

**Beyond Needles and Thread:**  
**Changing Supply Chains in the UK**  
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**Emerging Changes In The UK Apparel Supply Chain**  
**January 2000**

**III. The Evolution of the Apparel Production Channel**

**III.1. Historical Differences in Production Channels**

**III.1.a. The Craft Channel**

Mass production came later in the UK than in the United States (Disher, p. 152). Until the war, much clothing production incorporated a significant amount of hand work, particularly in ladies' wear. Goods were often made on a "make-through" system: that is, each garment was made from start to finish by one multi-skilled operative, or in some cases by a skilled master tailor who employed several trainees to work under his guidance.

Large numbers of women homeworkers were also engaged in production to provide flexibility in meeting seasonal demand and to keep prices down. Early Census data estimate outworkers as representing an additional 10% of the workforce in 1907, and an additional 3% in 1930 (these figures are conservative, however, because they do not include data from small companies where the majority of homeworkers were likely to be found).

**III.1.b. Development of the Fordist channel**

Mass production methods were beginning to be adopted in men's wear between the wars, partly as a result of experience gained in uniform manufacture prior to 1918. Some of the first advances in the mass production of women's wear were made by men's wear factories which were forced to diversify after having lost pre-war export contracts (Wray, 1957, p21).

Mobilization policies during the Second World War compelled major changes in the production system. Clothing output was limited and government regulations sharply reduced the range of styles, fabrics and garments that could be produced, causing products to become more standardized than they had been in the past. Raw materials shortages eliminated seasonal influences on fashion and extended the longevity of styles. Reduced

supply levels increased demand for quality goods to substitute for quantity and variety.

Men's wear factories were commandeered to produce long runs of standardized uniforms and military dress, a practice which facilitated the introduction of mass production systems. Mass production based on sectional manufacture was also a means of utilizing "green" or unskilled labor with minimal training requirements.

As mass production techniques developed, costs could be held down more effectively through investment and planning to secure economies of scale than by utilizing sweatshop practices and employing homeworkers. A report published by the Board of Trade after the Second War stated that for the first time: "Mass production had become more profitable than production based on sweat shops or homeworking." (cited in Rainnie, 1984) an assertion backed up by Census reports which show that, for the first time, net output per worker was highest in companies employing more than 1000. Profitability was also marginalized in the sweat shop sector through inability to match quality with that demanded.

Price controls encouraged the development of supplier-retailer networks because margins were capped in such a way as to encourage retailers to buy directly from manufacturers. In addition, product standardization diminished the importance of manufacturers' branded goods and allowed specialty and variety chain stores to develop their own brands.

Having established this direct and more secure market, the largest companies introduced new technologies as their production capacity increased. Because most of the new technology has been developed for the production of large volumes, "down-time" during style changes can be particularly expensive. This has become a disadvantage as orders have fragmented during the 1980s and 90s.

Smaller firms have been less able to compete due to their inability to invest in specialized and faster machines. However, some small are experiencing a revival because of their ability to manufacture smaller production runs.

### III.1.c. Subcontracting Networks

Contracting networks were also created during the wartime period. Wartime controls limited entry into the industry by allowing only existing clothing manufacturers to obtain rationed fabric and governmental certification of subcontractors was also required. The freezing of entry and the pre-certification of subcontractors resulted in the establishment of long-term relationships between manufacturers and their contractors.

After the war, the experience with mass production of standardized products using relatively unskilled labor led to "conveyor belt" production lines in which each operator

performed only one or two processes. The advantage of mass production in the apparel sector is in balancing economies of labor specialization against the inflexibility of needing to balance lines and retrain labor. This system has not, therefore, proven successful in all garment sectors. Some small contract manufacturers still operate a "make-through" system to cater for highly unpredictable markets, such as high fashion women's wear. Subcontracting systems still exist in markets that require flexibility, as will be discussed below.

#### III.1.d. Globalisation of Production

As production of large volume standardised product increased, it became more practical for basic items to be sourced and manufactured abroad. UK retailers, keen to display both low prices and good value, actively sourced overseas production for products such as mens shirts and underwear, which was insensitive to fashion changes. Table 3.1 illustrates the post war growth in import penetration for women's and men's wear.

The development of closer buyer supplier relations and cost saving activities on behalf of retailers have enabled suppliers to take a more pro-active role in importing made-up goods. As some retailers have closed their overseas sourcing operations, the UK's largest manufacturers have progressively invested in overseas factories for the supply of basic products. Vertical integration enables these suppliers to design and develop goods in the UK in close liaison with UK retailers, while manufacturing overseas to secure lower costs.

This system of globalisation works best with large volumes of standardised product and has been able to develop as an indirect result of the mass production techniques and market trends that developed in the UK.

A more flexible means of globalisation that has developed recently is outward processing (OPT) of manufacture. OPT enables suppliers to avoid paying duty on fabrics that are exported from the EU for manufacture overseas and is effectively a means of subcontracting. A higher degree of flexibility has been secured through OPT relations with relatively near neighbour countries in North Africa, Southern Europe and Eastern Europe.

#### III.1.e. The lean retailing channel and flexible production

Major changes in UK apparel manufacturing resulted from the reconfiguration of retailing in the 1980s. The concept of lifestyle shopping, pioneered by Next, caught on rapidly in the UK. Consumers quickly developed a preference for more sophisticated product ranges, better quality and higher design content, forcing major chains to move away from standardized mass-produced items, to smaller quantities of better quality, well-

designed, and co-ordinated ranges.

In order to manage this more diverse type of stock, retailers became increasingly involved in monitoring sales, passing on sales information to suppliers (electronically or manually), and developing means of securing faster, more efficient delivery. The need for flexibility to respond to market demand also strengthened relationships between retailers and their key suppliers.

At the close of the 1980s, inventory build-ups gave retailers a further incentive for gaining faster responsiveness from manufacturers. Many retailers were left with high inventories as a result of having increased stock ranges prior to the recession and these surplus stocks had to be marked down substantially. Vigorous markdown activity has now been superseded by leaner, stockless systems of retailing in order to minimize the discounting of unsuccessful lines and maximize the potential to react to short-term market trends.

Substantial progress towards lean retailing has been made in the last few years. Our surveys indicate that 87% of sales to variety stores are replenished on a daily or weekly basis (see section V). Major retailers (for example, Marks and Spencer and Next) hold no stock in warehouses or in-store stock rooms, transferring any inventory burden completely to their suppliers.

### **III.2. Differences by type of product**

As indicated above, the dynamics of change within the production system have affected men's wear and women's wear at different rates. The principal reason for the variation is the degree of flexibility that is required to meet changing consumer demands. A higher degree of flexibility is required in women's wear.

The effect of the different supply chain structures that have developed is manifest in the size of companies that have developed and the level of imports into the sector.

#### III.2.a. Men's wear and Women's wear

The level of import penetration is particularly high in basic product areas. Between 1984 and 1989, import penetration of mens' suits increased dramatically from 65.9% to 84.5%, while penetration of imports in the ladies' blouse market increased from 54.3 % to 77.4% by volume (Table 3.2). Import value penetration, however, indicates that, while the value of all imported goods is on average low, the relative value of imported women's dresses and mens' suits decreased, implying that domestic firms are specializing in higher-value products.

As far as UK production is concerned the size of firms is an indicator of the extent to which mass production techniques are employed. Table 3.3 shows that the average size of firms manufacturing men's and boy's wear is much higher than for women's wear. This was particularly evident in the 1960s and 1970s when average firm size in men's wear reached 90 employees, while the comparative figure in women's wear was just 43. The same pattern can be observed in the 1990s. Although average firms size has fallen significantly, men's wear producers on average employ twice as many staff as women's wear producers.

### III.2.b. Other

The principal sectors not included in statistics relating to men's and women's wear include manufacture of accessories, knitwear and hosiery and workwear.

Until recently, the manufacture of workwear has been subject to a high proportion of domestic sourcing (import penetration just 16%), although the production of standardised products does complement mass production. One obstacle in the production of workwear is the production of non-standard ratios and sizes. As bulk production becomes increasingly globalised, a niche market is developing for the production of these non-standard small batches, replenishment orders and the production of specialist protective clothing.

Knitwear and hosiery production is a major sub-sector within the UK textiles industry. High investment costs for new technology have necessitated the use of large-scale production and favoured large firms, and manufacturers in the Far East have gained specific expertise and a culture of innovation that has facilitated overseas sourcing. Import penetration is currently 64% by value. However, large, highly efficient production capacity remains in the UK and niche suppliers have developed to service added-value markets and quick response.

Average size of knitwear manufacturers in 1995 was 76 employees, and average gross output per unit £2.5 million compared to £1.5 million for men's wear and £0.74 million for women's wear.

### **III.3. Differences by type of retailer**

Retailers demonstrate varying degrees of capacity to utilise mass production suppliers. Although the market is concentrated in a few large retail groups some have a fragmented structure based on specific consumer types and the total size of the UK market is constrained by the size of the population. In reality, therefore, it is only a few of the large retailers that have been able to take full advantage of the economies of scale achieved through mass production. The leaders are Marks and Spencer whose supply chain has developed around close relations with large suppliers. Men's wear companies, such as

Burton, have also been leaders in the field, historically using their own manufacturing capacity.

Most of the UK's major retail groups have adopted a dual system of sourcing that enables them to source basic lines from mass production companies, while using smaller more flexible firms for fashion lines. These may be subcontracting networks, organised by a first tier supplier or the retailer themselves, or smaller manufacturing companies that use the principals of conveyor belt production but using smaller bundles and less capital intensive handling methods. In some cases companies operating team-based production systems or garment make-through may be utilised for flexible small batch production.

Another area where mass production techniques can successfully be applied is the branded clothing market. Brands offering sportswear or basic items such as men's shirts or jeans are distributed by a wide variety of retailers including supermarkets, department stores and independent outlets. However, forward ordering requirements enable brand houses to collate fragmented orders into viable large batch production that can be manufactured utilising highly sophisticated and relatively automated mass production manufacturing.

### Tables Section III

Table 3.1 Import Penetration: Men's wear and Women's wear

	Men's wear	Women's wear	Total
1960	5%	9%	7%
1970	11%	6%	8%
1980	n/a	n/a	18%
1985	30%	25%	27%
1991	44%	42%	43%
1994	55%	42%	48%

Source: UK Overseas Trade Statistics; UK Census of Production

*Classifications are aggregated data for men's tailored outerwear with men's shirts and underwear; women's tailored outerwear, dresses and underwear, matching output figures as closely as possible to import / export figures. Import penetration is defined as imports as a percentage of UK sales, where UK sales = manufacturers sales net of exports, plus imports.*

Table 3.2 Import Penetration of Selected Products

	1984		1989	
	vol.	val.	vol.	val.
Women's blouses	54.3%	39.2%	77.4%	57.6%
Women's dresses	50.3%	46.1%	53.1%	36.3%
Men's suits	65.9%	54.1%	84.5%	58.8%
Men's shirts	70.5%	53.9%	80.6%	60.4%
Women's skirts	35.2%	31.5%	44.4%	36.7%

Source: Keynote Market Report, Clothing Manufacture, 1990

Table 3.1 Firm Size by Product Type

Average Firm Size (employees)	Men's wear	Women's wear
1958	70	14
1963	87	25
1970	90	43
1980		
1986	38	20
1987	40	20
1988	40	21
1989	39	20
1990	37	20
1991	36	18
1992		
1993	50	23
1994	41	15
1995	45	21

*Sources: UK Census of Production; Business Monitor PA Series; Business Monitor Size Analysis of UK Businesses*

## **IV. Overview of Clothing Retailing**

The UK apparel market is characterized by the dominance of seven chain store groups that collectively account for almost half of all sales. These include Marks & Spencer (16%), the Burton Group, BhS, Next and Littlewoods. The fastest growing retailers, however, include smaller chains such as Oasis and New Look, while the most profitable are Burberry, River Island, Monsoon and Mackays<sup>1</sup>. Table 4.1 shows the distribution of retail sales by outlet type.

### **IV.1. Types of retail clothing businesses**

The principal types of clothing retail outlet include:

#### Variety stores

Multi-product stores often with a significant clothing offer, usually combined with household goods and food. The majority of products are branded with the store's own label (which is often consistent across product groups). Examples include Marks and Spencer and British Home Stores.

#### Department Stores

Again selling a variety of products, often including white goods, toiletries and household goods, department stores offer a less unified format than variety chains. Although some sell their own clothing brands, many manufacturers' brands are sold, some through "shop-in-shop" formats. Some store groups form nation-wide chains, such as Debenhams and House of Fraser. Others, such as Harrods, are exclusive, some being independent or family owned.

#### Specialist chains

As their name suggests, these outlets specialise in clothing sales. Their particular image or market niche has enabled these store groups to grow to either regional or national scale, and many of the largest chain store groups own a variety of fascias which offer distinct images and economies of scope. Examples include Arcadia (formerly the Burton Group) which offers the fascias of Top Shop, Top Man, Dorothy Perkins, Principles, Burtons and Evans. Another example is Oasis a distinct and independent chain store group.

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<sup>1</sup> ICC Business Ratio Plus, 1995

### Independents

Small independent retail outlets are declining in the UK. However, those that remain tend to be specialist outlets, serving a specific customer or location, such as supplying branded products in provincial locations where disposable income is relatively high. Alternately some specialise in supplying true niche markets, such as performance sportswear or non-standard sizes.

### Discount outlets

There are three types of discount outlets. Traditional chains still thrive in secondary shopping locations, trading on so called “grey” goods<sup>2</sup> and on inferior stock or over-stock originally destined for chain stores. However, the UK also boasts some US style discount retail clubs, where both branded and own-bought goods can be purchased without the overheads of high profile high street locations. Again following a US trend, several shopping villages have also been opened, primarily occupied by brand outlets selling cut price, out of season stock or overstock direct to the public.

### Mail Order

The mail order sector has traditionally been dominated by “big” books selling a wide range of products at relatively low market value. One of the main attractions has been the customers’ ability to pay by instalments through an agency arrangement, without the need for credit references. However, recent moves in mail order have been towards more targeted direct marketing techniques, particularly aimed at the professional customer. The most dynamic mail order houses at present are those owned by store groups, including Next and Littlewoods. Even Marks and Spencer has recently entered the mail order market.

Clothing is also sold through market stalls, supermarkets and sports goods stores, as well as by party plan, direct mail and second-hand (thrift) shops.

## **IV.2. Trends in sales by size of establishment**

In 1951, 60% of all clothing sales were accounted for by retailers with fewer than 10 outlets. By 1994 sales of clothing in small chains and independent stores (1-9 outlets) had fallen to 28%. The change is accounted for by the growth of multiple retailers. Chains of over 10 outlets accounted for 34% of sales in 1951 but now represent 73%. Over half of all

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<sup>2</sup> branded goods imported on the “grey” market, through third party agents who sell clearance lines, overmakes or unauthorised copies.

sales (53%) are through very large chains (100 outlets or more) which were not listed separately in 1951, but which accounted for only 34% of sales in 1971.

The development of large retailers can be explained by both generic growth and growth through acquisition. Retail chains have invested heavily in new shopping developments, as well as acquiring and restructuring single brand chains into complex multi-fascia groups. Examples include Sears (which acquired two men's wear chains, Foster Brothers and Horne Brothers in the 1980s) and the Burton Group (which acquired the Debenhams department store chain and Colliers men's outfitters in 1985)<sup>3</sup>. Both have again restructured in the 1990s to reflect market changes.

Recent statistics show that the major sources of growth in apparel sales are larger businesses<sup>4</sup>, where sales increased by 7% in the year to spring 1997. Small businesses showed at best static sales, with a decrease of 2% for the period between September 1996 and February 1997. The growth has resulted in falling numbers of independent boutiques and chains and a decline in the independent department store sector, which has been absorbed by store groups. This pattern of growth has considerable implications on the range of opportunities available to domestic apparel manufacturers currently supplying UK retail markets.

### **IV.3. Trends in business concentration and the growth of large retail chains**

#### Growth of the Large Clothing Chains

The austerity brought about by the Second World War created an environment in which consumers began to appreciate value and standardisation in consumer goods markets. Large retailers, able to access economies of scale, began to thrive as consumer markets picked up through the 1950s and 1960s. In reality, not only did the proportion of sales processed through large retail outlets increase, but these outlets became concentrated into relatively few successful and growing retail groups.

Table 4.2 shows the increase in concentration of retail sales in the largest 5 and largest 10 outlets for both men's and women's wear. The table shows that by 1980 men's wear sales were already concentrated in a few large outlets that have lost market share during the 1990s. However, women's wear sales have become increasingly concentrated

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<sup>3</sup> Barnes, 1993

<sup>4</sup> OETC Business Trends Survey, 3/1997.

during the period, although the majority of change has come from within the top 10 performers in each group.

### Supermarkets

A further trend of the 1990s is the growth of clothing sales in established supermarket groups, most notably ASDA and Tesco. Both have traditionally sold clothing, but have repackaged their clothing offer in an attempt to access the discerning consumer, rather than the bargain-hunting convenience shopper. ASDA have been remarkably successful by entering into a single sourcing partnership arrangement with the George Davies Partnership (GDP). Ultimately this has resulted in the purchase of GDP by the ASDA group. Tesco, meanwhile has been striving to increase sales of branded goods by sourcing sportswear and casual wear on the “grey” market<sup>5</sup>. Attempts to outlaw this practice to protect the selective distribution of branded goods have so far failed to stem demand.

### Mail Order

During the late 1980s it appeared that Mail Order would decline, as consumers became increasingly selective and the image of the low market value, large mail order catalogues became out-dated. However, in the 1990s, social trends and new technologies have contributed to regenerating the mail order market, and its market share has remained stable at around 10%. Moving away from offering credit to working class families, mail order catalogues have increasingly attempted to offer formats that appeal to professional consumers, offering more choices of payment, including store cards and credit or debit cards. Retailers such as Next have heavily influenced the mail order market, having purchased Grattan, a leading mail order house, in 1986 followed by the launch in 1988 of the Next Directory. Although Grattan was sold in 1991, mail order now forms 20% of Next’s sales<sup>6</sup>.

The current form of mail order catalogue has changed with a decreasing focus on the two main seasonal booklets and a move towards the launch of more targeted mini-books aimed at reviving seasonal sales or stimulating business for specific purposes, such as leisurewear, holidaywear or Christmas gifts. A parallel growth has occurred through

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<sup>5</sup> Purchase of goods from overseas wholesalers without the consent of the Brand House, who attempt to impose strict controls over stockists to maintain exclusivity and protect against unlicensed copying.

<sup>6</sup> Retail Monitor International, September 1998

specialist mail order labels, such as Racing Green (owned by Arcadia) and Hawkshead, which offer quality own brand clothing and which utilise Sunday Press distribution to target consumers. The big catalogue groups have responded by developing distribution relationships with designer brands, and by experimenting with new forms of distribution. These include the trialling of CD-Roms and Internet shopping, and the use of fast react courier services instead of traditional postal services<sup>7</sup>.

### Discount retailing

Discount retailing in the UK has grown through a variety of formats. These include US style discount clubs (for example Matalan), regional and national discount chains retailing seconds and clearance lines (examples include Peacocks and W. Boyes) from secondary locations, and the growth of “factory village” retail outlets that have emerged during the 1990s.

By 1996, there were 15 factory village outlets in the UK, selling primarily mid-market retail and manufacturers’ brands. Goods available include overstocks and out of season lines. However, growth projections have already been cut back, and forecasts of another 50 centres by the end of the Century have now been reduced to an expected 30<sup>8</sup>.

Discount retailing is reputedly most successful among low-income consumers during recessionary periods. During the mid 1990s, the discount chain store market is thought to be overcrowded, and some discounters are actively pursuing strategies that will increase their market level. The difference between discount retailers and low value fashion chains has, therefore, become less clear<sup>9</sup>.

## **V.1. The impact of Lean Retailing on the Production Channel**

### Lean Retailing Strategies

Stagnant high street sales, the quest to gain market share in a mature market and pressure on profit margins have forced UK clothing retailers to review their supply chain operations and attempt to introduce lean retailing strategies. Although different models have emerged, the main characteristics of UK lean retailing include:

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<sup>7</sup> The UK Fashion Handbook, 1997

<sup>8</sup> Retail Monitor International, August 1998

<sup>9</sup> UK Fashion Handbook, 1997

- supply chain rationalisation, to reduce transaction costs and facilitate the development of closer supplier relations and the introduction of integrated IT systems with key suppliers;
- reduced inventory, to reduce costs and minimise exposure to the risks associated with changes in fashion and weather;
- introduction of complex logistics systems, with individual store deliveries, delivery of store ready goods, and Just -In-Time call-off of goods on a daily or weekly basis; all strategies aimed at maximising shop floor stock holding without increasing stock levels;
- introduction of flexible supply chain systems capable of providing quick response capacity, balanced by low cost production for more predictable lines;
- added value expectations from suppliers, including third party sourcing, quality assurance and the movement of inventory upstream in the supply chain.

#### Sources of efficiency

With the introduction of lean retailing in the 1990s, flexible management of their distinct brands has enabled complex retail groups to restructure by combining and centralising head office functions to achieve economies of scale, while using branded outlets as a means of targeting specific customer groups. Whereas retail brand facias had previously been run as separate business units, both Arcadia and Sears have undertaken programmes to facilitate sourcing across brands and the use of centralised distribution, communications and quality control systems.

Lean retailing, however, has not proved to be an easy transition for some retail groups. Next, for example, experienced problems of lack of flexibility when sourcing the majority of products from overseas. On deciding on a strategy of change, the company found a lack of suitable domestic suppliers (many of which had closed down in the interim period). Having successfully reduced its stock holding levels, Next has more recently found itself exposed to a lack of availability of fast selling lines.<sup>10</sup>

To overcome such difficulties, some retailers have deliberately introduced new customer service technologies. Marks and Spencer, have introduced electronic customer order points where consumers can place orders for out-of-stock goods to be delivered to their houses or a local store from the central distribution warehouse.

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<sup>10</sup> Company Annual Report

More general sources of efficiency include the advantages of reduced transaction costs with fewer suppliers, improved IT links with preferred suppliers and reduced inventories facilitated by just in time delivery. These issues will be discussed in greater detail below.

#### Mass Production and labour costs

There is some evidence to suggest that wage and salary costs have fallen in those parts of the industry that have most fully adopted mass production. This is most evident in men's outerwear production, where wages and salaries as a percentage of gross added value has fallen from 67% in 1975 to just 45% in 1995 (Table 4.3). Much of this transition can be attributed to the adoption of automated process for the production of standardised garments and one would expect to find a correlating increase in the level of capital investment as a proportion of GVA. In other product areas, the effect is less clear, and, in both women's outerwear and underwear, statistics suggest that fragmentation of production in the early 1990s caused relative labour costs to increase.

By company size, employment costs as a proportion of GVA show a much clearer pattern (table 4.4). In the largest firms, those employing 1000 or more, labour costs have fallen from 68% in 1980 to just 54% in 1995. In the industry overall, there has been no pronounced reduction in labour costs, and table 4.4 shows that in firms employing fewer than 200 workers, relative costs have increased. This is consistent with the difficulties of the fragmentation experienced by small firms within current trading patterns.

#### Just-In-Time and inventory reduction

Several manufacturers, especially suppliers to Marks and Spencer, respond to electronic orders by delivering goods held in stock on a call-off basis that responds to retail sales processed. Where goods are delivered on such a "call off" system, receipt of sales information enables manufacturers to balance the volume of finished goods held in stock against the economies of achieving bulk production of forward ordered lines. In the case of goods being manufactured at off shore plants, the long lead-time for delivery to a UK warehouse eliminates some of the advantages of fast ordering systems. In either case, the risk associated with predicting the volume in which individual products will sell has been partially switched from the retailer to the supplier, and the cost incurred if goods fail to sell has been similarly devolved.

Some manufacturers have responded to the need for flexible manufacturing by introducing modular systems, or pre-booking production with subcontractors in preparation for true quick response.

Others have created innovative ways to finish goods supplied in the “greige<sup>11</sup>” state. Coats Viyella owned Stevensons dye-house specialises in dyeing made-up garments and relies on sophisticated IT systems to communicate and generate precise colour and finishing treatments on a Just in Time basis. The dyer also acts as a stock holding facility, warehousing imported goods ready for call-off, finishing and delivery to stores.

As has been mentioned previously changing replenishment practices have necessitated the holding of stock by manufacturers in order to meet daily retailer replenishment schedules, and in some cases have resulted in the introduction of modular production systems to shorten throughput times and reduce work-in-progress. This picture is further complicated by the increase in imports of overseas manufactured goods to meet market price expectations, but for which the cost of holding inventory in the UK is high. The features of changing inventory levels is explored further in section V.

As a result of changing inventory patterns, retail stock turnover has increased significantly from 4.8 times per year in 1976 to 8 times per year in 1996. Table 4.5 shows the pattern of stock turn (year end stock holding as a proportion of total year sales) by number of outlets. Smaller chain stores show the most dramatic shift in the speed of stock turnover, as shown in table 4.6. However, the tables also show that stock turnover was much more rapid prior to the development of standardised retail formats. In the mid 1960s, chain stores were able to turn over stock on average 6.9 times per year, and for womens’ wear census reports show a stock turn figure of 11.0.

### Adding Value

Manufacturers delivering to retail, particularly to the major chain stores, are under increasing pressure to reduce lead times and retail stock holding, while increasing delivery accuracy and added-value. The range of services associated with such strategies is broad and the extent to which these have been adopted is explored in section V. Key features of this element of lean retailing include:

- ensuring that the right goods are available at the right time, while minimising inventory – this necessitates quick response in manufacture or (at least delivery from stock see above) and the availability of replenishment if sales are good;
- pre-retailing and direct-to-store delivery to reduce the time from delivery to retailer by supplier and the availability of goods on the sales floor;

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<sup>11</sup> Undyed and untreated textile, ready for coloration, special finishes and fabric treatments

- information exchange to assist planning and management of the system through all stages of the supply chain, in an effort to reduce wastage (including time) and maximise responsiveness to demand.

A general perception of manufacturers is, however, that financial recompense for the additional services provided is inadequate, and that the major advantage of such practices is increased security in the buyer-supplier relationship. Suppliers have more recently expressed concerns relating to performance measurement as an increasing number of retailers are placing penalty clauses in their contracts, which can cause considerable loss of margin for manufacturers unable to deliver on time, or to an adequate quality standard.

Significant factors in the introduction of added value to the supply chain include the ability of manufacturers to respond quickly to retail sales demand and forecast sales patterns. The importance to retailers of being able to measure sales at SKU level and communicate this information to suppliers is exemplified by department store chain House of Fraser. This company ran into financial difficulties in 1996, when their inventory holding reached £11 million worth of old stock, allegedly due to an inability to monitor and turn off stock during adverse weather conditions<sup>12</sup>. The chain now faces a belated restructuring, one major element of which will be to address supply chain inefficiencies.

#### Quality assurance

In the spirit of partnership, and to save time and cost in the distribution of goods, quality assurance systems are beginning to change. Retailers previously carried out 100% inspections, often within their own distribution centres after delivery of goods. While this practice may have changed, retailers now require suppliers to provide evidence of goods being passed for sale, which may include certification from textile testing laboratories or quality assurance. Daly Transport Services, a North London based logistics company, provides one such garment testing service, accredited by major high street stores, and servicing both local factories and imported goods.

#### Logistics, transportation and reprocessing

Partly as a result of such inventory shifts, demand for Just In Time delivery and the need to ensure standards of imported goods, the distribution sector is undergoing significant growth. Distribution services include transportation, warehousing, picking, repackaging and delivery to individual stores or regional distribution centres. In addition,

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<sup>12</sup> Drapers Record,

many distribution or logistics companies offer facilities for the receipt of Point of Sales data, carry out quality assurance and garment testing on a contractual basis, and offer facilities for the re-processing of goods.

Garment re-processing includes pressing, labeling, repairing faults and repackaging. In many cases, goods transported flat to reduce costs are re-presented as hanging garments, ready for point of sale display. Reprocessing services are now offered by the largest integrated manufacturers, specialist distribution companies and small subcontractors that have diversified into this service area.

## **V.2. Retailing-clothing, manufacturing-textiles partnerships**

Increasingly, product differentiation is based on textile developments that add-value to finished garments, such as:

- fabric and product finish and performance,
- product durability and fitness for specific purposes,
- quick response to customer preferences (such as colour).

However, because these finishes also add cost to the materials, and add time to the production supply chain, new strategies have emerged to eliminate the risk of adding to the price of goods while increasing value inappropriately. This strategy has been facilitated by the fact that much of the upstream development in fabric and fibre technology has been implemented by innovative global firms, such as DuPont and Akzo Nobel.

In supply chains where value is added upstream in the process, labour becomes less significant to cost than time and material costs. Time compression is an alternative to reducing labour costs as a means of minimising costs and wastage. Attempts to reduce time wastage within the supply chain favour close proximity between retail customers and their garment and component suppliers, rapid decision making processes (often aided by computer technology to speed exchange of data and early prototypes) and Just-In-Time supply to minimise inventory.

Traditionally in the apparel supply chain, fabric developments were sold to manufacturers (or retailers). Garments were designed utilising the fabrics available or minor adaptations on a theme. In integrated supply chains, retailers are increasingly involved in the early stages of fabric development and design specification. However, in order to respond to the demand for quick response, product differentiation must be closer in time-scale to the end user, while to satisfy the demand for variety and performance it needs to be completed further upstream in the value chain. Concurrent product development of fabrics and garments facilitates bringing these processes chronologically closer together.

Marks and Spencer is an example of one retailer which now has CAD links to fabric suppliers to enable the approval of colourways and finishes within shorter lead times and with fewer sample iterations<sup>13</sup>. A survey of retailers<sup>14</sup> revealed that one third were to some extent involved in raw material developments, so this strategy is likely to increase in importance.

### **V.3. Retailers or manufacturers as drivers of change**

#### Changing Retail-Supplier Strategies

In order to examine in closer detail the characteristics of differing supply chain strategies, the following section focuses on three case studies exemplifying good practice and innovation within the sector. Within UK retailing, many other forms of supplier relations exist, and many supply chains exhibit a combination of different strategies.

#### *Close Partnership: The case of Marks and Spencer*

Supply chain relations have recently become much higher on the strategic agenda of many retailers and suppliers. However, a classic example of close direct partnership arrangements is that of Marks and Spencer, which has over many years built close relationships with the UK's largest manufacturing companies. Indeed companies such as the Dewhirst Group have supplied the retailer since its conception.

Marks and Spencer's success has derived much from the company's strategy of "own brand" labeling that generates consumer allegiance to the store rather than to the manufacturer. The St Michael brand is associated with quality and value, rather than style and choice, and has enabled the retailer to tightly control all facets of production from product development to cost structures. In turn, the level of business generated by Marks and Spencer and the standardisation of product have enabled suppliers to benefit from economies of scale not achievable in other parts of the sector. This has a cyclical effect on acquisition and investment, with a few successful suppliers adding to their capacity and

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<sup>13</sup> Centre for Work and Technology, Supply Chain Survey, 1997

<sup>14</sup> Centre for Work and Technology, Retail Survey, 1998

order book through acquisition and achieving sufficient volume of business to invest in leading edge technology.

The key elements of Marks and Spencer supplier relations include:

- production capacity dedicated to Marks and Spencer;
- transparent cost accounting
- collaborative product development
- strict retail control over quality assurance and production standards
- manufacture stock holding, to support call-off of goods in response to sales and zero retail inventory;
- exchange of Point of Sales data for planning purposes
- rationalisation of the supply base to minimise transaction costs

Throughout 1998 and 1999, however, Marks and Spencer has struggled to maintain the high profits associated with its business. M&S has now succumbed to price pressure and an increasing amount of its basic product is sourced from overseas. Because of its long term relationships with favored suppliers, much overseas sourcing is managed by UK based partners, such as Courtauld's Textiles, Coats Viyella, and S.R. Gent, either by outward processing or manufacture in an increasing number of company owned overseas factories. Until recently, M&S sourced 85% of goods from the UK; its strategy is to reduce this to 50% in the near future. As a result a further round of supply base rationalisation is underway, and some dedicated factories will be forced to close without the guarantee of M&S business.

The recent difficulties experienced by the retailer are symptomatic of the developments that have taken place in the apparel supply chain more generally. Economies of scale and standardisation of product no longer secure the volume of added-value business that is needed to sustain UK manufacturing. There are some specific difficulties that have arisen for M&S as a result of its size and structure. These include:

- Slow decision making processes that hinder quick response;
- A high burden of stock holding on the manufacturer, which creates pressure on financial returns;
- Lack of flexibility in production units that have invested to support mass production.

A similar close relationship can be observed with Next, a successful retailer which has increased domestic supply from 35% in the early 1990s to 50% in 1997, within the

context of substantial increase in gross turnover. A combination of dual sourcing from both UK and overseas, and a successful mail order business have enabled better monitoring of lost sales opportunities, and enable the company to trial products and turn supply on or off depending on initial sales results. The company has recognized the value of domestic manufacturers in helping them to maximize full price sales and minimize markdown activity. Significantly, individual buyer's performance is measured by the profitability of their departments, rather than the level of margin that can be achieved by minimising purchasing prices. The retailer's success is exemplified by the short duration of its end of season clearance sales.

### ***Complex supply chain structures: the BhS strategy***

In contrast to the formality and close control exhibited by Marks and Spencer in its supply chain relationships, some major UK retailers have traditionally sourced using a very different approach. The utilization of "manufacturing agents" which develop products, finance and manage production and a system of subcontractors is well established in some sectors, and has historically been one of the major concerns of industry support organisations due to the informal practices and poor working conditions that have developed. However, in spite of these concerns, requirements for quick response, flexibility and small volumes have enabled such subcontracting systems to re-emerge as an effective alternative to more rigid supply chain structures. In the 1990s, strategic planners are keen to learn from lessons exhibited in other parts of Europe and explore alternative ways to utilize this flexible production system without encouraging the kinds of informal practices that have become endemic.

The example below outlines one such strategy, that of BhS for developing flexible subcontracting networks.

British Homes Stores has a three tier system of working with suppliers. Seven major groups supply 30% of clothing product. These *core suppliers* manufacture largely basic product lines which are unresponsive to fashion changes and many of which are imported.

The remaining 70% of goods are supplied by either *key suppliers* or *new suppliers*. New suppliers are initially given only small orders in a restricted product range until the relationship develops over a 3 year period.

Key suppliers are, however, seen as the solution to the retailer's demand for flexibility. The majority are manufacturing agents, companies which specialize in product development and marketing, but which also source fabrics and production capacity. The

majority of garment assembly is completed by subcontractors. As it is recognized that this relationship is characterized by poor conditions and informal practices, the retailer has initiated steps to stabilize and formalize the relationship.

In a tri-partite system, the retailer is encouraging manufacturing agents to share information with subcontractors, pre-book capacity and develop long term relationships based on quality and delivery performance, rather than price competition and contracts with the lifespan of one single order docket. In return, the retailer seeks transparency of financial arrangements, and adherence to legal and health and safety practices. Overcoming many years of adversarial trading will not be a fast process, and as yet it is too early to predict to what extent this innovation will succeed.

However, the company argues that when sourcing from overseas, planning information is available months ahead of the selling season,. There is no real justification, therefore, for withholding forward plans relating to predicted sales volumes and product mixes from domestic suppliers. On this basis, preliminary production planning can be implemented before styles and colourways are confirmed, enabling subcontractors to reserve production, organize and train staff and predict capacity requirements.

### ***Direct Retail-Subcontracting Relations: integrated fashion***

In some instances, particularly relating to smaller fashion chains, retailers themselves perform the role of the manufacturing agent. This pattern is evidenced where retailers demonstrate a particularly high degree of range co-ordination and brand identity, and where continuous new style development is the norm. The motivation for retailers and manufacturing function to be combined varies. Some originated as manufacturers (River Island), design houses (Whistles) or branded wholesalers (French Connection) and have diversified downstream into retailing, while others have their origins as retailers (Oasis) and have adopted increasingly close control over manufacturing activities.

Typically, small fashion chains source through a variety of methods, including buying in styles from wholesalers to fill mid season shortfalls, as well as sourcing from some of the largest contract manufacturers and manufacturing agents. However, a significant proportion of products (as much as 90% in one case, and increasing in others) are sourced directly from subcontractors. Subcontract manufacture takes place both in the UK, where speed of response can be secured, and overseas in order to reduce costs. Of those retailers surveyed findings suggest that 40-70% of sewn apparel is UK sourced, although knitwear is dominated by imports.

Fabrics are also typically sourced by the retailer, which facilitates maximum economies of scale. In one case, retail fabric procurement accounted for 90% of requirements; another retailer with lesser involvement in fabric sourcing had reached a strategic decision to increase this activity.

Product development is largely completed by the retailer, in co-ordinated ranges which cover up to 6 seasons each year. Lead times, while normally between 13 and 20 weeks can be reduced to 2 weeks from concept to delivery; a significant time saving in an environment where up to 25% of purchases are for mid-season new style developments and a further 10% represent product trials. In a typical season only a proportion of styles are finalized and produced. Some fabric is withheld until sales demand has been anticipated, so that replenishment can be ordered or new style developments which co-ordinate with existing ranges can be produced at short notice.

In this way, retailers can respond quickly to the influence of popular music, media and sport, as well as their own and their competitors sales performance. The relatively flat decision making structure of this integrated supply system is able to quickly respond to changes in demand by minimizing product development time, utilizing fabrics which are held in stock, and subcontracting manufacture to a number of well-established local factories. The flexibility of this system is represented by the range of order sizes which retailers purchase. Initial trials can require production of as few as 300 units, whereas basic items may demand quantities in excess of 100,000. Average orders range from 3000 - 8000 units.

#### **V.4. Manufacturing as an alternative driver of change**

In the 1920s and 30s, manufacturers' brands dominated UK retailing. This phenomenon has been surpassed by the onset of retail brands. In 1991, over 46% of clothing sales were represented by retail brands, and this figure looked set to rise<sup>15</sup>. However, the proportion of sales accounted for by manufacturers' brands has also risen, albeit slowly, to 34%. The difference is made up by a fall in sales of goods classified as unbranded.

Opportunities for increased branding are stimulated by heightened awareness of branding among both manufacturers and consumers. Growth is strongest among suppliers of international brands, as outlined below, and the implications include heightened

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<sup>15</sup> Barnes, 1993

competition for established UK retail brands and outlets. Some of the strategies adopted by retailers to maintain the *status quo* are also illustrated below.

#### Branded sportswear

There has been a recent revival in sales of branded sportswear, primarily Adidas, Nike and Reebok, that has created a greater level of brand identity among younger consumers. However, smaller brand houses have also been able to capitalise on this escalation of demand. As major brand names become common property, smaller, more exclusive brands have found a niche by offering something different. Examples include USA Pro sportswear and Kangol leisurewear. The growth of brands in “every day” clothing has brought manufacturers’ labels into direct competition with high street retailers. In response, retail groups such as Next and BhS have relaunched their own sportswear brands, creating sub-brands, rather than using mainstream retail labels.

#### Brands sold through chain stores

As an alternative response to increased competition from manufacturers’ brands and in an attempt to maintain market share, some retailers have deliberately attempted to purchase branded lines to appeal to a wider range of customer. One example is Tesco, which has recognised the advantage of brands in the sale of sportswear. Mail order companies, such as Freemans, have also courted designer names to enhance their offer.

A complementary strategy is the development of partnerships between retailers and designers, which enable retailers to endorse own brand product ranges with the designer’s style and identity. In return, the designer receives additional exposure and may be offered some favourable production capacity by the retailer’s suppliers.

#### Department store shop in shop concepts

There has been some revitalisation of the department store concept with growth of smaller store groups, such as Alders, and restructuring at leading names, House of Fraser and Debenhams. The implications for suppliers and retailers are mixed. Department store strategies have varied from increasing the level of own brand merchandise (Alders plans to reduce concession space from 50% to 15% in its newly acquired Owen Owen stores<sup>16</sup>) or increasing the number of branded departments. Even where departments feature strongly, such as in Debenhams, many are shop in shop outlets run by other retailers including Wallis and Principles.

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<sup>16</sup> The Fashion Handbook, 1997

Shop in shop store formats enable retailers to respond to market fluctuations by changing the balance of products and images with minimal upheaval. Concession staff are particularly responsive to consumer feedback and offer dedicated service and some have direct influence over ordering and merchandising decisions.

### Fashion concessions

While department store shop in shops are traditionally associated with high quality brand names, a newer wave of fashion concessions has become established in the UK. Some store concepts, such as Top Shop, deliberately include concessions in larger sites as a low risk strategy to promote broader ranges of innovative fashion lines at minimal risk. Selfridges has also revamped its fashion department to offer a wide range of innovative brands, in a mini department store aimed at younger consumers.

Concessions provide a laboratory for alternative fashion lines, many of which are later adopted by the host store once sales are proven. Manufacturer's concessions have the advantage of being manned by dedicated sales staff who are able to respond to consumer needs, order according to perceived demand and feedback comments direct to the manufacturer. In response, goods can often be supplied at short notice, while style changes are often made in response to consumer feedback.

Concessions are seen as a means of brand development, and some successful names develop into stand-alone retail formats. However, brands then run the risk of competing with the independent retailers that also stock their lines, or over-exposing their brand and losing exclusivity.

## Tables section IV

Table 4.1 Distribution of UK Clothing Sales by Outlet Type

<b>All clothing</b>	<b>1988</b>	<b>1991</b>	<b>1994</b>	<b>1996</b>	<b>1997</b>
Multiple specialists	24.9%	25.8%	25.7%	25.6%	26.8%
Variety stores	21.0%	20.1%	20.9%	20.4%	21.7%
Independent specialists	18.6%	18.7%	15.1%	13.9%	12.7%
Mail order	8.8%	8.3%	9.7%	9.0%	8.9%
Department stores	8.4%	7.6%	8.2%	8.6%	9.2%
Discounters / factory outlets	3.6%	3.8%	5.4%	5.7%	6.6%
Others	14.1%	15.7%	14.9%	16.8%	14.1%

*Source: BATC Trendata 1997/ Keynote 1994*

Table 4.2 Concentration of Clothing Sales (percentage of market share)

	<b>Men's and boys wear</b>		<b>Women's and girls wear</b>	
	top 5 enterprise groups	top 10 enterprise groups	top 5 enterprise groups	top 10 enterprise groups
1980	43	53	36	51
1984	36	46	31	43
1986	42	53	36	49
1991	41	53	37	51
1992	39	52	37	51
1993	40	51	34	48
1994	37	50	38	52
1995	*	*	*	*
1996	38	47	40	50

*Source: Business Monitor*

Table 4.3 Wages and salaries as percentage of gross value added by product type

year	All clothing	Men's outerwear	Men's underwear	Women's outerwear	Women's underwear	wages index 1993#
1975*	65%	67	67	62	64	
1980	67%					83
1985*	61%	73	68	65	63	89
1990	59%	65	63	57	57	101
1993	66%	55	80	67	68	100
1995	61%	45	75	54	61	107

*clothing and footwear industries collectively for 1975 and 1985*

*# female wages in the clothing sector at 1993 levels*

*Source: Business Monitor: Census of Production, various*

Table 4.4 Wages and salaries as percentage of gross value added by firm size

year	Firm size (number employed)			
	0-199	200-499	500-999	1000+
1980	66	66	69	68
1985	62	63	60	58
1990	60	56	62	58
1993	67	59	63	58
1995	77	59	54	54

*Source: Business Monitor: Census of Production, various*

Table 4.5 Clothing retail stockturn (annual turnover divided by end year stock)

	<b>Annual turnover / end year stock holding</b>
1957	5.2
1966	5.6
1976	4.8
1980	4.7
1986	4.5
1990	5.6
1992	5.7
1993	6.5
1994	6.8
1995	6.9
1996	8

*Source: Business Monitor (includes footwear sales)*

Table 4.6 Retail stockturn by outlet size

	<b>1957</b>	<b>1966</b>	<b>1976</b>	<b>1980</b>	<b>1986</b>	<b>1990</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1996</b>
single outlet	4.6	4.7	3.9	3.5	3.7	4.2	3.8			
small multiple retail			4.6	4	4.5	4.6	5.1			
large multiple retail	6.5	6.9	5.7	5.8	6.4	6.2	6.6			
all	5.2	5.6	4.8	4.6	5.1	5.3	5.6	6.5	6.8	8.0

*Source: Business Monitor (Turnover divided by end year stocks)*

## V. HCTAR survey results

### V.1. Methodology

#### The Manufacturing Survey

The following analysis of changes in the apparel supply chain is based upon interviews with:

- a sample of 50 clothing manufacturers. The companies identified were selected to cover a wide range of products and vary in size, market orientation and location. As far as possible the sample is representative of the UK production base, although larger companies have been over represented to ensure that the widest possible variety of responses has been obtained;
- curtailed interviews with a sample of 5 manufacturing agents and 12 of their subcontractors in the integrated London apparel sector;
- qualitative interviews with 9 textile manufacturers and finishing companies, selected because of their innovative response to changing demands within the supply chain.

Each company has been interviewed at business unit level, utilizing a survey framework developed with the Harvard Center for Textiles and Apparel Research. Face to face interviewing techniques have enabled researchers to discuss corporate issues and strategy with senior company representatives. Much of the data generated is, therefore, qualitative rather than quantitative and the report also draws extensively on secondary data relating to the sector.

#### Retailer surveys

The research draws heavily upon retail surveys undertaken jointly for this project and for UK programmes supported by the DTI and European Regional Development Fund. These involved a postal survey of 9 retailers undertaken in 1998. This was followed by detailed semi-structured interviews with a further 9 retail groups undertaken in 1999.

### Other

In addition, complementary data has been extracted from a variety of sources including conference and workshop presentations made by retail and manufacturing companies, journal articles and the trade press and meetings undertaken with industry representatives to discuss a range of specific and pertinent issues.

The companies that have contributed to the research are listed in Appendix 2.

## V.2. Survey Findings: UK Supply Chain Developments

Because of the changes that have occurred in demand for the way that apparel is marketed to the consumer, there has been constant pressure on retailers and suppliers to find alternatives to their earlier strategies of cutting cost by minimizing labor costs. As already noted, within the more targeted and responsive consumer market, both time and unpredictability become significant cost factors. The remainder of this study examines the strategies adopted by both manufacturers and retailers to meet consumer demand, and explores the extent to which innovative practices have infiltrated the apparel supply chain. In this section, we explore the changing practices of a sample of UK manufacturing companies. In later sections, the response of selected retailers, upstream suppliers and a particular cross-section of small companies will be examined. A profile of the methodology employed is illustrated in Appendix 2.

### Integrating the Supply Chain

The examples shown above illustrate how the UK apparel supply chain is becoming increasingly integrated. However, while these are innovative examples, there is a sense within the sector that much of the development of closer relations is one-sided, benefiting the retailer, rather than the supplier. Many supplier-retailer arrangements continue to be based on individual contract orders and even those based on longer contracts are vulnerable to change (as witnessed by the de-selection by Marks and Spencer of several of its established suppliers<sup>17</sup>).

In some supply chains relationships between manufacturers and subcontracting networks have become centred on working environment and accreditation of factory standards. Some retailers, led by Arcadia, are seeking to ensure that even subcontracting factories are transparently accredited within the system, and that those that fail are no longer employed by first-tier suppliers. This form of integration is seen by subcontractors as one of the few ways to secure business in the future, even though relationships are largely based on trust, rather than contracts. The relatively large proportion of factories that fail under rigorous examination does carry the promise of more work and extra security among those that pass.

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<sup>17</sup> BBC On-line Network, 22<sup>nd</sup> October 1999.

### Information Technology

The level of IT implementation within the sector has increased significantly within the survey period, although there is a perception that suppliers in the UK lag behind those in many other parts of the EU. Survey data suggests that the greatest increase in technology is in the implementation of production planning systems and take up of communication technologies, such as the Internet. Since take up of EDI was relatively late in the UK and restricted to the suppliers of a few innovative retailers, Internet has become a more accessible method for exchanging business to business information, such as critical paths and specifications. In turn, evidence suggests that EDI exchange is used mostly for ordering and invoicing purposes, rather than for the exchange of sales and planning data. However slow the uptake of IT has historically been within the sector, some retailers are now predicting that Internet or EDI capacity will become a minimum supplier selection requirement within the next two years<sup>18</sup>.

Further IT developments are gradually supporting greater integration between textile and clothing manufacturers and retailers. Developments in CAD technology facilitate quicker product development and later confirmation of specifications, while computerised knitting and dyeing and finishing provide greater flexibility towards changes in style and quick response.

### Provision of products and services

As discussed in greater detail below, the level of services demanded by retailers has increased dramatically. The clearest characteristic is the movement of services up the supply chain, to save time and cost at the point of sale. For example, manufacturers are increasingly requested to present goods floor-ready, bar-coded and priced. Delivery to individual stores is also growing, and together these practices enable the retailer to save time and space on the warehousing and pre-retailing of goods. It is possible, that UK suppliers are disadvantaged by being expected to supply these services with little recompense and within the agreed price per unit, when specialist processing companies are developing to supply similar added-value to imported goods at additional expense to the retailer or importer.

### Partnerships and markets

The UK's major retailers, in implementing "lean retailing" strategies, have consciously reduced the number of suppliers with whom they deal. In turn, relationships with preferred suppliers are developing based on variables other than traditional purchasing

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<sup>18</sup> Drapers Record

contracts in an effort to develop two way communications and long standing commitments to buy and supply. Responses from the surveyed companies indicate that:

- Half of the manufacturers surveyed do not claim to have any strategic partnerships.
- Of the remainder, the majority are only in partnership with one customer. Some of these are dedicated M&S suppliers and have only one customer.
- While retailers initiate the majority of partnerships, those manufacturers with the multiple partnerships are more likely to initiate subsequent agreements.
- Within recent years, the most rapid growth in partnerships has been in those centered around information sharing and product delivery. Joint product development is less of a priority, as is product quality (a difficult variable to measure).
- Innovative companies are most likely to enter partnerships based on information sharing and delivery arrangements. Companies practicing teamworking are more likely to be in partnerships focusing on automatic replenishment practices, which otherwise lead to fragmented production and high inventory costs.

#### Teamworking and Flexible Production

Of the sample, 9 firms practice modular production to some extent, averaging 30% of volume but with a range from 5% to 75%, depending on the nature of the company's product range and the size of its customer base. The companies most wholly dedicated to teamworking produced large production runs of goods on "call-off" systems for M&S, the least used teams to produce small product runs for niche markets, trials or rapid replenishment. The importance of team based production as a proportion of the aggregated volume of the whole sample is approximately 15%, the remainder of goods being produced in traditional progressive bundle systems. Two small companies producing short runs of specialized products utilize a Unit Production System, but this is insignificant in terms of total volume.

Modular production is widely recognized to decrease the amount of work-in-progress and minimize lead times during manufacture, particularly in firms where style changes are frequent. Evidence suggests that the motivation for implementing teamworking is mainly to reduce work-in-progress, as the majority of firms that have taken this action supply basic or fashion basic products. There is a greater correlation between firms that have been innovative in implementing teamworking and those that provide delivery related services to retailers.

Throughput times for team based assembly are consistently lower, although evidence suggests that non-sewing processes, such as marker making and cutting, in team based systems are longer.

### Rapid replenishment

Manufacturers delivering to retail, especially to the major chain stores are under increasing pressure to alleviate the risk of retail stock holding and the cost of warehousing. In order to satisfy consumer demand, some retailers have adopted strategies of small initial orders supported by frequent and rapid replenishment of goods that sell well. The survey reveals some interesting scenarios.

An increased pressure to fulfil replenishment orders on a daily basis. A staggering 87% of sales to variety chains are replenished on a daily or weekly basis, in some cases 7 days per week. Over half of goods delivered to specialist chain stores are replenished on a weekly basis. This type of replenishment is often referred to as call-off, a system that enables the retailer to place an order for the anticipated seasonal requirement of an item, but to take delivery of only a small initial quantity that is replaced from the total order as goods are sold.

Only 4% of goods supplied to independent retail outlets are frequently replenished. This is primarily the activity of small vertically integrated companies selling through their own local outlets.

Of goods delivered to speciality chains and department stores, almost one third of goods are never replenished. For fashion goods this reflects the higher turnover and shorter selling season and the difference between replenishment and style adaptation as a concept of replacing goods sold. Some traditional Department Store branded goods retain a two season product calendar, and insist on forward orders as a sole means of providing stock. Some department stores also use less sophisticated ordering systems which lack the integration demonstrated by chain stores.

From the survey it was possible to identify several clear patterns of replenishment. These include:

- Forward orders with no replenishment
- Forward orders with one replenishment during the season
- Domestic fast track replenishment for imported goods, where local suppliers are used at a premium to ensure stock availability of best sellers
- Forward orders with regular replenishment, used mainly for basic items with a long product lifecycle.

- Forward orders with call-off. Goods are often replenished from made-up stock as described above in response to sales data.
- Forward order with phased delivery. Goods are ordered in advance and a delivery schedule agreed for the forthcoming season that enables manufacturers to pre-plan production schedules and both manufacturer and retailer to avoid inventory costs.
- Forward orders with fast track repeats where replenishment stock is not arranged in advance but in response to sales performance. This system depends on rapid manufacture as well as delivery.

### Inventory management

Changes in delivery expectations and retail stock holding capacity have impacted upon manufacturers' inventory holding. Table 5.1 shows how inventory levels have changed. Notable differences include:

- An increase in the level of trim and accessory holding, an element which has traditionally halted production through late delivery or unavailability, and a major obstacle in just-in-time systems;
- A decrease in fabric or yarn holding and in the number of days cover for goods cut and ready to sew;
- A decrease in the amount of work in progress;
- An increase in the finished goods inventory held by manufacturers.

The extent to which such increased stock levels are sustainable is a subject for debate. Retailers have undergone dramatic changes in the level of their stock holding over the last few years. It remains to be seen whether manufacturers will follow suit and fully utilize the opportunities presented by UK manufacturing plant to meet replenishment targets with shorter lead times, or whether the value of an increased inventory will be balanced against cost savings by producing in low waged countries. One chain store supplier recently commented that the additional delivery time from its plant in Sri Lanka is five weeks, and while air freight is increasingly accessible, the cost differential is five times greater than that of sea and land routes. In spite of press reports, it seems that this will be an option reserved for crises situations for the foreseeable future.

The survey data therefore suggests that one of the results of the trend towards lean retailing has been a shift of inventory holding and its associated risks and costs to manufacturers, rather than retailers and distribution centres. Survey evidence suggests that

between 1991 and 1995 manufacturers' finished stock holding increased by as much as 40%<sup>19</sup>. In addition, stocks of trims and components have also escalated, and many manufacturers have increased the number of suppliers from which they purchase materials and finished goods.

The increase in inventory level has been marked for two reasons. On one hand, suppliers are holding stock ready for "call-off" in response to sales by retailers. Survey data shows that almost 90% of goods delivered to multiple retailers are replenished on a daily or weekly basis in response to sales data.

At the same time, increased import activity by suppliers has necessitated the holding of stock that has been transported in bulk, but which may be distributed in store-ready batches. The main difficulty with the strategy of supplier inventory holding is the risk generated should sales not be as predicted and the cost of holding inventory.

#### Value-adding services

During the period covered by the survey, the level of value-adding services demanded by retailers has increased. Table 5.2 illustrates the average proportion of each business unit's production for which the variables apply. The principal developments include:

- Product specific bar-coding which has increased from 13% to 52% of average company volume. A further 38% of goods are labeled with the manufacturer's price or product instructions.
- Delivery of floor ready goods, which accounts for an average of almost 40% (an increase of 15%) of goods dispatched (value). This reduces the lead time from inward delivery of goods to availability of goods on the shop floor ; an advantage counter-balanced by the additional costs of transporting goods hanging rather than packed flat.
- On average, one quarter of goods (compared to 15% in 1991) are delivered to individual retail outlets.

Less common practices involve the manufacturer receiving electronic point of sales data (EPOS) and exchanging information (orders, lay-plans, product specifications, etc.) by electronic data interchange (EDI). While these practices account for an average of less than 15% each, they have never-the-less, grown significantly since 1991. In addition, since the

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<sup>19</sup> Centre for Work and Technology, Suuply Chain Survey, 1997

survey period, evidence suggests that a growing number of retailers and suppliers are sharing information by Internet.

On examining the introduction of services that support lean retailing and add value within the supply chain, one consideration must be the relative size of the most innovative companies. These tend to be the major chain store suppliers, often those competing for preferential supplier status. The actual extent of these practices, considered as a proportion of the total volume of goods delivered for sale is, therefore, much higher. Table 5.2 identifies the relative value of goods supplied utilizing new technologies and services.

The advantage to manufacturers of providing added-value services is less clear. In reality, many manufacturers respond to electronic orders by delivering goods held in stock. Where goods are delivered on such a “call off” system, receipt of sales information enables manufacturers to balance the volume of finished goods held in stock against the economies of achieving bulk production of forward ordered lines. In the case of goods being manufactured at off shore plants, the long lead time for delivery to a UK warehouse eliminates some of the advantages of fast ordering systems. In either case, the risk associated with predicting the volume in which individual products will sell has been partially switched from the retailer to the supplier, and the cost incurred if goods fail to sell has been similarly devolved.

### Rapid Replenishment

As already discussed, an increasing proportion of goods are delivered to individual stores to reduce time in delivery and warehousing. Other changes include:

- Increased pressure to fulfil orders on a daily basis. A staggering 87% of sales to variety chains are replenished on a daily or weekly basis, often 7 days per week. Over half of goods delivered to specialty chains are replenished on a weekly basis.
- This compares with only 4% of goods that are re-ordered daily by independent retail outlets. This figure represents sales of small vertically integrated companies selling through their own local outlets.

Of goods distributed to specialty chains and department stores, almost one third (29% and 33%) are never replenished. This reflects the higher fashion content and brand image of many goods sold through these channels, and in many cases, less developed methods of ordering and replenishment. For example, some classic branded lines are still delivered on a two season per year basis, and replenished from the retailer’s stock holding. One vertically integrated company supplied a major chain store under an innovative

replenishment system, a relationship that it was unable to pursue with its vertically integral retail customer. On the other hand, specialty stores targeting young markets exhibit shorter selling seasons, and continuously develop styles rather than re-ordering existing lines.

Manufacturers reacting to more flexible replenishment patterns, such as initial trial orders followed by one major replenishment if sales are achieved, are able to respond proactively to information, manufacturing goods in modular systems, for example, or pre-booking production with subcontractors and suppliers in preparation for true quick response.

#### Product development and lead times

The survey evidence of product development and lead times creates a complex picture from which it is difficult to generalise or model a “typical” product development critical path. The shortest standard lead time, from concept to delivery of the first goods, lasted 8 weeks, although for specific quick response orders this could be reduced to just one week. The longest lasted 44 weeks.

However, some clear patterns do emerge. In general it is evident that lead times are shortest for small firms, and longest for those firms offering non-seasonal basic goods, such as formal wear and jeans. The critical variables that separate those companies practising quick response or demonstrating short standard lead times include:

- the time taken in the development of product, which can extend to several months, but which is almost eliminated in quick response;
- the length of time taken between presenting samples and awaiting ordering decisions from customers;
- the duration of the manufacturing process;
- the length of time over which products are manufactured and despatched, which varies from one delivery on completion of manufacture and several months of concurrent production and despatch for call-off forms of replenishment.

It is clear from the variations in performance that many of these variables are external to the individual firm. For example, the longest lead times are attributable to those companies selling branded goods which are subject to twice yearly exhibitions and forward order of stock by retailers. Those firms with the shortest lead times are vertically integrated and can quickly make decisions about stock requirements, choice of style and quantity.

Notable among those firms offering quick response is the shortening of product development time and reduced delay in awaiting orders. It is probable that this is attributable to a variation in customer demand for quick response goods that could entail the customer specifying which styles are required and exchanging information about volume and order preference in advance. It is also notable from the critical paths outlined by companies that there is a greater level of concurrence in the development process for quick response items that enables manufacturers to source fabrics, make samples and promote goods to potential customers earlier in the process. In addition some companies clearly manufacture quick response items from fabrics or yarns held in stock, eliminating the need for sourcing and awaiting delivery of materials. Table 5.3 shows the variations in standard and quick response lead times.

### Range complexity

#### **Advantages between domestic and foreign supply chains**

Surveyed retailers suggest that UK sources were seen as being advantageous for the speed of response, capability of UK suppliers to make specific delivery arrangements and the quality of service provided. Some indicated that UK suppliers were particularly valuable for the supply of replenishment and trial orders, and styles where late sourcing decisions were required in order to avoid holding large volumes of high priced goods. UK suppliers were also perceived to offer the most favourable style options for the domestic market.

When asked to indicate some of the reasons which underlay their sourcing decisions, it was no surprise that price or perceived value (in relation to quality within a price range) were significant factors for importers (specified by 7 out of 10 companies who answered the question). However, it was more surprising to find that some overseas sourced goods were associated with innovation (especially knitwear and fabrics), capacity availability and specific skills, machinery, technology, design and variety<sup>20</sup>.

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<sup>20</sup> Centre for Work and Technology, Retailer Survey, 1998

## **Bottlenecks and inefficiencies within the channel**

### Added value and manufacturers' benefits

A general perception of manufacturers is that the financial recompense offered by retailers for the additional services provided is inadequate, and that the major advantage of such practices is increased security in the buyer-supplier relationship. Suppliers have more recently expressed concerns about performance measurement, as an increasing number of retailers are placing penalty clauses in their contracts. These can cause considerable loss of margin for manufacturers unable to deliver on time, or to an adequate quality standard.

In examining the introduction of the services that support lean retailing and add value within the supply chain, one consideration must be the relative size of the most innovative companies. These tend to be the major chain store suppliers, often those competing for preferential supplier status. The actual extent of these practices, considered as a proportion of the total volume of goods delivered for sale is, therefore, much higher.

### Obstacles to improved supplier relations

The case studies above illustrate recent trends in innovative retail-supplier developments. However, there is little evidence to suggest that these strategies yet form a majority of supply chain relations. While lean retailing pressures have spread through the apparel production chain in recent years, the whole production channel is not becoming leaner. Survey data shows that much of the burden of adjustment to volatile and uncertain demand has been shifted from retailers to clothing manufacturers. There are, for example, few manufacturers who recognize that production capacity is booked in advance, it is more common for orders to be placed later and fragmented to accommodate changes in style or color. The reduction of retail stock holding has also forced this burden onto manufacturers, as the information required to phase production is not always forthcoming.

Quick response manufacturing, therefore, appears in many instances to be more akin to a fire fighting reaction to last minute ordering, rather than a result of careful planning, efficient production management and mutually beneficial supply chain relations. This is particularly the case for small and medium sized companies. Where the management capacity to develop joint partnership objectives and combat adversarial supply relations is still in its infancy. In addition, few accounting systems are fully able to identify the true financial benefits of minimizing mistakes and wastage.

### Textile supplies

There is little evidence to suggest that, in general, fabric suppliers have responded as quickly to changes in retail demands for faster delivery and increasing responsiveness to information.

- Lead times for basic and fashion lines are little changed and in some cases have apparently increased.
- Minimum order quantities for fabrics show little change. Fashion fabrics tend to be supplied with longer lead times and larger minimum orders, causing many small companies to compromise styles by relying on stock fabric services.
- Many apparel manufacturers cite the availability of materials as a major factor in determining whether good selling lines can be replenished.

Some of the more innovative retailers have overcome these limitations by becoming directly involved in fabric sourcing. Survey evidence shows that 7 of 14 fashion retailers are involved in fabric purchase, whether sourcing direct, selecting fabrics for their manufacturers to purchase or collaborating in the development process. Of these 4 retailers envisioned increasing involvement in fabric sourcing. Fashion chains such as Oasis themselves often purchase fabric in bulk which is stored until required for manufacture. Small suppliers to the sector lack both influence with major fabric suppliers and the working capital to hold inventory on this scale.

While apparel manufacturers have made significant progress in the exchange of information with retailers, evidence suggests that information sharing has not been fully explored as a means of improving relationships with suppliers. Information sharing is utilised mostly for data relating to immediate demand and delivery of fabric orders, and is less important with regard to delivery information and sales of finished goods.

The response of some upstream suppliers is explored in section III.

### Relationships with suppliers

Contrary to lean manufacturing principles, many apparel manufacturers have increased the number of piece goods suppliers with whom they deal. In 1991, the average number of suppliers was 8.3 per manufacturer, by 1995 this had increased to 13.1, in spite of the trend downstream in the supply chain to rationalize the number of suppliers. Overall,

almost half of the companies surveyed had increased the number of suppliers used, while only 10% had rationalized their supply base. One reason for this is the requirement to obtain greater choice in the range of fabrics and yarns sourced to support the greater diversity of products offered. (For example, an increasing number of manufacturers now source both woven and knitted fabrics or buy yarns to knit themselves and source knitted fabrics to extend their product range). Other reasons include the need to secure greater flexibility and reliability, and the tendency for preferred garment suppliers to cover a greater range of their customer's product requirements.

Relationships with other upstream suppliers have also been subject to change. The major suppliers of items such as zips (YKK) and threads (Donisthorpe) have been among the first upstream suppliers to adopt innovative supply chain practices. In some cases this has involved reducing their customer base to provide an enhanced service (such as just in time production and customisation) to their most valued (mainly largest) suppliers. While such developments have enhanced the service available to large garment suppliers, some smaller firms may have found their supply chain extended by the necessity to deal with agents or wholesalers for such items.

In addition, delays in receiving component parts are cited as one of the most common reasons for late delivery and are a direct result of lack of integration upstream within the supply chain. The situation is compounded for subcontractors providing quick response supply, as negotiations for components frequently bypass their involvement so they have little opportunity to liaise direct with suppliers and lack the status to ensure timely delivery.

### **Special problems of SMEs: the London garment sector**

Although quick response and fluctuations in fashion demand are considered to be new and increasingly significant concerns within the apparel sector, pockets of the apparel trades have historically served markets where style changes and rapid response have always been demanded. The London clothing sector traditionally served London based apparel markets, with its major competitive advantage being proximity to the UK's largest market. The characteristics of the sector facilitate the supply of constantly evolving fashion products, particularly for supply to young fashion chains, where value is added through innovation of style, rather than by the quality of goods. In general, the quality and value of goods associated with London suppliers is relatively low.

### Structure of the sector.

In East and North London, apparel employs in excess of 10,000 workers in 980 clothing firms almost exclusively dedicated to women's wear production. Most firms are very small and only 2% employ 50 or more. Table 5.4 shows the comparative distribution of firm size against the UK sector.

In addition, the use of homeworkers is common, especially among CMT units, where addition of homeworkers and casual employees increases the average workforce from 11 to 19. Unusually within the UK, the East London apparel sector is characterized by a relatively high proportion of male employment<sup>21</sup>, a characteristic largely attributable to cultural traditions among the sector's large number of ethnic minority workers, many of whom are drawn from Muslim communities.

The London clothing sector is characterized by a complex structure of small firms which provide a variety of functions; some very specialized and others more comprehensive. These include:

- Wholesalers which buy ready made goods, locally and from overseas, either to fulfil orders or to hold in stock for speculative buyers. Purchases are made from both manufacturers and CMT units.
- Manufacturers responsible for financing and managing all aspects of garment production for their retail clients. Although some manufacturers do have internal production capacity, in general patterns, fabrics and lay markers are supplied to CMT firms (subcontractors) for assembly. Finished goods are returned to the manufacturer for quality control and dispatch.
- Cut, Make and Trim (CMT) firms responsible for providing the labor and machinery to assemble garments for manufacturers, wholesalers or designers. Raw materials, patterns and marketing are provided by the customer. CMT firms are among the largest in the sector, with an average firm size of 11.8 or 19.6 if homeworkers are included.
- Subcontractors including pleaters, embroiderers and some firms that make linings provide specialist services for pre-assembled or semi-finished goods.

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<sup>21</sup> NOMIS Census of Production, 1993

- Suppliers of fabric, leather, trims, buttons, and specialized machinery. The majority of suppliers are distributors for goods made outside London.
- Designers working either independently or freelance for manufacturing companies. Many use local CMT firms to assemble their ranges, again providing fabrics, patterns and lay markers.

Within East and North London, the majority of firms manufacture women's fashionwear, demonstrating considerable resilience in a highly competitive, relatively low value market, where speed of response is important, rather than quality of goods. A large proportion of goods supplied through the network of manufacturers and subcontractors supply high street fashion chain stores. Wholesalers primarily supply smaller retail chains and independents, as well as discount outlets and market stalls. Some, however, do provide a source of mid-season new styles for larger chain stores, facilitating responsiveness to fashion changes. In addition to UK supply, there is a tradition of export marketing among wholesalers and manufacturers.

#### Inter-firm Networks

Survey work illustrates that there is a clear division between the role of manufacturers and their subcontractors. Most manufacturers, but very few subcontractors, offer a design service. Half of the CMT units surveyed offered a pattern grading service, although the majority was carried out by the manufacturers, while sampling was divided between the assembly of production samples by CMT units, and prototype and sales samples generated by the manufacturers. CMT operations, as their name suggests were largely responsible for cutting. While manufacturers often provide a lay marker (frequently CAD generated) it is not uncommon for garment cutters to resort to manual layouts. The cutters' skill is a mainstay of the CMT business, as surplus fabrics are often made up into extra garments and sold illegally to wholesalers and market traders as "cabbage".

Although some manufacturers do have internal production facilities, it is more common for the bulk of garment assembly to take place in CMT units. Quality inspections are carried out at various stages, primarily on receipt of goods into the factory from homeworkers, and again at the pressing and finishing stage. Manufacturers also check the quality of incoming goods, often with 100% inspections. However, this is largely an informal practice and in some cases quality control is the responsibility of the delivery driver. Recent

changes in retail standards have. However, seen an increasing amount of Quality Assurance provided by third party contractors.

One of the major characteristics of the subcontracting network, is the high dependence of subcontractors on just a small number of manufacturers, and in many cases just one customer. One of the reasons for this phenomenon is that the short-term nature of relationships and lack of planning make it difficult for CMT firms to balance the demands of more than one manufacturer. Indeed, many felt that to do so would jeopardize their relationship with their existing customer. Two of the CMT units were partially involved in supply direct to a retail chain store that fulfilled the manufacturing function internally, and all but one of the firms supplied customers based only in London.

In contrast, manufacturers often supply not only a larger number of customers (on average 8), but also a more diverse market sector, often including a combination of market levels, retail and mail order and even corporate clothing.

Typically a manufacturer or agent may source from 10 or more subcontractors, often primarily London based, but increasingly also in other regions, such as the West Midlands or overseas in Turkey, Cypress or Eastern Europe. Those supplying larger orders also source from China, and the Indian Subcontinent, often supported by family contacts or cultural ties. Many subcontractors express concern that an increasing proportion of their potential business is now imported through OPT arrangements. One characteristic of the relationships is the short-term duration of contracts, with the close proximity of competitors leading to undercutting.

### Flexibility

One of the major strengths of the subcontracting system is its flexibility and ability to operate economically within short lead times and in response to fashion changes. Most of the CMT units reported lead times becoming shorter, and typically expected to be able to deliver completed goods within 1 to 3 weeks of the order being placed. Even manufacturers, with considerable sourcing and product development requirements reported lead-time capabilities of 3 to 6 weeks. Similarly order sizes have tended to decline, with CMT units accepting minimum orders of between 150 and 200 units, and experiencing an average order size of 2000 units.

In general, although the manufacturers claimed to offer mid season new styles and replenishment orders as part of their service, there is little evidence of CMT units experiencing either of these patterns. The short nature of the ordering and manufacturing cycle, which does not distinguish between pre-season and mid-season lines, is an obstacle to awareness, while

CMT units are often asked to replenish goods originally made overseas or in other local CMT units depending on capacity availability, lead time and price constraints.

#### Added value services

Although there is evidence that even some of the more progressive manufacturers are able to offer services such as CAD, EDI and product development, there is little evidence that these developments are communicated through the supply chain. The added value services most frequently expected of CMT units tend to be associated with delivery arrangements and preparation of floor ready goods. Although not linked to their customers electronically, two of the CMT units were preparing computerized specifications to issue to their homeworkers in an effort to improve quality standards. As already mentioned, however, the flexibility of production inherent within the subcontracting system provides significant added value.

#### Opportunities and threats within the London garment sector

Although the sector has survived significant down-sizing, the survival of a quick response, flexible production system offers significant opportunities within the UK apparel system. However, feedback from companies themselves illustrates the lack of security that many firms (especially CMT units) experience. It is evident that, in spite of the added value that the subcontracting system offers, many supply relationships have only survived because of the low cost base on which the sector operates, facilitated by low wages, informal trading and low rates of investment. However, there is a sense in which those companies that remain have done so because of the competitive strengths that they offer, namely flexibility and reliability.

#### Sustainability

Within the low cost markets that the sector serves, future sustainability of the London garment sector is questionable. While retailers are tolerant towards the informality and poor conditions of much of the sector because of its ability to continue to offer low cost quick response demand exists. However, there are already signs that retailers are demanding ever-increasing standards of quality and health and safety because of pressure from public opinion. Meanwhile, the failure of retailers and first tier manufacturers to provide financial recognition for the added-value services, such as quick response, that are demanded, subcontractors continue to operate with low margins and have little opportunity to invest. The

threat of quick response competition from Eastern Europe is very real (although it is speculated that wage costs in competitor economies will rise with integration into the EU), but in reality manufacturers are currently seeking sources of low cost quick response within London that can often not be economically manufactured in the UK.

**Human resources issues**

**Industrial relations issues**

**Industry regulation and industry policy**

## Section V Tables

Table 5.1 Inventory Levels

	<b>1991</b>	<b>1995</b>	<b>Percentage change</b>
Fabric/ yarn holding	5.6 weeks	5.4	-4%
Trim/ accessory holding	4.9 weeks	5.4	+10%
Ready to sew goods	14.9 days	11.5	-23%
Work-in-progress	4.5 weeks	4.1	-9%
Finished goods	3.7 weeks	5.3	+43%

Table 5.2 Services offered to retailers

<b>Service offered / demanded</b>	<b>% of average volume 1991</b>	<b>% of average volume 1995</b>	<b>% of aggregated volume 1995</b>
Bar-code at SKU level	13	52	72
Bar-code at non-SKU level	nil	5	7
Manufacturers label	22	38	21
EDI	5	12	29
POS data: individual stores	nil	5	13
POS data: aggregated stores	3	7	16
Bar-coded shipping containers	2	5	10
Model Stock Program	2	12	22
Automatic replenishment, manufacturer determined	nil	7	9
Delivery to individual stores	14	23	22
Floor ready merchandise	27	37	47

*Source HCTAR survey data*

Table 5.3 Variations in standard and quick response lead times.

	<b>Standard lead time</b>	<b>Quick response</b>

	longest	shortest	average	longest	shortest	average
Concept/ product development	4	2	2	1	1	3
Sourcing and suppliers	6	1	1	9	8	2
Production sampling, presentation, orders	6	3	2	2	8	2
Cutting, making up, inspection & packing	8	2	3	1	1	4
Concept to final inspection/ packing of all goods	4	6	9	3	*	*
Concept to first goods despatched	4	4	8	2	2	1
Despatch and sales	6	5	3	1	1	4

\* data not obtainable

Table 5.4 Distribution of firms by size in the London Clothing Sector.

	1-4	5-10	11-24	25-49	50-99	>100
East London	37%	34%	21%	7%	2%	1 firm
UK	61%		20%	9%	5%	5%

Sources: Nomis: 1993 Census of Production

## VI. Fashion, Style and the Product Cycle

### VI.1. What is Fashion?

The definition of fashion in the UK has changed. Traditionalists would suggest that the twice yearly ranges launched by UK and continental fashion houses epitomise fashion. However, more recently innovative retailers and manufacturers have transformed these traditional patterns to create a seasonality, style and image appropriate to their customer base. Fashion in this context encompasses the following added value features:

- A lifestyle concept, that enables the consumer to embrace similar taste and style in all aspects of their consumerism including household goods, clothing and accessories;
- An element of change, so that each consumer can follow trends without losing individuality;
- An appropriateness to market level, enabling all consumers to embrace fashion, without sacrificing value, quality or frequency of purchase, according to their budget and lifestyle.

Some of the UK's most successful fashion retailers include Oasis, French Connection, Next and New Look, while the UK consumer eagerly awaits the market expansion of outlets such as Zara and Mango to increase the availability of fashion. These retailers have in common a balance of basic lines and fast turnaround fashion items and a distinct corporate image. New Look, although at the lower end of the market, can turn around styles from concept to delivery within two weeks. This approach is ideal for their young market. Other retailers, such as Top Shop and Miss Selfridge rely on manufacturers' shop in shop concepts to inject high risk fashion styles into their stores.

Fashion in this context is not, however, necessarily original. Innovative styles take time to capture a market, depending upon press coverage, season, events, and other influences. It is noticeable that the fashion retailers are keen discounters of slow selling lines. After several experimental iterations, however, slow sellers can become popular and are adopted by mass market outlets.

With the exception of the fast turnaround styles of these retailers, the traditional two season range calendar has generally become one of three main seasons complemented by three bridging ranges to accommodate left over separates within new ranges, to cater for seasonal variations in the weather and to inject freshness into stores. The companies most reluctant to change the seasonal pattern to which they work are the *high-fashion* designer

brands that trade on forward orders and high profile seasonal launches. One of the reasons for reluctance to change among these outlets are the supply chain constraints that have developed historically. These include the requirement to forward order fabrics in order to secure originality and exclusivity, and the difficulty of stimulating economic orders from a fragmented customer base. Forward ordering enables brands to amass small orders into volume production.

## **VI.2. Strategic retailing**

### Lifestyle Shopping

One of the most significant changes to occur in UK apparel retailing is the growth of “lifestyle” shopping concepts based on the provision of carefully co-ordinated ranges targeted towards a recognized and clearly defined customer base. Early examples are overseas retailers, such as Benetton and Stefanel which entered the UK market to capitalize on the emerging gap left by the large, untargeted chain stores. In 1984, menswear outlet Hepworths re-launched itself as the UK’s first domestic lifestyle format: Next. The chain grew dramatically and its model was followed by both new entrants to the market and re-focused existing chains. One of the most significant impacts of this shopping format is the stimulation of consumer demand based on variety and choice that has pervaded other retail channels. Over the last decade, this has resulted in an increase in the number of product lines on offer, demand for smaller unit volumes to satisfy specific groups of customers, and a greater requirement for manufacturing flexibility towards short term changes in fashion and taste.

### Continuous style development

According to survey evidence, around one third of supply to specialist fashion shops is based on continuous style development. This strategy calls for rapid manufacture and great flexibility. Fashion retailers, including Oasis, French Connection, River Island and Jigsaw are regarded as among the most responsive to market change, a strategy that is achieved by working closely with a network of subcontracting units. The combination of responsiveness to fashion changes and maintaining a co-ordinated brand identity is achieved by retail internalization of the design and production management functions. In effect, these retailers are vertically integrated. Although none of the chains mentioned above are among the largest UK retailers, evidence suggests that they are among the most profitable, and capable of significant growth in both the UK and overseas markets.

The outcome of these changes in consumer demand has been to necessitate a rethink in the sourcing of goods. Differing strategies will be explored more fully below, but it appears that the following generalizations can be made:

- demand for standardized basic products remains in some market sectors, and can be cost effectively satisfied by low cost overseas sourcing in large volumes, at the expense of rapid response capabilities - *slow response mass production*;
- demand for smaller volume production, capable of responding to either changes in taste or escalating demand, is satisfied by flexible production in domestic and/or near neighbor producing countries with short response times and replenishment capabilities - *quick response production*;
- demand for fashion leading items, continuously influenced by the media, popular music and sport is satisfied by shortened supply lines, utilizing locally based production - *continuous new style production*.

#### Defining the product

There are a wide number of influences on the choice of product. However, increasingly products are sourced as ranges rather than single items, forming part of an integrated style on behalf of the retailer or brand. One of the major influences in the UK is the unpredictable weather, which frequently causes retailers to complain that they have the wrong type of goods in store, and which, along with fashion changes, is a major cause of lost sales in the high street.

A recent study by KSA suggests that an increasing amount of UK product will be sourced utilising rapid reaction techniques in response to fashion changes. However, this remains a relatively small proportion of all sales<sup>22</sup>. The main growth area is predicted to be replenishment. Table 5.1 outlines the current and forecast sourcing pattern for UK retail.

#### Control of creation and design

In a survey of 16 speciality fashion chains, one quarter of goods were sourced by retailers direct from subcontractors in a relationship that involved the retailer internalising the normal functions of a first tier manufacturer, including design. The pattern is most significant where retailers demonstrate a particularly high degree of range co-ordination and brand identity, and where continuous new style development is the norm. The motivation for

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<sup>22</sup> Kurt Salmon Associates: Drapers Record Challenge Conference, 1999

retail and manufacturing functions to be combined varies. Some of the retailers originated as manufacturers (River Island), design houses (Whistles) or branded wholesalers (French Connection) and have diversified downstream into retailing, while others have their origins as retailers (Oasis) and have adopted increasingly close control over manufacturing activities.

Subcontract manufacture takes place both in the UK, where speed of response can be secured, and overseas in order to reduce costs. Of those retailers surveyed, findings suggest that 40-70% of sewn apparel is UK sourced, although knitwear is dominated by imports.

Fabrics are also typically sourced by the retailer, which facilitates maximum economies of scale. In one case, retail fabric procurement accounted for 90% of requirements; another retailer with lesser involvement in fabric sourcing, had reached a strategic decision to increase this activity.

Product development is largely completed by the retailer, in co-ordinated ranges that cover up to 6 seasons each year. Lead times, while normally between 13 and 20 weeks can be reduced to 2 weeks from concept to delivery; a significant time saving in an environment where up to 25% of purchases are for mid-season new style developments and a further 10% represent product trials. In a typical season only a proportion of styles are finalized and produced at the outset. Some fabric is withheld until sales demand has been anticipated, so that replenishment can be ordered or new styles that co-ordinate with existing ranges can be produced at short notice.

In this way, retailers can respond quickly to the influence of popular music, media and sport, as well as their own and their competitors' sales performance. The relatively flat decision making structure of this integrated supply system is able to quickly respond to changes in demand by minimizing product development time, utilizing fabrics that are held in stock, and subcontracting manufacture to a number of well-established and geographically close factories. The flexibility of this system is represented by the range of order sizes purchased by retailers. Initial trials can require production of as few as 300 units, whereas basic items may demand quantities in excess of 100,000. Average orders range from 3000 - 8000 units.

Typically, smaller fashion chains complement their own production systems by sourcing from wholesalers to fill mid season shortfalls, as well as from some of the largest contract manufacturers and manufacturing agents. Oasis, for example complements its own design and production arrangements by sourcing from one key manufacturer based in the

Republic of Ireland. A close relationship has developed between the companies based on ease of communication and comparable company culture<sup>23</sup>.

In reality most UK retailers have some involvement in defining the product. Marks and Spencer, for instance, is well known for its close control over minute decisions. Initial product development is carried out in response to specifications issued by the retailer to its main suppliers, whose design teams work on bringing concepts to reality. A further key element of the design process is engineering the product to meet both manufacturing requirements and retail price thresholds without sacrificing design.

With new processing techniques for goods manufactured from unfinished fabrics or yarns (explored below) it is increasingly common to leave final product definition until late in the manufacturing process. This is particularly appropriate to imported goods, and enables colour and finishing decisions to be made late in the production cycle while achieving economies of scale on the labour intensive making-up processes.

#### Defining the product life cycle

Traditionally, the product lifecycle lasted for a whole season (spring/ summer or autumn/winter). Since the 1980s, however, retailers have introduced mid-season ranges with a short lifecycle, especially for high summer or Christmas. At the same time, changes in visual merchandising techniques, such as lifestyle range presentation and sparse shop layouts resulted in some ranges being stored off the sales floor for some of the season. The product lifecycle was, therefore, artificially shortened, even though the costs and risk associated with forward ordering were not reduced.

In the 1990s, it has become more common for retailers to introduce ranges progressively throughout the season, spreading risk and cost and ensuring greater responsiveness to consumer demand. Some retailers, such as New Look, give products an initial lifecycle of 2 weeks. After this, the product is replenished, replaced or discounted according to initial sales. Such strategies enable the retailer to continuously introduce new styles and stimulate demand. As a result, the length of product lifecycle has become more responsive to the duration of consumer demand, and the seasons have blurred into 3-4 main periods of progressive style change and new style introduction. The lifecycle of the product has been transformed from launch-sales-discount to an evolution of the style throughout one season and perhaps into the next.

Only the brand houses that continue to trade through shows, product launches and range reviews continue to maintain a two season calendar, depending on forward orders and

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<sup>23</sup> Drapers Record 10th January 1998

customer loyalty to maintain sales throughout the season. One of the reasons for this is the difficulty reported in securing small volume production and materials for more fragmented supply.

### Product Development

Survey findings from the Harvard Center for Textile and Apparel Research indicate that the average number of products offered for sale by manufacturers has increased. UK companies, in general, have identified a comparable increase in product proliferation between 1991 and 1995 (see table 5.2), with not only the total number of products offered having increased, but also an increase in both the number of new products added to the range and the number dropped. The responses overall, therefore, indicate an increased fluidity within the product range.

UK manufacturers identify product development as a major investment of both time and resources. As product proliferation has increased, manufacturers have seen an increase in the number of sample iterations expected, and a decline in sample adoption rates<sup>24</sup>. In addition, while retail buying decisions are confirmed closer to the selling season to maximize flexibility, samples are still demanded of manufacturers months in advance.

### Upstream product differentiation

Frustrated by inadequacies in the apparel supply chain, some innovative upstream suppliers have become involved in added-value processes, through which they can secure competitive advantage. Even basic garments are often differentiated by the fabrics from which they are made (elements such as yarn content, surface interest or special finishes influence consumer decisions). The range of processes available has increased dramatically over the last few years, and upstream manufacturers and retailers have invested in joint product development processes as a means of securing market demand to justify capital expenditure. Color calibrated CAD systems, linked directly between retailers and fabric manufacturers, is one way of facilitating concurrency in product development that is beginning to enable decisions relating to fabric finish to be made closer to the selling season. Innovative production technologies, such as modular dyeing techniques, enable the physical realisation of design developments with greater flexibility and shortened production cycles.

The close integration between fabric or yarn manufacturers and retailers is exemplified by Marks and Spencer, and compensates to some extent for the lack of

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<sup>24</sup> Apparel, Textile and Footwear Challenge, Supply Chain Benchmarking Report, 1997.

flexibility within the garment manufacturing cycle. Where close relationships can be developed between fabric manufacturers and processors, garment producers and retailers, there is considerable scope to further reduce lead times by improving the product development cycle, and facilitating quick response. Research Institutions such as Cranfield and Manchester Metropolitan Universities are currently engaged in exploring opportunities to increase competitiveness and minimise environmental impact through concurrent product development within the garment supply chain.

Some of the upstream textile developments that have benefits throughout the supply chain include:

- sophisticated quality assurance at the raw material stages that improves final product quality. Developments include laser inspection technology and selective breeding programmes for sheep and cotton that improve raw material quality;
- treatments including waterproofing, U.V. proofing, anti-crease, anti-tickle finishes that add-value to end products
- fibre selective differential dyeing that enables patterns to be woven into fabrics that will be dyed further down the production channel;
- process refinement, including computerised dye batch formulation and modular dyeing that enables colour consistency to be achieved in subsequent small dye batches and which reduces the necessity for bulk dyeing;
- integrated CAD systems that enable preliminary colour decisions to be made through data transfer, saving the time and expense of sampling.
- concurrent product development of textiles and garments reduces lead times and eliminates waste and duplication of effort;
- investment in downstream dyeing and finishing plant that supports local dyeing, printing and finishing of imported fabrics for quick response manufacture and garment dyeing techniques that can be completed immediately prior to distribution of finished goods.

However, in spite of a variety of upstream-led supply chain developments, UK manufacturers and retailers still consider fabric suppliers to be less innovative than their counterparts in Europe and the Far East. The source of fabric origination is a determinant of garment manufacturing location. Fabrics sourced in the Far East are more likely to be made-up in neighbouring countries and OPT arrangements depend on the use of fabrics sourced in the EU Free Trade Area (EFTA).

### Product proliferation

In response, some companies have begun to recognize the proliferation of styles to be a problem, and deliberately adopted strategies to reduce this trend by rationalizing SKU performance and eliminating marginal lines. In addition, some firms, backed by their major retail customers, have concentrated production on basic styles, differentiated by frequent changes of color and minor style adaptations made possible by downstream processing, such as garment dyeing and finishing.

A second trend apparent from the survey, is that, overall, the number of styles offered by manufacturers up until, and including, 1991, was, it appears, falling. Most of the increase in product proliferation has occurred during the latter part of the survey period (Table 6.2)

For manufacturers, increased product proliferation can result in fragmented production. Order sizes are widely recognized to be falling, and while some companies have adopted innovative methods of production and turned the situation to their advantage, many continue to see the demise of continuous bulk production as a threat.

### Complexity of the product

## **VI.3. Fashion and the production channel**

### The fashion pyramid and the effect of product cycles on global sourcing

While price and innovation are major incentives for overseas sourcing, the need for rapid changes in product range in response to fashion and weather fluctuations has been an incentive for continued domestic sourcing, and in some cases for import patterns to change to closer proximity sources such as North Africa or Central Europe.

According to survey evidence, around one third of supply to specialist fashion shops is based on continuous style development. This strategy calls for rapid manufacture and great flexibility. Retailers dependent on subcontracting networks utilise a combination of UK, European/ North African and Far East suppliers depending on product, relative price and response time. Others, such as Next, maintain dual sourcing regimes to enable trials, small runs and replenishment to manufactured locally, while main season production is manufactured overseas. The implications of this type of production model include:

- inability of domestic suppliers to balance profitable large scale production with small volumes. Increasing dependence on flexible production has compromised the viability of some domestic suppliers;
- a lack of availability of planning information for quick response manufacturers;
- a compromise of copyright and unequal loading of development costs where garments developed by UK suppliers are produced in bulk in low labour cost countries.

In order to compensate for the latter obstacle and simplify retail sourcing activities, UK manufacturers are increasingly investing in overseas factories (both directly and through joint ventures). The availability of overseas capacity has recently been highlighted as a major source of competitiveness and a factor likely to influence supplier selection.

## Tables Section VI

Table 6.1

Sourcing Pattern	Characteristics	Proportion of purchased goods	
		1997	2001
Traditional	<ul style="list-style-type: none"> <li>• Pre-season</li> <li>• Twice yearly</li> </ul>	67%	48%
Speed	<ul style="list-style-type: none"> <li>• Last-minute</li> <li>• Small Flexible Supply</li> <li>• Young fashion, new fabrics, colours</li> </ul>	8%	11%
Replenishment	<ul style="list-style-type: none"> <li>• Basics with some change</li> <li>• Planned replenishment for inventory reduction</li> </ul>	25%	41%

Table 6.2: Product Proliferation

	Number SKUs	New styles introduced	Styles dropped	net gain (loss)
1991	2251	1074	1106	-32
1995	2388	1432	1365	+67

difference	+138	+358	+259	+99
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