

**Retail Management**  
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**Lecture – 25**  
**Retail Supply Chain Management**

Hello everybody, welcome to this NPTEL Swayam course on retail management. This is Dr. Swagato Chatterjee from VGSOM, IIT Kharagpur who is taking this course for you. We are in week 5 and we were discussing retail supply chain management. And in the last video we have discussed up to the data sharing, in this particular video we will discuss about the logistics strategy.

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## Logistics Strategy

**Pull Supply Chain**  
Merchandise shipped to stores based on sales and inventory levels in the stores

**Push Supply Chain**  
Merchandise shipped to the stores based on forecasted sales rate



So, what are the logistics strategy that the retailers can take? There are two kinds of strategy, obviously the pull strategy and the push strategy. So, this is a very common marketing terms that we use again, but this applies here as well. So, pull supply chain is merchandise shipped to the stores based on the sales and inventory levels in the stores. So, the stores call for the inventories. On the push strategy merchandise shipped to the stores based on the forecasted sales rate.

So what is right and what is wrong is something that varies, that depends on what kind of situation you are in. For example, if the product is something which is of high frequency product let us say, then that case you can go with the push supply chain strategy. You can ask the distributor that I will not give the order, you have the data shared with me, let us say it is

rice or it is any kind of grocery items, you already shared those information to the distributor or wholesalers, they will send according to their predicted way.


They will send it to your store with very high probability will keep the stock based on whatever sales prediction they are doing. Because these are high frequency items, anyway even if it takes 7 days more to sell them off, they will be sold off, so you do not have any problem in that. But if it is a product which is not of high frequency, which is high margin but low frequency products, it is better to wait.

It is better to get the order from the retailers and that is why people probably will also have a little bit of delay in terms of delivery time and etc., to get the product in the retail stores. So, these are two specific strategies that are there. So, what defines pull strategy to go ahead with? The frequency and the margin of the product. The frequency in which the product is being sold and the profitability that the product is bringing in.

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### Activities Performed by Distribution Center

- Managing inbound transportation
- Receiving and checking merchandise
- Storing or cross docking merchandise
- Preparing merchandise for the sales floor
  - Ticketing and marking
  - Putting on hangers
- Shipping merchandise to stores
- Managing outbound transportation



What are the different activities that are done in the distribution centre which is the distributor's job? So distributor's job is managing, so often times this distribution centres are also something which is managed by the retailer themselves. For example, let us say if I am Wal-Mart, I will have my own warehouse from where materials will come and there I will sort them up and send it to different retail stores.

Let us say this is a distribution centre where two types of products come, one is shampoos come or all different kinds of FMCG products from different people, different manufacturers

come here. Now if I am a buyer or a sourcing manager, I will buy for the whole east zone. So let us say if I am handling the eastern part of the distribution of a particular retail chain, let us say it is Big Bazaar and Calcutta and Siliguri and Guwahati and Patna, Jharkhand.

There is Jamshedpur, Ranchi, Bhubaneswar, Cuttack these are the areas where I will generally focus on. So, if these are the 6-7 cities or Durgapur and somewhere also will be part of that, if there are so many cities where I will be focusing on, then what I will do is that I will make a purchase of products for all these cities together. Now when I am making this order, let us say I am giving FMCG products, I am giving this order to P and G. P and G has multiple products.

So, all the FMCG products that I am buying from P and G I will ask them to get it delivered in my distribution centre. So that will be huge volume of product which is the inbound transportation. So, I will receive and check the merchandise whether whatever that I ordered have arrived properly or not. Then, I will store them, cross dock them, sometimes it is like if I am only one single store then whatever comes I will send it off. But if there are multiple different stores, then I will be depending on, I will store them and do some more activity.

What kind of activity? I will prepare the merchandise for the sales floor. Now I have different stores and different stores will have different kind of requirement of the product. Let us say I have brought 1 lakh shampoo bottles, but 1 lakh sample bottles will not go to one store, so that whole order of 1 one lakh sample bottles now I have to send 10,000 to let us say the Bhubaneswar, 5000 to Jamshedpur, 5000 to Ranchi, 10,000 to Guwahati, 30,000 to Calcutta.

So, something like that there are distribution I will and even in the Calcutta there are multiple let us say store floors of Big Bazaar, then I will further break let us say. Now, all these things the ticketing and marking and putting on the hangers and getting it ready for transportation will be done there. Then I will ship the merchandise to the stores and manage the outbound transportation. So, whatever trucks, whatever the last outbound transportation that comes I will basically put those correctly and ensure that it goes to the right place.

So, from the inbound transportation to the within distribution centre operations till the delivery is my job. There are other kinds of distribution centres. This is something that we are talking about in the supply chain side. Supply chain side also happens in the e-commerce.

Now, if I think about e-commerce there is no store existing, but exactly similar kind of activity happens in the delivery centres if we have heard about them.

So, there is a distribution centre, from the distribution centre to different delivery centres products goes and in the delivery centres which is close by, for example if I talk about West Bengal again, so there is Flipkart or Amazon they will have a distribution centre in Dhanpuri which is the closest which is the hub, they call them a hub, delivery hub or distribution hub. So Dhanpuri is Kolkata's closest distribution hub that is why if a product is coming from let us say Maharashtra, let us say it is coming from Mumbai.

So from Mumbai hub to Dhanpuri hub or Calcutta hub it will be transformed. From Calcutta hub it will come to, if I am getting the order in Kharagpur it will come to closest Kharagpur's delivery centre. So, whatever product that is being delivered in and around Kharagpur, Bindapur and small towns inside this area, for those area a particular delivery centre which is a small probably a small location that has been created.

A small warehouse kind of a setup that has been created where all these materials come. And then again sorting and etc., happens and from that delivery centre to my house the final delivery happens. So, every stage there is talking, there is I would say ticketing and etc., in every stage that particular activity is there.

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### Who Can Use DC's?

- Retailers selling non-perishable merchandise
- Retailers offering merchandise that has highly uncertain demand like apparel
- Retailers selling merchandise that needs to be replenished frequently
- Retailers that carry a large number of items shipped in broken case quantities like drug stores
- Retailers with many outlets



Who can use distribution centres? Retailer selling non-perishable merchandise. So, if I am a retailer, I am selling non-perishable merchandise which will not perish, which I can store for

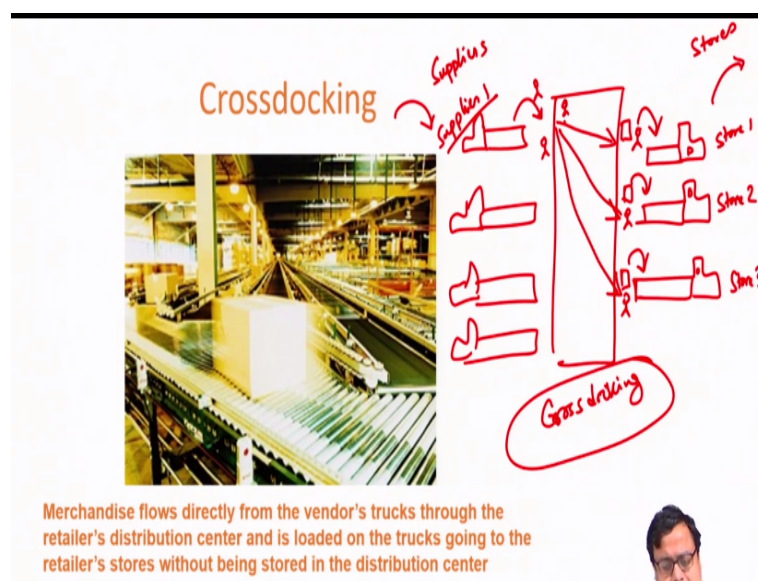
some period of time, yes. Retailers offering merchandise that has highly uncertain demand like apparel. So, because it is an inventory, inventory basically absorbs any kind of undulations in the demand or uncertainty because if you can store them based on the right time at the right demand, you can probably put more number of products.

Otherwise, if you do not have a distribution centre, if you do not have inventory anywhere, then the moment the demand is high you cannot handle the demand or there will be stock outs. So, distribution centre can also be used to store the products, right. So that is why it also captures a little bit of uncertainty. Retailers selling merchandise that needs to be replenished frequently. So, if it is high frequency product for that also this DC's can be used.

Retailers who carry a large number of items shipped in broken case quantities like drug stores. So, if the products are probably in large amount, but sold in small, small boxes, then you have to store all those boxes and then you have to sort the boxes and probably in every store there will be let us say 10 boxes of drugs will be required. They will not require a whole carton of a particular drug, you might require 10 boxes or 3 boxes or 7 boxes.

So that kind of sorting and et., will require a space while you can do all this activity, so for that you might require a DC. Like any retail chain of medicines, like let us say if it is Fortis or if it is let is Emami's healthcare which is related to Frank Ross, which is related to retailing of medicines will basically use these kinds of activities. And retailers with many outlets as I told any kind of retail chain will use DC at the end of the day.

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Now, I used a term called crossdocking, if you remember, here I used a term called crossdocking. So, what is crossdocking? Let me come back to that. So, crossdocking is a specific type of activity that happens often in the DC's where merchandise flows directly from the vendor's truck to the retailer's distribution centre and is loaded on trucks going to retailer's stores. So, let us say these is truck 1, this is truck 2 and this is truck 3.

Three trucks up there and this is the distribution centre, there and this is trucks let us say. These are 4 trucks, this is coming from the suppliers. These are all coming from the suppliers and these are all going to the stores. This will go to store 1, this will go to store 2, this will go to store 3. Now the supplied items whatever items that has been brought let us say 30% of that goes to store 1, 40% goes to store 2, 30% goes to store 3. So, crossdocking is a facility where it will not be stored.

There will be these traveling lines inside let us say and these lines basically will automatically will take all the items that is coming from supplier 1, divide it into three specific spaces and then will be kept here as a heap and whoever is loading it will basically load the products on the truck. So, these divisions will happen automatically by through manual labour also or mechanized labour also whatever be the case.

There will be no dumping of the product anywhere. So, there will be no storage of the product or unloading of the product. It will directly come from the truck, go through these rails, go in another truck and you can basically program that how much of this material will be picked up and stored where, how much of that material will picked up and stored where. You can put some manual labour also who will basically doing the sorting, who will be doing the loading and who will be doing the unloading also.

You can do that activity, but there will be no storage in between. So, these are called crossdocking. So, from one dock to another dock you are basically moving and this can be done in various places. Let us say it need not do always trucks in both sides, it can be let us say trains in one side and trucks in another side or it can be even ports, from port to let us say trains there are crossdocking facilities available.

So, whenever from one mode to another mode and it can be different mode, it can be same mode, it can be trucks on both sides, it can be two different kinds of modes, but the products

are basically transformed from one mode to another mode without storing them somewhere is called crossdocking. So, this is also coming up very because the more you can do that the the material handling cost comes down and the better is, your more efficient is your supply chain activities.

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Then another important term that comes into the supply chain is called reverse logistics. This is a very important term because in the retailer context, this also becomes an important factor which contributes to their losses or costs. Like when customers are not happy with your products and they want to return it. It can be products which are related to let us say if yourself are the manufacturer and you are also doing the retailing so you are the person who is both, then there is one kind of cost.

If you are just aggregator, like let us say if you are something like Flipkart or Amazon, where you are just a delivery guy who is an aggregator then there is a different kind of cost. But reverse logistics basically means that from the customer, the product goes to the store, from the store the product goes to the distribution centre which might be different distribution centre for reverse logistics. For forward logistics there can be one set of distribution centre.

But reverse logistics there can be different or different section at least if not a different setup altogether because you have to understand most of the products will not come through a reverse logistics, most of the products will basically be consumed by the consumer, they will not send it back. And the products which will be send it back will have different kinds of

formats. For example, mostly these apparel products or some electronics products will be sent back, not grocery items.

And from the distribution centre to the vendor, this route is called the reverse logistics. Often times, retailers decide that we will not send it off, and it happens in e-commerce a lot. The customers give it to the store, stores give it to the distribution centre or let us say in e-commerce set up the person picks it up from the customer and directly the delivery person delivers into the distribution centre.

At this point, it will be sold in online auctions or let us say certain flea market it will be sold it off. So, if that gets sold off in online auctions or flea market, if it is sold it off in online auctions and flea market, then what happens is that you are basically making a loss, you are not getting the money back, but you might feel that whatever may be money I am making out of it is probably better than giving it off to the vendor because giving it off to the vendor will require more transportation costs which I will incur.

So, they will sell it off at a lower price which may recover a little bit of loss that the retailer is making. So reverse logistics is still an important activity that is why and this is also where customer's expectations come in. Customer also have huge expectation on how the reverse logistics are handled, at least at the customer side, if not the other part of the whole chain, how it is handled in the customer side whether it is picked up from his home or whether he or she has the independence to drop it off in different parts.

Let us say whether there can be an omnichannel facility here like he or she bought it from online but want to get it delivered offline because then the money that he has been paid for this particular product will come back quickly, he will not have to wait for the whole thing gets dumped somewhere and then only he will get the money back that waiting for the refund is reduced. If those can be reduced, if the customer can be handled properly, then the customer satisfaction goes up.

So reverse logistics also have an important factor in terms of the customer satisfaction, how customer becomes satisfied in this particular range. That is all for now in terms of the supply chain management of retailing. In the next video, we will talk about the operations



management of retailing and what kind of things that the retailer should do within the store, till now we were talking about outside the store.

So what kind of jobs, what kind of activities that should be done inside the store so that better, I would say, efficiency and better profit satisfaction and better profitability can be achieved. So, thank you very much. I will see you in the next video.