks supplied by a third party. The distributor in turn is stocked by the manufacturer (say, Procter & Gamble [P&G] in this case). The P&G manufacturing plant receives raw material from a variety of suppliers, who may themselves have been supplied by lower-tier suppliers. For example, packaging material may come from Pactiv Corporation (formerly Tenneco Packaging) while Pactiv receives raw materials to manufacture the packaging from other suppliers. This supply chain is illustrated in Figure 1-1, with the arrows corresponding to the direction of physical product flow.



**FIGURE 1-1** Stages of a Detergent Supply Chain

A supply chain is dynamic and involves the constant flow of information, product, and funds between different stages. In our example, Wal-Mart provides the product, as well as pricing and availability information, to the customer. The customer transfers funds to Wal-Mart. Wal-Mart conveys point-of-sales data as well as replenishment orders to the warehouse or distributor, who transfers the replenishment order via trucks back to the store. Wal-Mart transfers funds to the distributor after the replenishment. The distributor also provides pricing information and sends delivery schedules to Wal-Mart. Wal-Mart may send back packaging material to be recycled. Similar information, material, and fund flows take place across the entire supply chain. In another example, when a customer makes a purchase online from Dell Computer, the supply chain includes, among others, the customer, Dell's Web site, the Dell assembly plant, and all of Dell's suppliers and their suppliers. The Web site provides the customer with information regarding pricing, product variety, and product availability. Having made a product choice, the customer enters the order information and pays for the product. The



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customer may later return to the Web site to check the status of the order. Stages further up the supply chain use customer order information to fill the request. That process involves an additional flow of information, product, and funds among various stages of the supply chain.

### **The Importance of Supply Chain Management**

It is well known that supply chain management is an integral part of most businesses and is essential to company success and customer satisfaction.

### **Boost Customer Service**

- Customers expect the correct product assortment and quantity to be delivered.
- Customers expect products to be available at the right location. (i.e., customer satisfaction diminishes if an auto repair shop does not have the necessary parts in stock and can't fix your car for an extra day or two).
- Right Delivery Time – Customers expect products to be delivered on time (i.e., customer satisfaction diminishes if pizza delivery is two hours late or Christmas presents are delivered on December 26).
- Right After Sale Support – Customers expect products to be serviced quickly. (i.e., customer satisfaction diminishes when a home furnace stops operating in the winter and repairs can't be made for days)

### **Reduce Operating Costs**

- **Decreases Purchasing Cost** – Retailers depend on supply chains to quickly deliver expensive products to avoid holding costly inventories in stores any longer than necessary. For example, electronics stores require fast delivery of 60" flat-panel plasma HDTV's to avoid high inventory costs.
- **Decreases Production Cost** – Manufacturers depend on supply chains to reliably deliver materials to assembly plants to avoid material shortages that would shutdown production. For example, an unexpected parts shipment delay that causes an auto assembly plant shutdown can cost \$20,000 per minute and millions of dollars per day in lost wages.



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- **Decreases Total Supply Chain Cost** – Manufacturers and retailers depend on supply chain managers to design networks that meet customer service goals at the least total cost. Efficient supply chains enable a firm to be more competitive in the market place. For example, Dell’s revolutionary computer supply chain approach involved making each computer based on a specific customer order, then shipping the computer directly to the customer. As a result, Dell was able to avoid having large computer inventories sitting in warehouses and retail stores which saved millions of dollars. Also, Dell avoided carrying computer inventories that could become technologically obsolete as computer technology changed rapidly.

### **Improve Financial Position**

- **Increases Profit Leverage** – Firms value supply chain managers because they help control and reduce supply chain costs. This can result in dramatic increases in firm profits. For instance, U.S. consumers eat 2.7 billion packages of cereal annually, so decreasing U.S. cereal supply chain costs just one cent per cereal box would result in \$13 million dollars saved industry-wide as 13 billion boxes of cereal flowed through the improved supply chain over a five year period.
- **Decreases Fixed Assets** – Firms value supply chain managers because they decrease the use of large fixed assets such as plants, warehouses and transportation vehicles in the supply chain. If supply chain experts can redesign the network to properly serve U.S. customers from six warehouses rather than ten, the firm will avoid building four very expensive buildings.
- **Increases Cash Flow** – Firms value supply chain managers because they speed up product flows to customers. For example, if a firm can make and deliver a product to a customer in 10 days rather than 70 days, it can invoice the customer 60 days sooner.

Lesser known, is how supply chain management also plays a critical role in society. SCM knowledge and capabilities can be used to support medical missions, conduct disaster relief operations, and handle other types of emergencies.



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## Societal Roles of SCM

### Ensure Human Survival

- **SCM Helps Sustains Human Life** – Humans depend on supply chains to deliver basic necessities such as food and water. Any breakdown of these delivery pipelines quickly threatens human life. For example, in 2005, Hurricane Katrina flooded New Orleans, LA leaving the residents without a way to get food or clean water. As a result, a massive rescue of the inhabitants had to be made. During the first weekend of the rescue effort, 1.9 million meals and 6.7 million liters of water were delivered.
- **SCM Improves Human Healthcare** – Humans depend on supply chains to deliver medicines and healthcare. During a medical emergency, supply chain performance can be the difference between life and death. For example, medical rescue helicopters can save lives by quickly transporting accident victims to hospitals for emergency medical treatment. In addition, the medicines and equipment necessary for treatment will be available at the hospital as a result of excellent supply chain execution
- **SCM Protects Humans from Climate Extremes** – Humans depend on an energy supply chain to deliver electrical energy to homes and businesses for light, heat, refrigeration and air conditioning. Logistical failure (a power blackout) can quickly result in a threat to human life. For example, during a massive East Coast ice storm in January 1998, 80,000 miles of electrical power lines fell resulting in no electricity for 3,200,000 Montreal, Quebec residents. Due to extreme cold, 30 died and 25% of all Quebec residents left home to seek heated shelter. In addition, economic costs included \$3 billion in lost business, \$1 billion in home damage and \$1 billion in government expenditures.

### Improve Quality of Life

- **Foundation for Economic Growth** – Societies with a highly developed supply chain infrastructure (modern interstate highway system, vast railroad network, numerous modern ports and airports) are able to exchange many goods between businesses and consumers quickly and at low cost. As a result, the economy grows. In fact, the one



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thing that most poor nations have in common is no or a very poorly developed supply chain infrastructure.

- **Improves Standard of Living** – Societies with a highly developed supply chain infrastructure (modern interstate highway system, vast railroad network, numerous modern ports and airports) are able to exchange many goods between businesses and consumers quickly and at low cost. As a result, consumers can afford to buy more products with their income thereby raising the standard of living in the society. For instance, it is estimated that supply chain costs make up 20% of a product's cost in the U.S. but 40% of a product's cost in China. If transport damage is added in, these costs make up 60% of a product's cost in China. The high Chinese supply chain cost is a major impediment to improving the standard of living for Chinese citizens. Consequently, China has embarked on a massive effort to develop its infrastructure.
- **Job Creation** – Supply chain professionals design and operate all of the supply chains in a society and manage transportation, warehousing, inventory management, packaging and logistics information. As a result, there are many jobs in the supply chain field. For example, in the U.S., logistics activities represent 9.9% of all dollars spent on goods and services in 2006. This translates into 10,000,000 U.S. logistics jobs.
- **Opportunity to Decrease Pollution** – Supply chain activities require packaging and product transportation. As a by-product of these activities, some unwanted environmental pollutants such as cardboard waste and carbon dioxide fuel emissions are generated. For example, paper and paperboard accounted for 34% of U.S. landfill waste in 2005. Only 50% of the 84 million tons of paper and paperboard waste were recycled. Also, carbon dioxide emissions from transportation accounted for 33% of total U.S. CO<sub>2</sub> emissions in 2005. As designers of the network, supply chain professionals are in a key position to develop more sustainable processes and methods.
- **Opportunity to Decrease Energy Use** – Supply chain activities involve both human and product transportation. As a by-product of these activities, scarce energy is depleted. For example, currently transportation accounts for 30% of world energy use and 95% of global oil consumption. As designers of the network, supply chain



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professionals have the role of developing energy-efficient supply chains that use fewer resources.

### **Indian Grocery Retail Market**

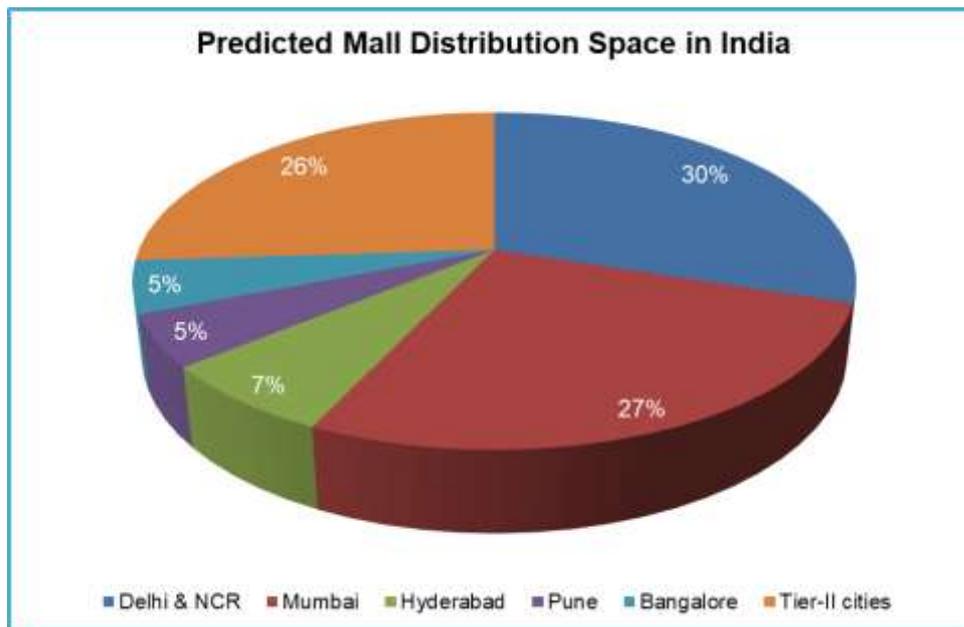
The traditional kirana stores constitute over 50 per cent of the Indian retail market and have an annual turnover of US \$80 billion. (Goswami& Mishra, 2009), about 6.5 million grocery stores are estimated to have their presence in this country in various shapes, structures and sizes. But most of them are fragmented. In the current developments taking place in the retail industry the organized retailing is slowly gaining its presence in the urban market. As of now the organized retailing is very low and is only 2-4% in the market. The changing pattern of the consumer's purchases, needs and demands are impacting the organized retailer in urban areas.

CII-McKinsey & Company, 2005 have stated that Grocery sector can be classified into three components: (1) The packaged foods, soaps toiletries household items etc. which all come under the branded grocery products (2) Grains and cereals which come under the dry unprocessed unbranded grocery and (3) Fresh Vegetables, fruits, dairy products, meat etc. are categorized under Fresh grocery. Generally the Unbranded products nearly account for about 60% of all packaged food sales. About 40% of the food business includes 18% of milk, 13% fruits and vegetables and 9% of meat under Fresh groceries categories in India. The grocery sector in India till 1990 was contained by Haats, Mandis, Bania shops and after that it includes ApnaBazaar, KendriyaBhandaar and from 2003 onwards, the era of organized retailers like Subhiksha, More, Spencer's and many more started. The old practice of retailers stocking daily items in very small shopping space with no parking lot has given place to well stocked items, very clean and neat environment, and fresh stock, huge variety of stock, loyalty programs and above all low price. As the disposable income has increased and consumers have become very much brand conscious, they are always looking for big assortments and wide variety at affordable prices. This combination of wishes and tastes of the consumer are changing the pattern and the business model of today's retailers.

### **Demographic Details of Indian Retail Grocery Sector**

India in the current situation is becoming a focal point for all the global trade towards the strategic off shoring and becoming an appealing market. Out of 6,40,000 villages in India, about 87 per cent of villages have population of more than 2000 people. Despite a rough estimation of about 3.6 million rural retail outlets, the distribution and marketing in these villages are very low and all this is because of uneconomical logistics (Deveshwar, 2005).

Therefore most of the multi nationals are not showing interest in entering the rural markets. In 2013 the multinational food companies with foreign direct investment (FDI) was worth of \$2.14 billion and continue to increase significantly. As of now the Indian retail market is estimated at \$490 billion and is estimated to grow at a pace of 6 per cent to reach \$865 billion by 2020. A panel from Seventh Food and Grocery Forum pointed out that the grocery and food retail in this country will be about 69 percent of India's total retail market. (Seventh Food & Grocery Forum report, 2009).



Source: Technopak Analysis, CSO and other sources

### Retail Trends in Indian Grocery Market

There is a huge growth of mass discounters like Wal-Mart, Big Bazar and many more organized retailers. To fight with these big giants the small traditional retailers and the traditional departmental stores also started restructuring and repositioning themselves. On the other hand with the increase of huge competition and modernization, private labels started dominating and competing with the branded products. In addition to these the internet shopping has given a new shape to the retailing and the new light to the SCM practices. The product should be available and always should reach the customer on right time. For this to happen there should be some process which makes the product move from one phase to the other in right time through right channel with less cost involved. When the system or the process through which the movement of the product is done properly with the reduction of wastages, right price can be set.



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## 1. Optimizing Storage Space

If you investigate how you are using your storage space, you may find that you are paying for too much space. You might even be wasting your money paying your staff to search for stored items.

Another possibility is that as your warehouses are not efficiently designed in terms of item storage, the time taken to do inbound and outbound processes are greater and difficult to manage.

An effective storage strategy can help you reduce your storage space and personnel cost. Automation and process consulting can help improve productivity and profitability. The less human touch is there in the inbound and outbound processes the better in terms of reducing errors and eliminating bottlenecks.

Automated warehouses enable easy collection of data across the supply chain which also helps take better decisions via real-time collaboration between departments. Layouts that are efficient also help in a smoother transition to complicated and advanced operations, such as cross-docking, bulk-breaking, etc. reducing overhead charges and manual errors.

## 2. Use of Multiple Suppliers

Putting all your eggs in one basket is never a good strategy. If you only use one supplier, you are eliminating competition for your orders.

Find several suppliers who can compete on price, and use several of them at all times so you can avoid costly delays in receiving products. Using multiple suppliers protects you from spending money on less-than-satisfactory service.

Dealing with multiple suppliers at the same time creates a bargaining power which isn't only limited to monetary benefit, but also in terms of product quality and delivery time. As suppliers compete to become the preferred choice, they supply better quality of products at a competitive rate, if there are economies of scale to achieve. This in turn reduces your return costs, ensuring higher revenue and higher profits.

## 3. Faster Movement of Supplies

If you can find ways to expedite shipments from suppliers, you can order closer to the time you need the supplies. Ordering far in advance can incur warehouse costs because you have to store them so that they'll be available, and products are more likely to get lost or damaged.

In addition, examine whether you can shorten the time it takes you to transport supplies from where you receive them to where you need them.



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The easiest way to achieve this is by using an optimization program to create efficient pick-up & inbound routes. This can be done by a simplex function on your spreadsheet or can be achieved by specialized software in case your business scale in larger. Optimizing this process reduces the cost of after-order replenishments, hence reducing overhead costs and eventually boosting your bottom-line.

#### **4. Evaluating Customer Demand Patterns**

Evaluate customer-demand patterns frequently to see if you're seasonal and even monthly assumptions hold up.

Adjust your supply ordering based on your most recent evaluation, and you will be ordering in a way that's more closely tied to what you really need to have on hand. Based on how you want to manage your inventory, you can choose to either lag the demand (keep somewhat less inventory than your demand in the warehouse) or lead it (keep more than the demand).

The most efficient way to manage demand patterns is to have access to clean and clear data across your entire supply chain and have real-time visibility of the inventory lying at different locations. Once you have the historic data, all you need is to analyze what's going on from that you can come at the conclusion of the inventory levels you need to have. You can choose to keep a safety stock with you, which act as a buffer for a proverbial rainy day and on top of that, any strategy amongst LIFO (Last In First Out), FIFO (First in First Out) etc. depending on the category of products you are dealing with.

Seasonality of demand is another variable that you need to consider. In case you are dealing with products where sales are highly seasonal, you have to be prepared for a particular season well in advance. However, during the other seasons, you can choose to reduce manpower or inventory levels making sure you don't overshoot from your yearly budgets and also don't end up with large amounts of unsold inventory. So plan your employee numbers and stocks efficiently to manage this.

#### **5. Optimizing Ordering Process**

Part of your supply chain costs come from your ordering system. If you have multiple people filling out requisitions, using multiple software or even paper checklists, you could be over-ordering.

In addition, if there's no approval process and individuals have the power to order supplies whenever they want, you could be ordering things you don't need. Examine your ordering process to see if it is causing waste.



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Automating orders with the help of a warehouse management software or warehouse control systems are the best choice for this scenario. Create your own algorithms to calculate inventory and place delivery or replenishment orders as quickly as possible when it goes below a certain level, will reduce turnaround time and manual errors. You can use a spreadsheet too, however ensure that you have real-time updates coming in from multiple sources so that you don't miss out on any.

You can make use of Advanced Shipping Notice (ASN) for regular delivery schedules too. These ensure that you don't have to keep more inventory with you and you can seek regular delivery from your suppliers. As you establish an optimized cycle, it will be easier for the suppliers as well to plan production and shipping.

### **Conclusion**

When you streamline your supply chain management process, you can operate more efficiently. You'll speed up order processing and save yourself money.

You will be able to perform processes like splitting orders for optimized fulfilment, manage multiple suppliers or fulfilment locations, manage Drop shipping and much more.

All it takes is assessing your present procedures and figuring out where you can make enhancements. We can help you do that. To know how we help brands like you optimize the supply chain process, make a business inquiry. With the emergence of many retailers impending in the market it is necessary that specific forms of distribution or channel services are adopted. Information Technology has added value to the Supply chain management by increasing the efficiency, effectiveness and ultimately overall profitability. Parallel controlling merchandise has become very important in the retail industry. Thus with a perfect SCM the organized retailers are gaining the competitive advantage over the unorganized retailer in many aspects like inventory management, shorter time for restocking, greater efficiency and control. As India is dominated by the unorganized retailers and about 12 million Kirana shops are prevailing. The kirana Stores are very tiny in nature and only offer a small and unreliable selection of goods. These kirana or the unorganized sector will remain the replica all over; the way they have penetrated in this country is stunted and never be scratched. As these have the advantages quick accessibility which gives the customers fast buying and by free home deliveries the organized retailers are not able to swap them on this recital.



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