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Articles

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DE-STRESS TO DELIVER

Everyone can Win!

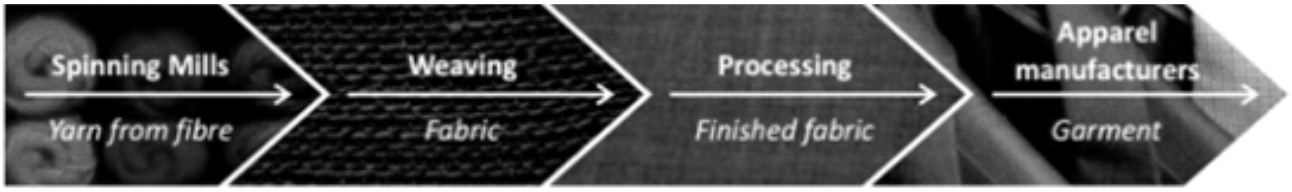
by **Chandrachur Datta**

Fashion should be trendy!

This summer, newspapers were full of advertisements of colorful Chinos and other new offerings. Every other brand showed off similar offerings. Their mantra is to offer something new and exciting in every season. There are two major seasons – Spring-Summer and Autumn-Winter. The design and merchandising departments of every leading brand are eager to predict the trends of forthcoming seasons so that in a competitive market, their offering is always in keeping with the 'current trends'.

The chain

Now, predicting trends is not an easy task. The supply chain of apparel is a complicated one involving many stakeholders. It starts from yarn manufacturers who take different types of fibres as raw material and create yarns of different qualities and counts. They weave yarn to make multiple qualities of fabric. For adding colors, either the yarn is dyed (pre-weaving yarn dyeing) or the fabric is dyed (post-weaving piece dyeing). For multi-color designs, the yarn-dyed route is very important.



Fabric manufacturers are suppliers to brands which generally outsource the apparel manufacturing. To create a particular fashion line, this whole route has to get synchronized as operations at every stage are specific to particular qualities and designs of garments. In general, it takes 60-90 days for the fabric manufacturer to deliver the processed fabric. Including designing and garmenting, it takes almost six months to produce the offering for a season.

Thus, to remain relevant in the 'current trend', brands have to always predict the future trend. By future, we mean at least six months to one year. The colorful Chinos in stores today must have been at the designer's desk at least six months before!

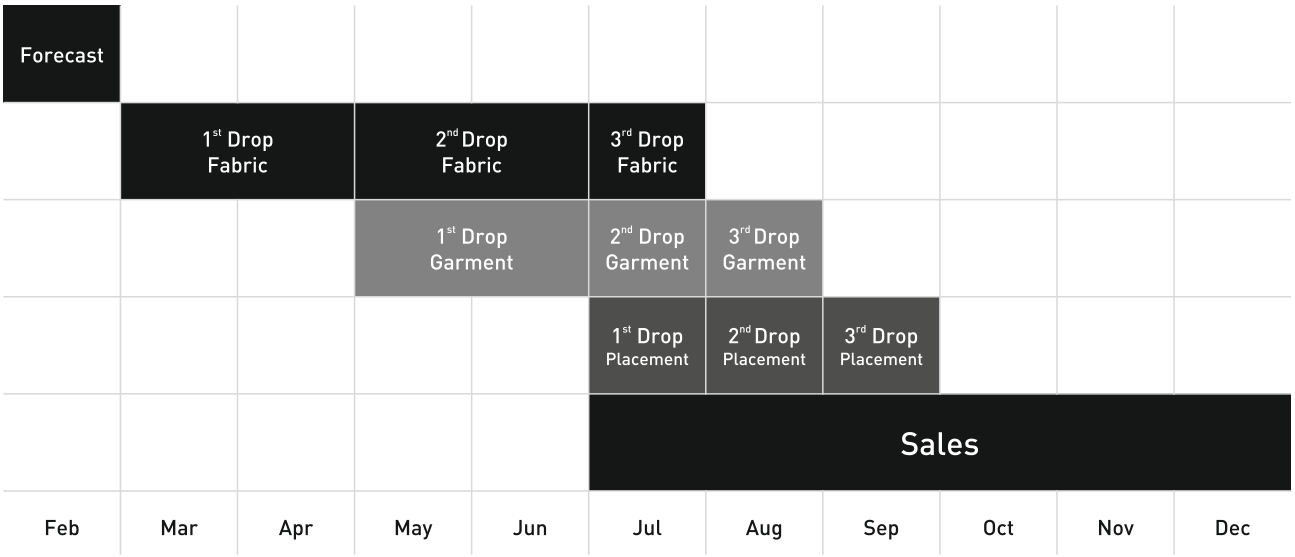
The issue

Brands sell through various channels/entities. Designs that the brands come up with are booked by these entities well in advance. Based on these bookings, brands determine the demands for each of their designs and go back to their suppliers and apparel manufacturers to book their capacities. Basically, buyers have to forecast the demand and make a decision whether to 'Buy Deep' or 'Buy Shallow'.

Lower prices for higher quantities of fabric are also a factor that influences 'Buy Deep' decisions.

It is a challenge for the merchandiser to make the stores look 'fresh' to the customers. Hence, the offerings of one season are broken into several placements, which help in rejuvenating the look and feel of the stores.

There is an opportunity to do flash introductions as well. If a brand copies the design of another, develops it and introduces in its own chain within the season, it is a flash introduction.



When the season starts, not everything sells at the same rate. Some designs are winners, selling out in the first two to three weeks; they disappear from the stores. Most of the time, these winners also end up as broken sets – some sizes remaining unsold. The stores have no option but to remove these balance pieces from the shelf to the backend store.

Every placement generates a few winners. Buyers would love to get the winners back on the shelf within the season. Most often, they refrain from placing an order for the winners. The supply lead-time of fabric is 45-60 days, that of garmenting about 15 days. If reordered, the garment will appear in the store after 65-80 days by which time the season is entering its waning period. The risk of these repeats remaining as surplus is very high. The buyer is more worried about the remnant inventory as it impacts his open to buy budget (OTB) for future buys. Hence, most times the buyer does not order repeats. For the same reason, even flash introductions for identified winners are also avoided.

Results:

1. Lost opportunity to sell more of the winners. The extent of this loss is not assessed. As markups are high, a loss of sale has huge impact on bottom line.

2. High inventory of the surplus materials - non winners, broken sets and unsold stock (bought in higher quantities either due to wrong forecasting to extract volume discounts).

Brands are compelled to flush surplus inventory at marked down prices at the end of the season (End of season sale – EOSS) for two major reasons –

- To release blocked working capital
- To clear shelf space to display fresh arrivals of the next season.

Every season, this vicious cycle repeats itself. The management reviews similar data at the end of every season, and blames its fate for not identifying winners correctly. So even if the outlets had good footfalls, the brands make very low profits.

Does the vicious cycle end?

Apparel brands, over the years, have taken different measures to solve this problem.

- Better Forecasting – Focus on improving buyer's capabilities to "sense" the future fashion trends.
- Partnering with the garment manufacturers – The flow speed of the garment manufacturing lines have been improved phenomenally. When required, the transfer batch size between work centres has been practically reduced to one to get garments out in record time. However, the core problem of higher lead times of the whole supply chain has not changed.

Many companies have tried forward/backward integration as well. But, even when the whole chain is under single ownership, the challenges have persisted.

We should attack the right problem

The uncertainty that hovers over this industry is due to following facts:

What to sell has to be determined well in advance

How much to sell has also to be determined well in advance

The supply chain cannot respond well within the season when winners are identified

The industry has to introduce new offerings every season, this cannot be changed. 'Buy Deep' route is not an option as surplus can kill the company. So the only option available is to 'Buy Shallow', and to react well within the seasons to maintain the supply of winners. Keeping stock of fabric and converting it into garments based on the indication of the sales rates of an SKU from the store will improve the reaction time significantly. The aggregation at a fabric level (same fabric used to create different styles and sizes) will surely help reduce surplus of garments. However, the surplus of "out of fashion" fabrics is bound to be there. Unless a retailer has a different market segment to flush out the excess fabrics, the risk can be significant.

The TOC approach

The fabric manufacturing lead time is the most significant part of the supply chain's lead time. The weavers' lead time, which is 45 to 60 days (from yarn to fabric), determines the reaction time of the complete supply chain. If it is cut by half, the garment can be reintroduced in the store well within the four month season.

Though the lead time of production – order to flow from yarn to finished garment –is about 45-60 days, the actual processing time (touch time) of an order on the machines is only 1.5 – 2 weeks. The gap between touch time and lead time is because of waiting times in front of every resource. The waiting time is due to either long queue in front of a resource or due to unavailability of all components to start processing (de-synchronization of arrival of parts for the assembly) or waiting in finished goods warehouse for the complete kit of all products. The waiting time can be reduced:

- By limiting the visibility of orders on the shop floor, which prevents cherry picking across many orders (for larger batches of a component). This prevents the de-synchronization of the flow in the components of the garment.
- By having a priority system that forces the synchronization

The lead time of manufacturing an order will crash to half i.e. about three weeks.

Not all orders have to be promised such low lead times. The first placements by the brands, anyways, are done with adequate lead times. These shorter lead times are only offered for repeats.

A category of shirts, of a large brand, could generate Rs. 150 crore worth of sales. Usually, 30% of this is brought in by winners. A repeat of Rs. 30 crore worth of winners can add Rs. 15 crore to the bottom line of the brand. This is significant for the brand because as a company it could be making a total profit of Rs. 30 crore (3% PBT on Rs. 1,000 crore sales).

A brand that gains such huge profits due to the efforts of a fabric supplier should not have any hesitation in offering a premium for rapid repeats. A 10% premium of the fabric price, for a garment which is sold with 100% mark-up, decreases the gross contribution by about 3%. When the brand gives up the 3%, it gains the balance 47%.

This not only created a win-win for both parties, but also brings the industry chain out of the constant pressure of margins. The brand gains additional profit due to additional sales of winners. The possibility of rapid repeats enables the brand to buy shallow across the whole range. This decreases surplus stocks, leading to higher rotation of capital.

Since the brands cannot predict the winners upfront, they will have to increase the range with the supplier who is committing to rapid repeats. This means more business for the weaver who will then extend preferential treatment to such brands in return for a premium for repeats.

The implementation requires a few paradigm shifts for both parties. Most mills want to ensure booking of their capacity well into the future. Even if production lead time of an order is brought down to three weeks, the total lead time will have to be assessed taking into account the queue of all orders committed to by the mill. Trying to push an order through as a 'chase order' will create chaos in planning and eventually lead to loss of capacity due to increased setups. This may also, at times, jeopardize orders of rapid repeats.

not faced with any stock pressure. This means that he, in turn, should also enjoy high availability at low inventory with high inventory turns. If the company can achieve this at low inventories – 1/3rd the current inventory – the ROI of the distributor increases more than three times presenting him with a financial motivation to put in the cost and effort.

An ordering system based on forecast cannot ensure high availability at low inventory due to forecast errors. To manage such high availability at low inventory at the distributors' requires the company to move to replenishment to actual secondary sales at high frequency. It has to move away from forecast-based ordering to consumption-based ordering. This requires textile plants to hold inventory, and supply to distributor as per his consumption. (Supply to consumption based system requires distributors to hold inventory only to protect against demand during the transportation time. Assuming that the maximum distance between any two points of India is 10 days, we can assess that a stock of one month will be more than enough for distributors to enjoy 12 turns.)

This way of working also requires that the manufacturer not have any stock pressure, else he will be forced to push the stock out and kill the inventory turns of the distributor. The only way this can happen is when the plant moves away from made-to-order to make-to-consumption. The consumption from central warehouse should trigger manufacturing orders in the plant. With lead times of production being long, the inventory required to be held at the central warehouse is huge. Hence, the lead times in the plant have to be reduced significantly. When the plant operates according to the Theory of Constraints (TOC) processes of production planning and execution, the production lead times reduce by about half and the reliability of delivery improves up to the high 90s.

Unless some capacity is allocated for rapid repeats, it is not possible to deliver them reliably in three weeks. If orders received do not fully use up the capacity allocated, it does not mean that the capacity is wasted. It can still be used for other orders.

The brand, on the other hand, has to understand the dilemma of the weaver in allocating capacity. It should commit to load this capacity. If it does not, the weaver will reduce the allocation next season.

The brand will have to change its philosophy in buying. It has to buy shallow. On observing the sales rate, it decides on the repeat buys. Some OTB will have to be kept unutilized to order repeats. The brand will also have to change its policy of not offering premiums to fabric manufacturers. It has to give up the mentality of trying to make profits by pushing down prices with the weavers, especially for the repeats.

Case of a leading shirting fabric manufacturing mill

The company manufactures high-end, yarn-dyed fabric and supplies to leading brands in India. It sources yarn from various spinners. Its main customers are retail chains that procure fabric and get garments manufactured to sell in their stores/franchisees.

In eight months of TOC implementation, the company achieved.

The company offered rapid repeats with penalties for even one day late delivery, to a leading retail chain in India. It has not only experienced increase in volumes from this customer, but has also received substantial rapid repeat orders. The retail chain has changed the buying process to accommodate the advantage offered by the mill.

Reduction of manufacturing lead time from **45days to 30days**

Lead times of **25 days** for rapid repeats

Improvement in on-time delivery performance to the **90s**

Output up by **over 15%**

Reduction of waiting time at warehouse for full assortment arrive **(from 15 days to 8 days)**

The last word

The many entities that constitute the fashion supply chain work with individual goals. If all entities are to flourish, it is important that they ensure a 'big win' for everyone. This can be achieved if each appreciates the challenges faced by the other.

Vector Consulting Group **(www.vectorconsulting.in)**, is the largest Theory of Constraints (TOC) consulting firm in Asia. The firm has been working closely with well-known companies across industries to help them build unique operations and supply chain capabilities that can be leveraged as a competitive edge in the market. Vector now has the highest number of success stories in Theory of Constraints Consulting and has also won several national and international awards for their work.