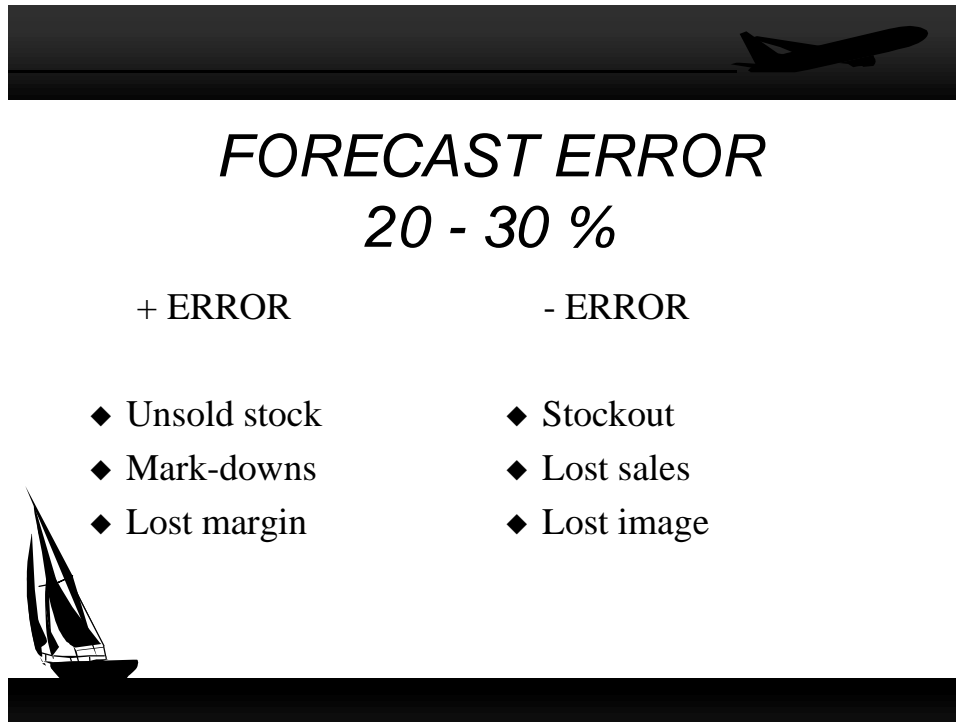# Demand Driven Garment Sourcing

Heikki Mattila

Nearly one million jobs have disappeared from textile and clothing industry in European Union during the past 10 years. Domestic production has been replaced by imports from lower cost countries. Large retailer groups source half of their merchandise outside of Europe. The industry has also sifted their production to Eastern Europe and to the Far East. The only reason for is the price.

EU-15 Textile job losses
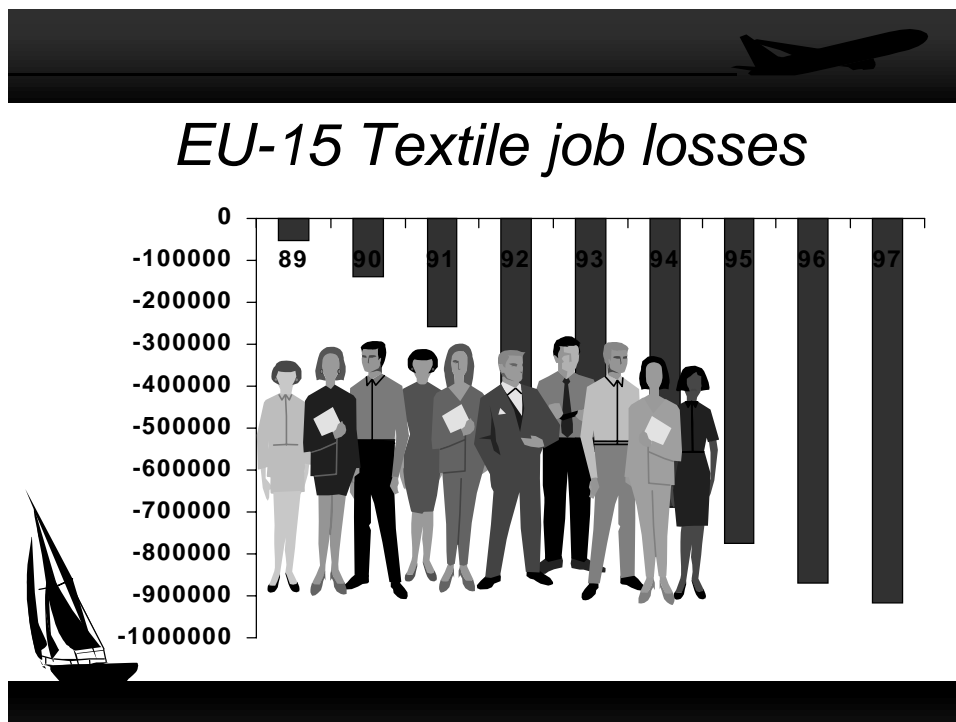
Figure 1. EU has lost nearly one million textile and clothing industry jobs

Multi-shop chains and centralized organizations buy up to 90 % of their product mix up-front of the season with long lead times. About half of the volume is bought from the Far East, from where transporting may take 8 weeks. Purchases are made on the basis of forecasts, which the buyers make 7 to 8 months before the selling season starts. Forecasting with such a long lead time is not easy and the forecast error

becomes high, on the average ±25% . A quarter of the total purchase quantity will not correspond with demand and it has to be sold at reduced prices. As the average price mark-down is nearly 50 %, hardly any margin is left. At the same time negative error occurs as well. More full price sales could have been achieved had the store carried right merchandise in right quantity. Now the store runs out of stock.

FORECAST ERROR
20 - 30 %

+ ERROR	- ERROR
◆ Unsold stock	◆ Stockout
◆ Mark-downs	◆ Lost sales
◆ Lost margin	◆ Lost image

Figure 2. Wrong goods are bought due to forecast error.

The long lead time and up-front buying slow down turnover of stock as well. A lot of capital is tied down in inventories. Stockturns is below 3 even though the retailers have started with more than the traditional two seasons per year.

The following trade-offs are available for retailers when planning their sourcing:

- Own label collection or supplier labels
- Offshore sourcing or local sourcing
- Up-front buying or in-season replenishment
- Traditional sourcing, Vendor Managed Inventory or Quick Response

The alternatives to traditional sourcing are purchases from the supplier's stock or cooperation with suppliers. This can be done under Vendor Managed Inventory (VMI), Quick Response (QR) or Efficient Consumer Response (ECR) strategy.

VMI-strategy means that the supplier produces and keeps a stock from where retailers can order the goods at very short delivery time even during the selling season. This reduces the forecast error of the retailer and his stockturns improves considerably. But as a whole the forecast error of the chain stays. It is now the producer who makes the forecast and carries all risks. Due to the errors the product range available at store level may not be more demand driven than before.

QR- and ECR-strategies mean that part of the goods sourced for the season are done up-front as before. The retailer keeps part of his purchase plan open for buying later. The manufacturer also reserves part of his capacity for later use. Once the selling season has started the remaining part of purchases are done on the basis of Point-of-sale information collected from cash-registers. A new forecast is made and the forecast error regarding this replenishment buying is a lot lower.
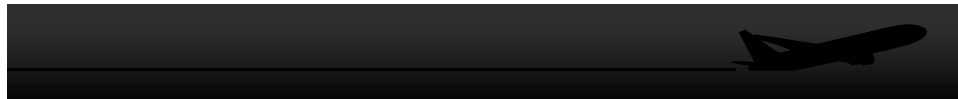
Retailer's problems

- 80-90 % up-front buying (6-7 months)
- Forecast error high
- Buying corresponds poorly with demand
- Lost margins
- Lost sales
- Stockturns slow

Figure 3. Traditional retailers are not very competitive

The main reason for sourcing from the Far East is low price. The products are between 30 and 50 % cheaper than from European suppliers. This, however, is the only advantage. Problems are caused by the long lead time and the high forecast error.

Resent research shows that despite of higher purchase price from the local supplier, retailers can improve their profits by implementing demand driven sourcing. Once the selling season starts, Point-of-sale information is collected in stores and a new forecast for the rest of the season is produced. Replenishments are ordered on the basis of this forecast. Products are made by a partner factory, which receives the new

forecast electronically. The partner factory must be near-by, preferably in the same country as the retailer. Products sourced in this way can be 30-40 % more expensive than from the Far East. The retailer makes more money even though the products are still sold at the original price. Stockturns is faster, less capital is tied down in inventories and the retailer earns higher profits. However, cooperation agreements through the whole supply chain will be needed in order to succeed.
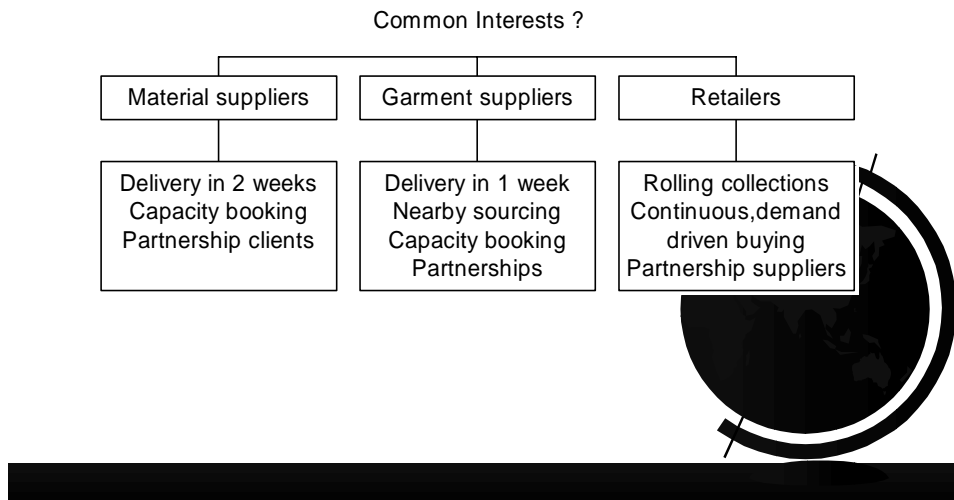
Critical Success Factors
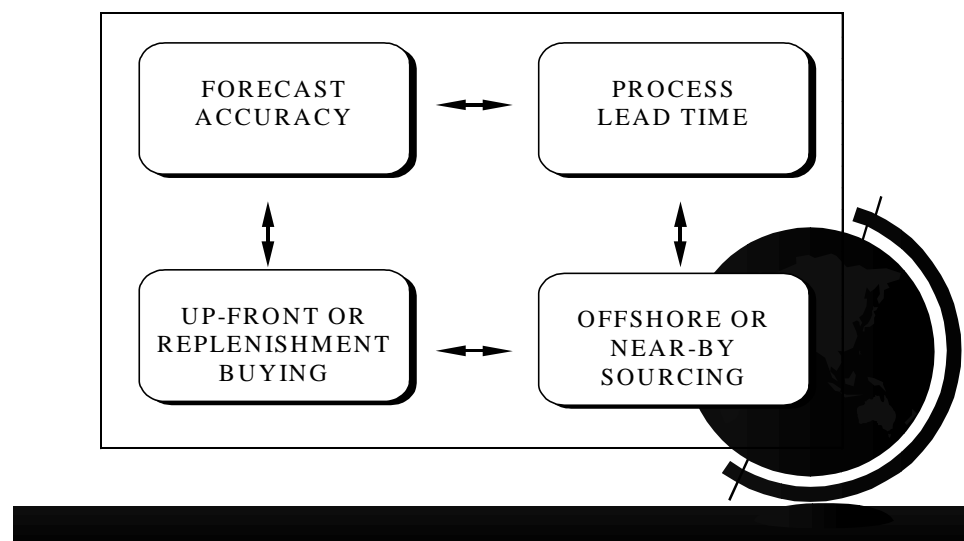
Figure 4. Successful product sourcing is the key to profitability,
      - how well does the product range correspond with demand?

Critical success factors in garment sourcing are the accuracy of demand forecast and the lead time. A suitable combination for sourcing in terms of offshore / local sourcing and up-front / replenishment buying must be selected. The following success measures can be used:

- Service level (what proportion of product range at style, color and size level is available in store through-out the selling season)
- Lost sales (how much sales is lost due to the fact that the consumer does not find the product she is looking for)
- Substitute rate (what proportion of consumers select a substituting product in case her size is out of stock)
- Gross margin (sales price less the cost of sales)
- Stockturns (sales divided by inventory value)
- GMROI (gross margin divided by average inventory value)
- Mark-down sales (what proportion of sales is done at marked down prices)

SUPPLY CHAIN

Common Interests ?

Material suppliers	Garment suppliers	Retailers
Delivery in 2 weeks Capacity booking Partnership clients	Delivery in 1 week Nearby sourcing Capacity booking Partnerships	Rolling collections Continuous,demand driven buying Partnership suppliers

Figure 5. Cooperation through-out the supply chain is a must in order to succeed with demand driven sourcing

Summary:

1. In case it is not possible to buy replenishments during the selling season sourcing from the Far East is more profitable than buying form local suppliers.

2. In case Point-of-sale information is available and can be used for planning replenishments, it is more profitable to increase the proportion of replenishments despite of higher purchase price

3. QR- and VMI-strategies are more profitable than up-front buying with long lead time. The best results are achieved when Quick Response strategy is implemented in cooperation with suppliers and by utilizing the Point-of-sale information in forecasting replenishments.

4. Increasing the number of selling seasons and purchasing separately for each season improves profits even though orders per purchase will be smaller.

5. Shorter lead times improve profits in all areas. Especially the lead time between forecasting and starting of the selling season is critical as it has an impact on forecast accuracy and this in turn determines the final profits in the store.