skillset
The Sector Skills Council for Creative Media

Strategic Skills Assessment for the Fashion and Textiles Sector in England

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Alliance
Sector Skills Councils

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1. Introduction to the Strategic Skills Assessment

The key role of Skillset as the Sector Skills Council for the Fashion and Textiles industry is to assess the industry's skills needs and work with industry and Government to respond to those needs. Within this context, the UK Commission for Employment and Skills (UKCES) charged Skillfast UK, the Sector Skills Council for fashion and textiles at the time (until March 2010), to carry out a Strategic Skills Assessment (SSA) of the UK fashion and textiles sector. This will now be carried out on an annual basis for the UK and each of the home nations by Skillset.

The report incorporates four key elements, including:

1) What Drives Skills Demand

The report will look at the current and recent performance and competitive position of the sector and key sub-sectors; the economic structure and condition of the sector; the factors driving this performance and position; and the skills implications.

2) Current Skills Needs

Leading on from the drivers of change, the assessment includes a robust analysis of current and expected skill needs in the sector and recruitment issues. This section details the character of skills needs, and differentiate across the full spectrum of skills.

3) Anticipating What Lies Ahead

As part of the assessment, Skillfast-UK is invited to offer a strategic insight, building on the current drivers of skills demand and skills needs, examining possible/likely future trends in the sector and anticipating the associated skills needs these will bring.

4) Geography

The assessment requires Skillfast-UK to pay particular attention to geographical composition of the sector and highlighting where specific skills issues are particularly manifest. This analysis allows for the correct interpretation of higher level skills information presented in the skills needs analysis.

2. Executive Summary

Sector footprint and demographics

The Skillfast-UK sector footprint in England employs 290,000 people within 72,000 businesses.

Using ABI data, gross value added in the sector is over £7 billion with gross value added per head standing at almost £38,000.

Of the sub-sector boards, the apparel and textiles elements of the footprint account for the largest number of business, employment and gross value added.

In terms of demographics, the majority of the workforce work within process, plant and machine operatives and elementary occupations. 51% of the workforce is female and 16% are from a BME background.

18% of the English fashion and textiles workforce are self-employed, with a further 25% working on a part-time basis. 43% of the sectors workforce are aged over 45 many of whom hold key occupations and possess hard to replace skills.

Looking at qualifications, 42% of the workforce are qualified at below level NVQ level 2, whilst 17% hold an NVQ level 4 or above. This compares with 23% and 34% respectively for the wider UK workforce.

Current sector performance

Using ONS data it is possible to see that there were large falls in GVA for the manufacturing side of the sector between 2003 and 2007. However, following 2005 these losses had levelled out with growth occurring before the recession hit. In this period GVA per head in the manufacturing sector had increased from £30,000 to over £40,000 per head indicating a movement to higher value manufacturing.

Whilst GVA has declined in a number of the sector activities, sub-sectors that have shown growth during the 2003-2007 period include wholesaling activities have increased its value by a quarter. Again, this indicates the movement to higher value activities within the supply chain.

Domestic service functions such as cleaning and repair have remained stable during this period.

Despite the falls in GVA, the value of exports produced in England has seen growth over the past decade. The apparel market in particular has seen large increases fuelled by overseas demand.

Key drivers of current sector performance and skills demand

The structure of the sector has been impacted more than any other sector by the onset of globalisation. Globalisation, enabled by the dismantling of trade barriers, along with lower communication and transport costs, has seen lower value added manufacturing outsourced

to low-cost nations and the Consumer Price Index for clothing decouple itself from the all item index.

This structural change has seen a transformation in the way sector firms operate, looking towards niche manufacturing, balanced supply sourcing or outsourcing operations in order to be competitive in the global market place.

Key drivers of skills demand in this context are:

- the growth of fast fashion and technical markets
- the British style
- adaptation to changing technology
- the impact of migration
- the image of the sector
- the sustainability agenda

The skills implications of the above drivers include:

- a reliance on design creativity, allied to strong technical and commercial awareness successful branding and marketing skills
- the development of new technologies
- the ability to compete in premium and niche markets on a global level by maintaining craft skills
- maintaining the current trajectory of business start-ups by ensuring owner-managers have the correct skills available
- ensuring firms have the ability to manage overseas supply chains and understand the product environment
- the maximisation of production efficiencies enabling firms to reduce costs through multi-skilling
- attracting a greater number of graduates into the sector (this is a key problem where strong leadership is needed in times of rapid change)
- due to the long-term decline in apprenticeships and other development mechanisms, along with the negative image of the sector, the ageing workforce is going to be a key problem

Impact of the recession

Indicators from all available sources show how productivity and employment in the sector have been impacted by the recession with key employment indicators down. However, by the end of 2009 there had been a slight improvement within the job market although this trend requires monitoring.

Current skills needs

National datasets show vacancy rates and hard-to-fill vacancy rates within the sector are similar to the all sector level.
Hard-to-fill vacancies and skill shortage vacancies in the fashion and textiles footprint, whilst in line with the England all sector figure, did have a greater prevalence as a proportion of vacancies. The Skillfast-UK employer survey confirmed that these shortages were in associate professional, skilled trades and operative occupations. Higher level skills issues were reported in design occupations with the commercial and technical skills of graduate designers identified as a major issue.

Skills gaps, although less prevalent than skills shortages, were above national all sector levels and are highly prevalent within the sector. Again, Skillfast-UK's employer survey found gaps in a range of occupations spanning various sectors and skill requirements.

Future skills priorities include the recruitment and retention of able young people, the development of management and leadership skills and improving sales and marketing skills.

Scenario planning

Working Futures III data predicts a period of stability in workforce numbers compared to the large employment losses seen in the past decades. This in turn will see positive recruitment requirements for the sector to replace retirements.

It is envisaged that there will be a gross increase in the need for managers and senior officials and no change for professional occupations. Transport and machine operatives and elementary occupations will continue to decline, signifying the continued restructuring of the sector.

Skillfast-UK's own bespoke scenario planning offers an insight into the patterns that will affect the sector, with continued emphasis on customer service, commercialisation of new technologies, strong craft skills, overseas sourcing and supply chain management seen as the drivers of sector behaviour and driving sector skills needs.

More recent scenario planning on a European level has shown there may be three directions in which the fashion and textiles sector could go down by 2020. The three scenarios present different influences at play on the sector and with it the skills mixes required by employers.

Priorities

Taking into account the evidence presented, Skillfast-UK has identified a number of issues for action. These include:

- the supply of technical skills at operative and craft level
- graduate level technical skills and commercial awareness
- presenting a realistic picture of the sector
- international trade and the supply chain
- management and leadership skills
- information on sector jobs and careers
- literacy and numeracy

3. Introduction to the Skillfast-UK footprint

Skillfast-UK is the Sector Skills Council for fashion and textiles. The sector footprint covers the apparel, footwear and textiles supply chains, from the processing of raw materials, to product manufacture, to the after-sales servicing of products.

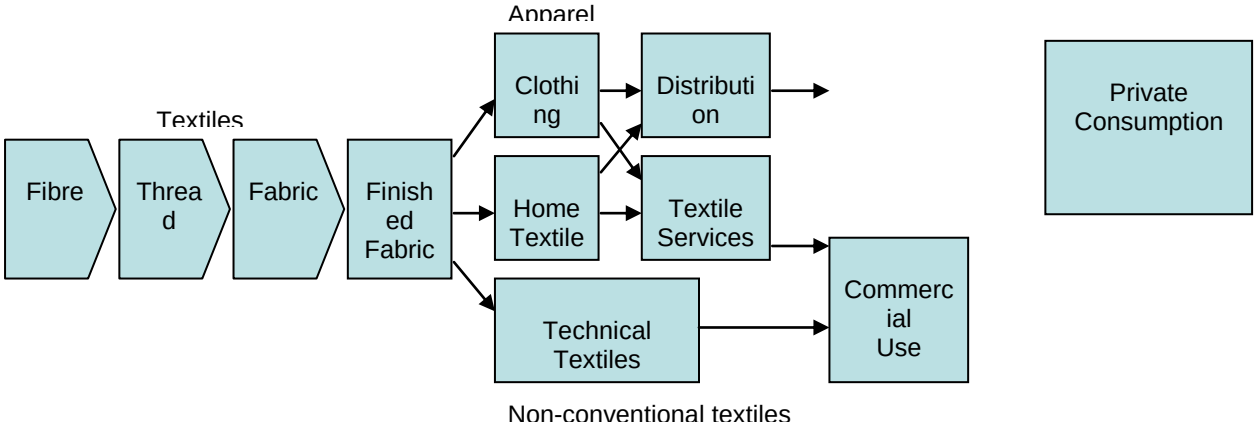
Within Skillfast-UK's remit are companies that undertake the following processes and activities, most of which occur within the UK fashion and textiles supply chain (see Figure 1).

- Materials production and processing, including processing of raw fibres, spinning and weaving, tanning of leather, finishing of textiles, manufacture of knitted and crocheted fabrics, production/processing of manmade fibres, production of non-wovens
- Product design (textiles, clothing, fashion design)
- Manufacture of made-up articles, including household textiles, carpets, apparel, knitwear, luggage, footwear and leather goods
- Trading in apparel, footwear and textile items, including sourcing, logistics, distribution, branding and marketing
- Servicing of apparel, footwear and textile items, including fitting of carpets, laundries, dry cleaning, textile rental and clothing and shoe repair

Companies within the footprint serve the following end-use markets:

- Carpets
- Home furnishings (e.g. curtains and upholstery fabrics, as well as "technical" components such as furniture platform cloths)
- Household textiles (e.g. bed linen, table linen, as well as "technical" components such as pillow tickings)
- Technical textiles for non-consumer applications (e.g. automotive, medical, industrial textiles)
- Technical consumer goods (e.g. tents, sleeping bags, rucksacks) and performance outdoor-wear
- Footwear (including repair services)
- Leather and leather-goods (including leather repair)
- Retail clothing
- Knitwear and hosiery
- Corporate clothing, work-wear and protective clothing (including support services such as laundering)

Figure 1: The fashion and textiles supply chain



Source: EMCC 2004, p.1 in EMCC 2008

Skillfast-UK's footprint is represented by six strategic sector boards, each of which represents a specific part of the Skillfast-UK footprint. These boards are:

- Apparel and sewn products
- Design
- Footwear and leather
- Laundry and dry cleaning
- Manmade fibres and technical textiles
- Textiles

4. Current Stock of Businesses and Employment

The Skillfast-UK sector footprint covers a wide range of sectors, each of which that has performed differently in recent years and have been subjected to different drivers. This section therefore covers:

- current stock of businesses and employment
- sector demographics
- recent sector performance
- the role of globalisation
- key drivers of demand
- productivity within the sector and an assessment of the implications for skills arising out of these key drivers

4.1 Businesses and activity

Following a re-sizing exercise of the fashion and textiles sector in England, the sector can be seen to account for over 290,000 jobs and 72,000 workplaces within the Skillfast-UK footprint. (tbr 2008)

This is in comparison with data from the Annual Business Inquiry (ABI) 2007 which estimates the figure at 190,000 employees and 23,000 firms. As the ABI analysis excludes the self-employed workforce, it can be deduced from these figures that a high number of micro and niche industries exist within the English fashion and textiles sector.

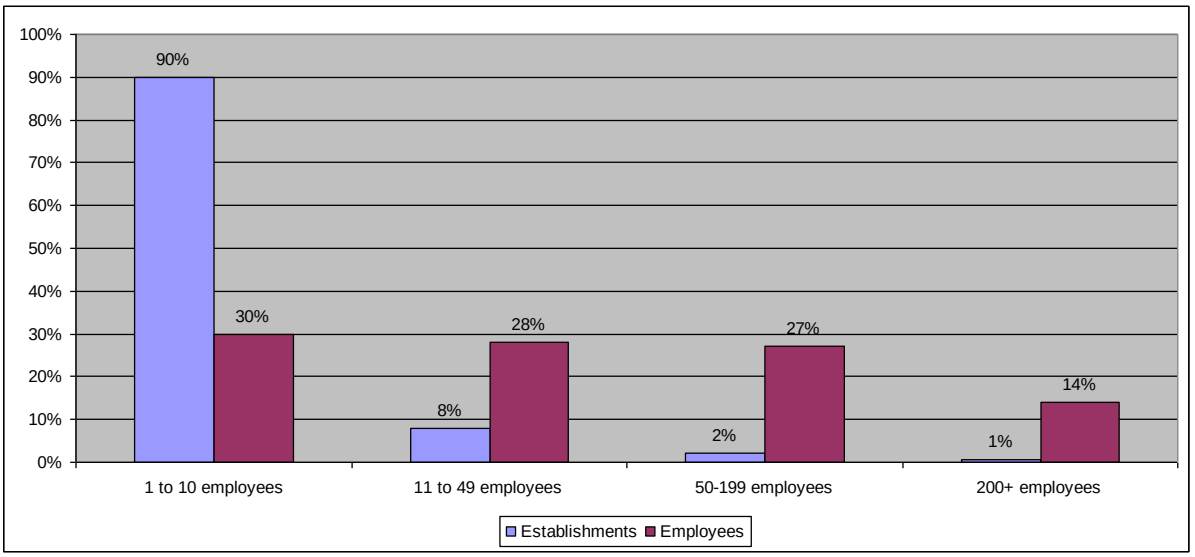
4.2 Business demographics

The following section is based on analysis of the ABI data. This is due to the practicalities of breaking down into a national level the information from the tbr study from a UK level. It must be noted that due to the sizeable number within the workforce excluded from the ABI analysis, this must be taken into account.

4.3 Size of firms

Reflecting the high number of micro and niche business within the English fashion and textiles sector, 90% of businesses recorded in the ABI employ between one and ten people. However, in employment terms, the ABI notes that the majority of employees operate in workplaces that employ between 50 and 199 and over 200 employees. This is important to note as firms with over 50 employees only account for 3% of firms in the sector.

Figure 2: Size of firms



Source: ABI 2007

4.4 Businesses and employment by fashion and textiles sub-sector

Using the ABI data to assess the employed workforce within the English fashion and textiles sector, it can be seen that sizeable amounts of the workforce are employed within the wholesale of clothing and footwear, washing and dry cleaning, manufacture of other wearing apparel and the manufacture of made-up textile articles sub-sectors.

It is noticeable that half of the workforce are involved within the manufacturing side of the sector whilst 30% are employed within a wholesaling function. This demonstrates the continuing importance of this sector to the supply chain.

Table 1: Businesses and Employment by sub-sector

SIC 2003	Businesses	Employment
5142 : Wholesale of clothing and footwear	900	36,400
9301 : Washing and dry cleaning of textile and fur products	4,800	34,400
182: Manufacture of other wearing apparel and accessories	3,400	25,500
174 : Manufacture of made-up textile articles, except apparel	1,900	20,800
175 : Manufacture of other textiles	1,000	14,100
5141: Wholesale of textiles	2,200	13,500
5116: Agents involved in the sale of textiles, clothing, footwear and leather goods	1,800	9,700
172: Textile weaving	200	5,800
173: Finishing of textiles	500	5,400
177: Manufacture of knitted and crocheted articles	300	4,200
193: Manufacture of footwear	200	4,100
171: Preparation and spinning of textile fibres	200	3,700
192: Manufacture of luggage, handbags and the like, saddlery and harness	400	2,900
5271: Repair of boots, shoes and other articles of leather	200	2,100
176: Manufacture of knitted and crocheted fabrics	100	1,300
191: Tanning and dressing of leather	100	900
183: Dressing and dyeing of fur; manufacture of articles of fur	*	100
181: Manufacture of leather clothes	100	*
247: Manufacture of man-made fibres	*	*

Source: ABI 2007 (3 digit SIC used in places to avoid disclosure)
Rounded to nearest 100 *Undisclosable

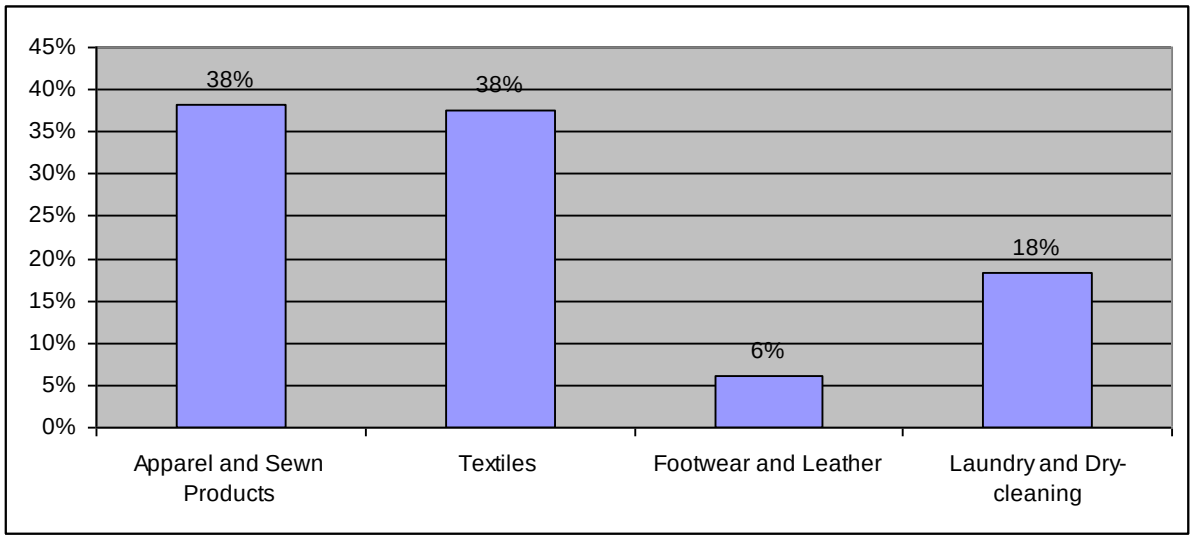
4.5 Employment by sub-sector board

The Skillfast-UK footprint is separated into six distinct sub-sectors. However, national datasets only allow us to look at four of these. Analysing these four, a higher proportion of the Skillfast-UK English footprint is dominated by the apparel and textiles sub-sectors, with 38% of employees working within these sub-sectors.

Employment within the textiles sub-sector accounts for a quarter of employment, whilst there is also significant employment within the laundry and dry cleaning and footwear and leather.

The tbr study suggests 1% of employment is within specific design businesses within the UK and therefore needs to be taken into account.

Figure 3: Employment by fashion and textiles sub-sector



Source: ABI 2007

4.6 English manufacturing employment within a European context

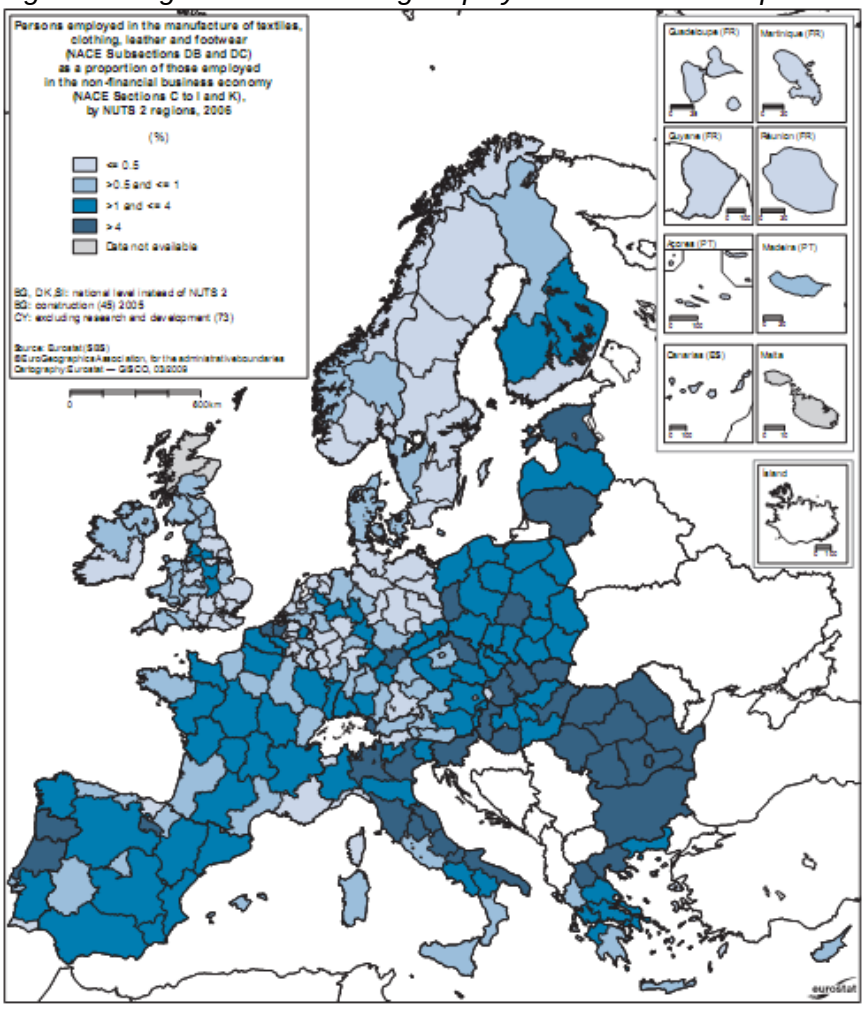
Information from Eurostat clearly shows employment within fashion and textiles manufacture within a European context is lower in England than in many other countries, although there are still significant pockets that exist.

The map in Figure 4 demonstrates there are areas of England where fashion and textiles manufacture is still a significant employer. This includes traditional manufacturing areas such as London, the Midlands, Yorkshire and the North West.

What is clearly demonstrated is the extent to which textiles, clothing, leather and footwear manufacturing is clearly concentrated within the Central and Eastern states of Europe where lower production costs make these nations an attractive proposition for production centres.

Of the western European nations, Italy, with the combination of an interdependent supply chain and global demand for Italian produced goods, and Portugal which was originally a beneficiary of outsourcing in the early 1980's, remain proportionally higher employers within fashion and textile manufacture.

Figure 4: English manufacturing employment within a European context



Source: Eurostat Business Review 2008 (Based on SIC17-19)

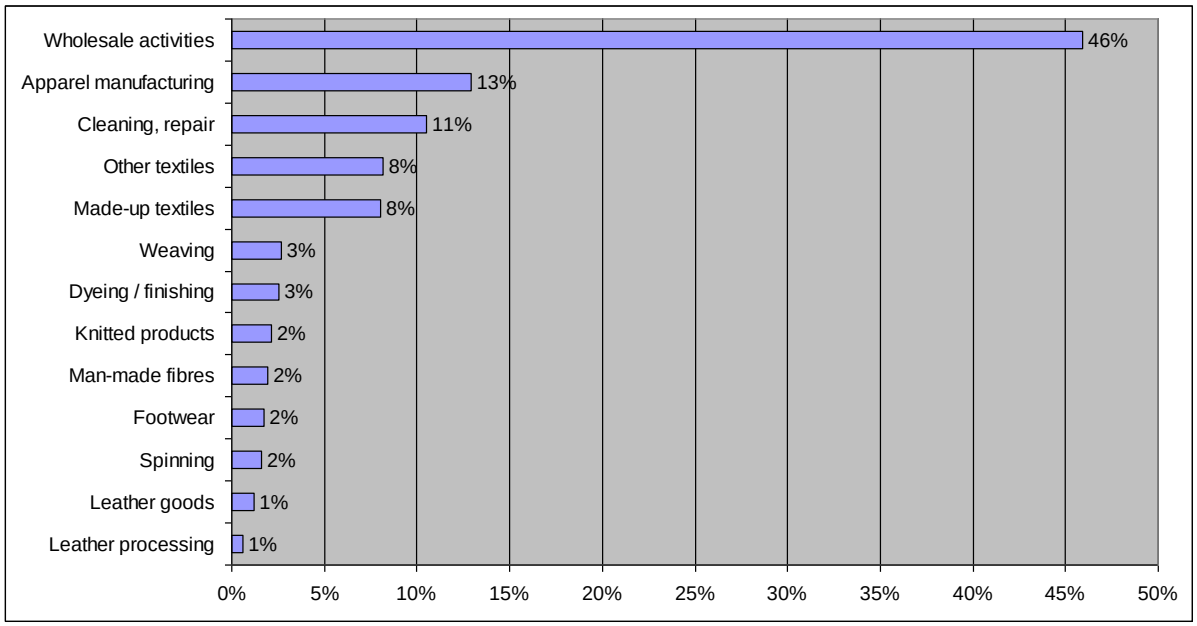
4.7 Sector Gross Value Added

Using the figures from the ABI, Gross value added (GVA) for the sector is estimated to stand at over £7 billion with GVA per head measured at £38,000 per head.

Based on Skillfast-UK estimates of GVA by sub-sector, it is possible to see how the wholesaling sub-sector is the dominant contributor to sector GVA. Apparel manufacturing and the cleaning and repair servicing functions are also substantial contributors to sector output.

These three functions span the breadth of the fashion and textiles supply chain so shows how each element is important in bringing value added to the sector.

Figure 5: GVA by broad sub-sector grouping



Source: Skillfast-UK estimates based on ABI 2007

4.8 Employment demographics

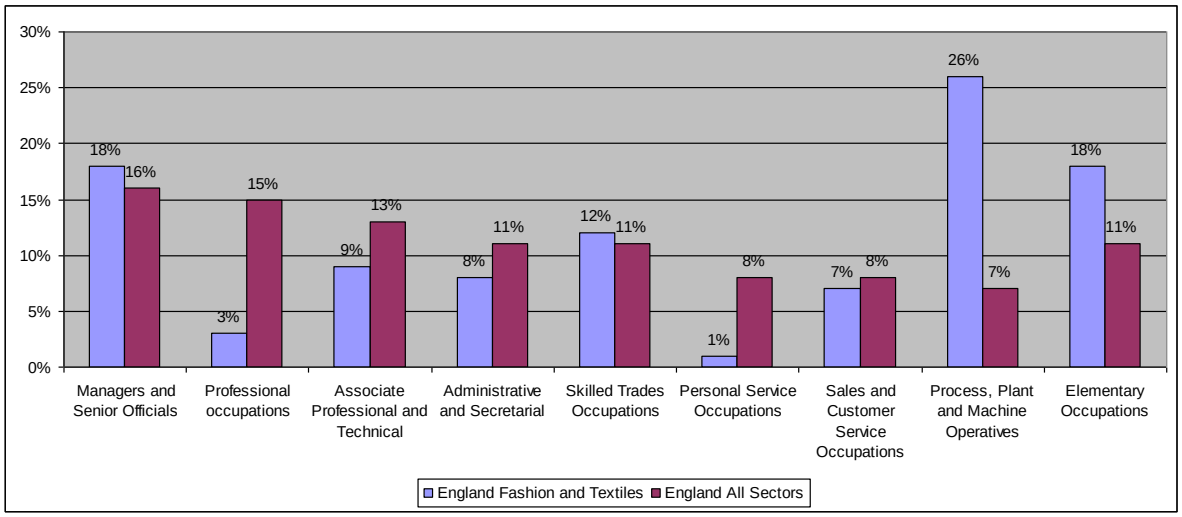
The Skillfast-UK English fashion and textiles footprint can be seen to have a number of characteristics that distinguish itself from the wider economy. As we will see, these facets will be important factors in determining the future skills needs in the sector.

Occupational make-up

Owing to the large manufacturing base that still exists within the English fashion and textiles sector, process, plant and machine operative occupations make up just over a quarter of the workforce. This is followed by elementary and managerial occupations that between them contribute 37% of the sector workforce in England.

Compared to the English all sector workforce, it can be noted that professional and personal service occupations are not as prevalent within the English fashion and textiles sector as within the all sector average. How these occupations translate into the Skillfast-UK footprint are shown in Table 2.

Figure 6: Occupational distribution in the England footprint



Source: APS 2008

Table 2: Key occupational groupings within the Skillfast-UK footprint

Occupational group	Occupation	Key job titles
Managers & senior officials	1121 Production, works & maintenance managers	Production manager, technical manager
Professional Occupations	2122 Mechanical engineers	Engineer
Associate professional and technical	3111 Laboratory technicians	Textile technologist, dyeing technician
	3422 Product clothing & related designers	Textile/clothing designer, garment technologist
	3542 Sales representatives	Technical sales, sales executive
	3543 Marketing associate professionals	Marketing executive
Skilled trades occupations	5223 Metal working production and maintenance fitters	Tufting engineer, loom technician, sewing machine mechanic
	5411 Weavers and knitters	Weaver, knitter
	5413 Leather and related trades	Shoe maker, saddler, clicker, shoe repairer
	5414 Tailors and dressmakers	Tailor, kilt-maker
Process, plant and machines operatives	8113 Textile process operatives	Scourer, spinner, tufter, twister, warper
	8114 Chemical and related process operatives	Leather worker, dye-house operative
	8136 Clothing cutters	Pattern cutter
	8137 Sewing machinists	Body linker, collar linker, mender, repair hand, sewing machinist, seamer
	8139 Assemblers and routine operatives nec.	Machinist – footwear/leather-goods
Elementary occupations	9234 Launderers, dry cleaners, pressers	Dry cleaner, garment finisher, laundry operative, presser

Source: Skillfast-UK (2005)

4.9 Sector demographics

Female employment

At 51%, the English fashion and textiles sector employs proportionally more females than the sector at an all England level. This reflects the large number of textile and apparel manufacturing jobs existing within the sector that have traditionally been the domain of the female workforce.

BME employment

16% of employment within the sector is drawn from BME groups and is proportionally higher than the all sector level for England. Asian/Asian British is the largest ethnic grouping within this category.

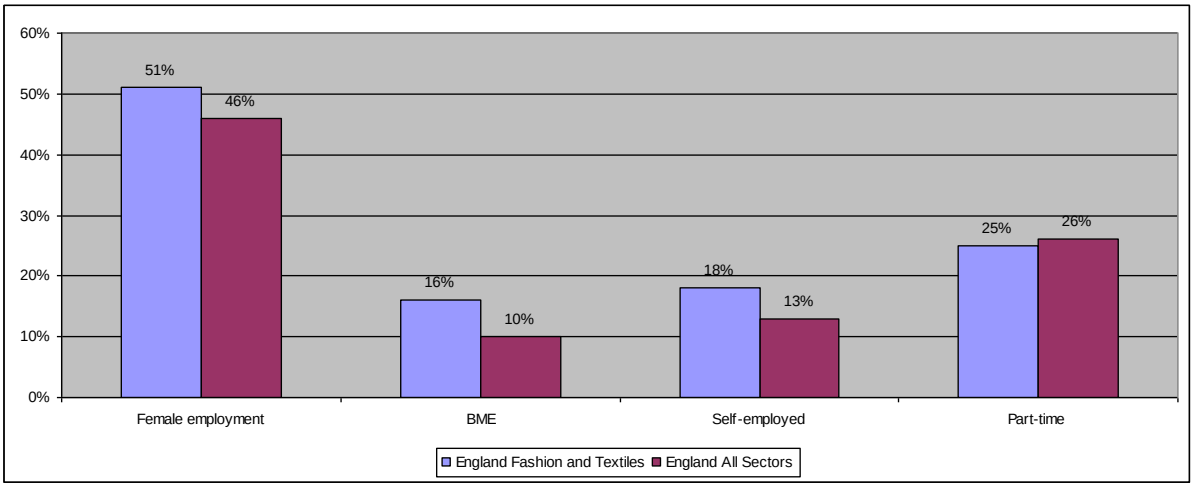
Self-employment

Self-employment is a key trait of the sector in England with 18% of the workforce representing this status, and not picked up by the ABI. Again, this proportion indicates the large number of small and micro businesses that exist within the fashion and textiles sector that the differences in employment estimates the tbr resizing study and ABI differences highlight.

Part-time employment

Part-time working is roughly similar to the pattern exhibited at an England all sector level with a quarter working part-time in the sector. This suggests a flexibility of working patterns within the fashion and textiles sector.

Figure 7: Key demographic indicators



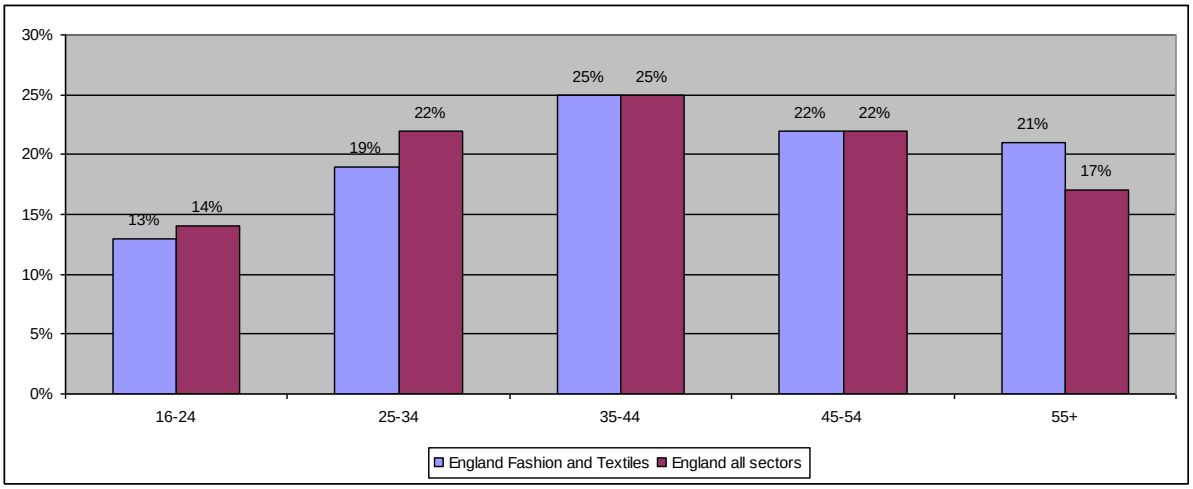
Source: APS 2008

Age-bands

The sector in England has an ageing workforce that has implications for the future health of the sector. Over a fifth of the workforce is aged over 55 years of age and in all, 43% of the sectors workforce is over 45. This is above the picture exhibited nationally.

This is a key issue for the English fashion and textiles sector as many older workers are known to hold key management and technical positions. As they retire their replacements will require extensive training and development over a prolonged period.

Figure 8: Age-bands



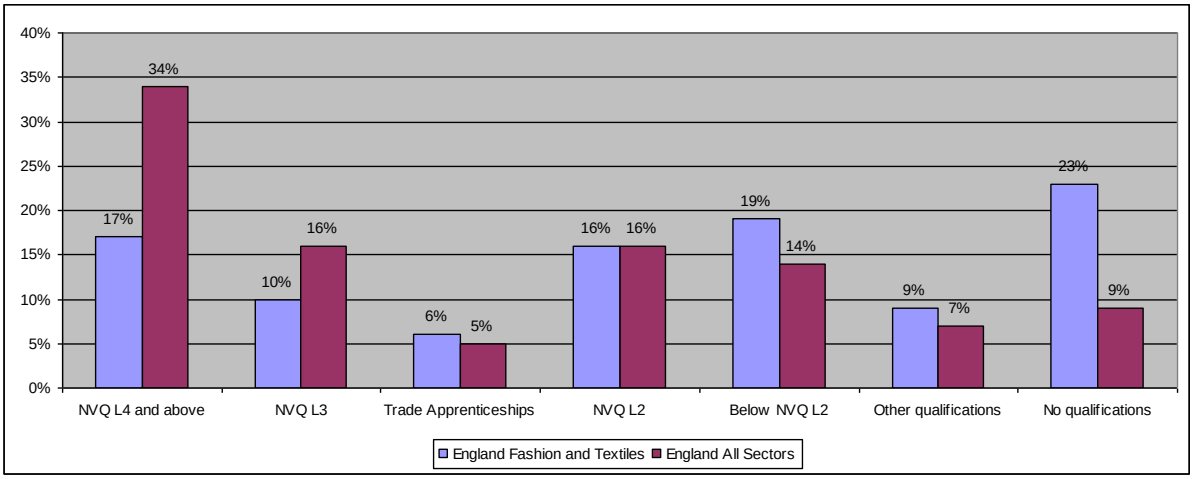
Source: APS 2008

4.10 Qualification composition

Qualification levels in the English fashion and textiles sector show large differences compared to the all England figure. 42% of the workforce is qualified at below NVQ level 2 with over a fifth holding no qualifications, illustrating the low barriers to entry that exist. This is in relation to the wider English workforce where 23% are without NVQ level 2 qualifications.

Whilst there are proportionally only slightly more management roles within the sector compared to the English all sector average, at 17%, the English fashion and textiles sectors workforce with NVQ level 4 qualifications is only half that exhibited within the wider English all sector picture. This is a worrying concern given the emphasis on the sector moving towards higher level skills needs, particularly the need for employers to utilise higher level managerial skills to remain competitive.

Figure 9: Qualification levels



Source: APS 2008

5. Current Sector Performance

5.1 GVA and employment

Between 2003 and 2007 the English fashion and textiles sector has undergone great structural change, with globalisation impacting the sector enormously.

Using figures obtained from the ABI, it is possible to see that within the English fashion and textiles sector, a clear movement has been made from lower value production to production and functions higher up the value chain.

Employment, although now beginning to slow in terms of movement, has declined by 22% with GVA falling by 6%. This is a modest decrease in comparison with the other home nations who have seen significant downturns in their GVA.

However, GVA per head during this period had increased by 20%. This represents a movement in England to higher value production and functions as lower valued manufacturing has been outsourced to lower cost nations.

Table 3: Headline indicators for England 2003-2007

	% change
Employment	-22%
GVA	-6%
GVA per head	20%

Source: ABI 2003 & 2007 based on Skillfast-UK estimates

5.2 Variations in GVA by sector

Sectors that have seen growth in absolute terms are encompassed within the wholesale segment of the footprint. In England, GVA can be seen to have increased by almost a quarter during this period as the trade in fashion and textiles products increased through greater import and export activity and high turn over through the demands of fast fashion.

Similarly, leather-goods have improved their position whilst laundry and dry cleaning and repair functions have seen marginal losses suggesting a certain level of stability within the service sector part of the economy.

These figures correspond with the patterns noted within the UK profile of sub-sectors that have seen rises and falls in business registrations. Within this analysis, the wholesaling feature of the sector showing a healthy grown rate as distribution becomes more prominent and important, whilst manufacturing sub-sectors that are easily transferable have been lost through off-shoring and outsourcing and reflected in the data below.

Table 4: Changes in sector GVA by sub-sector 2003-2007

Sector	GVA +/-
Wholesale activities	24%
Leather goods	1%
Cleaning, repair	-5%
Other textiles	-11%
Man-made fibres	-14%
Made-up textiles	-15%
Dyeing / finishing	-23%
Weaving	-30%
Leather processing	-30%
Apparel manufacturing	-31%
Spinning	-32%
Knitted products	-45%
Footwear	-53%

Source: Skillfast-UK estimates based on ABI 2003 & 2007

5.3 Key economic indicators for the fashion and textiles sector

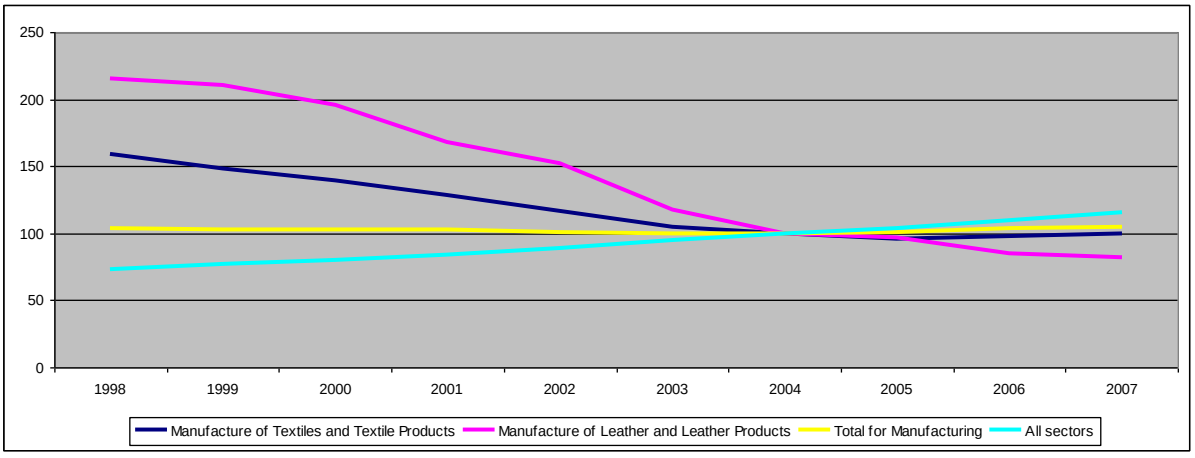
Manufacturing production performance

The Index of Production measures the volume of production at base year prices. As Figure 10 shows and reflecting the decline in GVA, the English textiles, leather and clothing (TLC) market has seen a vast drop in production since 1999, although the decline had become less prominent in the years leading up to the recession.

Again, relating to the decline in GVA for the footwear sector, the leather and leather products market has seen the most marked substantial declines although again this has become less pronounced in recent times.

What is of note is that the recent annual decline has become less pronounced, with the manufacture of TLC products showing signs of stability. However, these figures date from before the recession and needs to be taken into consideration.

Figure 10: Index of Production 2004 = 100



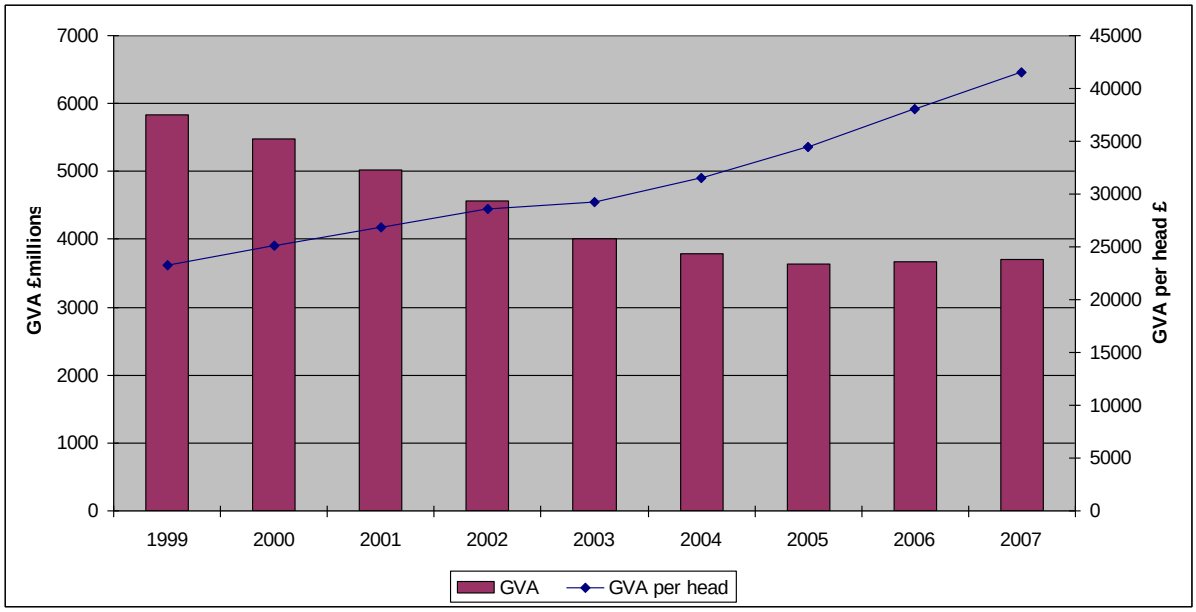
Source: ONS Monthly Digest of Statistics

5.4 GVA and GVA per head in the manufacturing industries

Reflecting the rapid structural changes to the fashion and textiles manufacturing base, the latest available figures for England show that whilst GVA has declined significantly since 1999 as noted in the Index of Production, the sector had begun to find a natural level within the global economy.

The move to higher value production can be seen in the GVA per head indicators which illustrate how the English fashion and textiles manufacturing GVA per head has increased to over £40,000 from under £30,000 in the space of a four year period.

Figure 11: GVA & GVA per head for England within fashion and textiles manufacturing



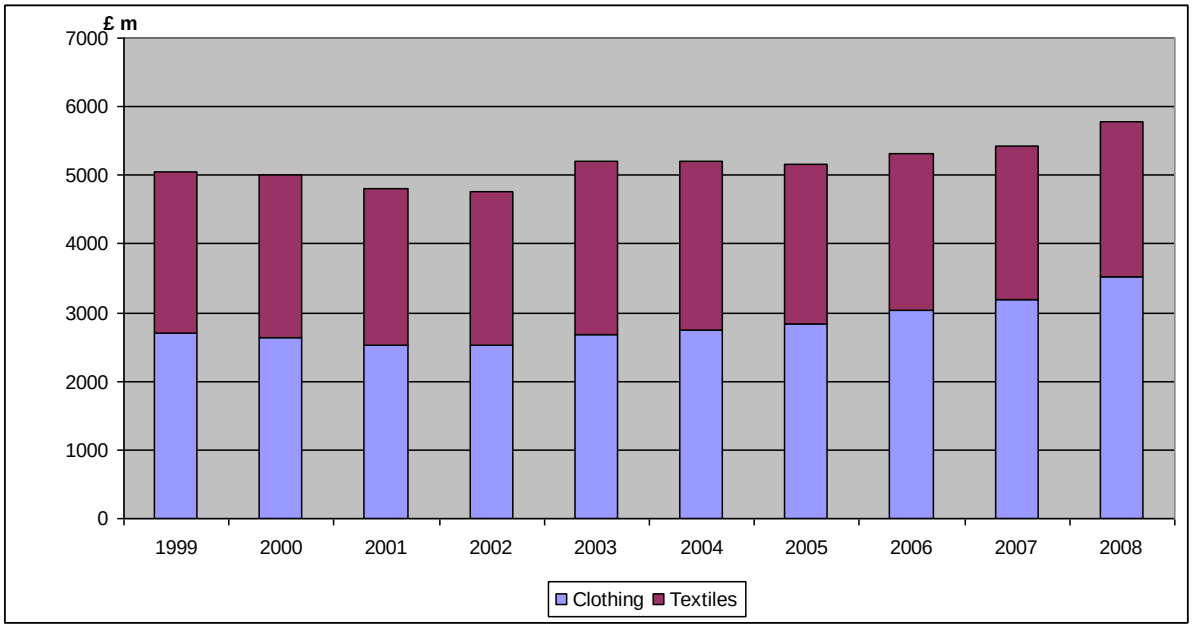
Source: ABI & ONS Regional GVA accessed from StatWales beyond 20/20 database based on SIC 17-19 for England (please note. The method of collecting ABI data changed between 2005 and 2006 for which the employment estimates were made. Therefore, the figures are not strictly comparable between these years.)

5.5 Index of Exports

A key indicator of the buoyancy of the textiles and clothing market in England is the value of exports. These figures show the export market has steadily been increasing in value over the past ten years. Whilst textiles have remained steady in their export value, clothing has seen an increase of almost a billion pounds and represents a 31% increase.

What is suggested is that English clothing manufacturers have been successful in finding their niche in the global economy and are actively exploiting opportunities overseas. These figures are significant as they demonstrate growing markets, particularly for high value English produced fashion and textile goods.

Figure 12: Value of exports by product type for England



Source: ONS via Stats Wales beyond 2020 database for England

6. The Role of Globalisation in Shaping the Sector

To fully understand the dynamics that have shaped the structural change within the UK fashion and textiles sector, it is important to contextualise these changes within the impact of globalisation.

Globalisation of the supply chain has driven structural change in the UK and Western European fashion and textiles sector at a far greater rate than experienced by most other sectors of the economy.

Coupled with price deflation in the UK market, this has continued to lead to pressure on margins and reduced profitability for the sectors manufacturing firms, whilst creating opportunities for UK companies to reduce their manufacturing cost base through outsourcing and higher value functions.

Global outsourcing is not a new phenomenon for the fashion and textiles sector, a sector that has traditionally been sensitive to global political and economic changes in the past 60 years. However, recent academic thinking is beginning to place these changes within two distinct phases in an attempt to understand the current phenomena.

Bottini et al, (2007) note that the first phase of globalisation and outsourcing of production was initially driven by the clustering of production, enabled by the fall in transportation costs on the basis of specialisation in the production of completed goods.

However, a new second phase has been identified, characterised by the increasing separation of various production stages and a trade in tasks that has occurred in the past 20 years (Baldwin, 2006 in Bottini et al, 2007) and one which UK fashion and textiles firms have actively been taking advantage of and been particularly adept at.

As Bottini, et al (2007 p.7) recognise, “this change has been driven by the ability of firms to take advantage of the mobility of capital in the pursuit of efficiency savings as political, economic and technological drivers have combined. Material off-shoring, predominantly in labour-intensive industries such as consumer electronics, textiles and apparels and footwear and leather goods was an early key characteristic of this movement.”

Within this context the outsourcing experienced by the textiles and fashion sector has been made possible by two key drivers.

Firstly, the liberalisation of trade policy, enabled by legislative drivers such as the phasing out in 2005 of the Agreement on Textiles and Clothing that had protected developed countries from low cost competition from low production cost countries. The abolition of this legislation was key to opening up manufacturing opportunities for low cost countries to supply existing markets whilst also improving access to labour markets for companies to off-shore (although anti-dumping legislation remains in place).

Secondly, the continued sophistication of communication technology has allowed the managing of processes taking place overseas. Coupled with a fall in logistics costs to supply end markets, this has enabled companies to outsource and control the supply chain with far less disruption that would previously have been the case.

Summarising the significance of these changes, research by Clutier et al (2007) attempts to place the UK’s position within the global context. The significance of this Table is that it offers a clear steer of high cost European producers such as the UK home nations towards

high value, innovative and niche production areas. This reinforces the findings of the Skillfast-UK SWOT analysis conducted with employers in the UK (Skillfast-UK 2005) which highlighted strengths and opportunities within the areas highlighted as positives for high cost producers within this analysis.

Table 5: Competitive analysis of the UK as a high cost producer in global TLC networks

Competitive factors	EU High Cost (inc England)	EU Medium Cost	Euromed Non-EU	Turkey	Asia
Labour costs	---	-/+	+	=	++
Qualification of labour	++	+	=	+	+
Labour availability	-	=	+	+	++
Management skills	++	+	=	+	+
Design/fashion	+++	+	-	=	-
Communication skills	++	=	=	+	--
Innovation	++	+	-	=	=
Market sensitivity	+++	+	=	+	--
Reliability/quality	++	+	=	+	=
Reactivity/flexibility	++	+	=	+	--
Local market base	+++	+	=	++	++
Access to raw materials	++	+	--	++	+++
Local trimmings/components	++	+	--	++	+++
Equipment	+	+	=	+	-/+
R&D	+++	++	--	=	+
Institutions/fairs	+++	-	-	-	+++
IT	+++	++	+	+	---/+++
Financial health/profitability	-	-	=	++	++
Access to capital	-	-	=	++	+++
National infrastructures	+++	++	=	=	-
Energy costs	-	+	=	=	-
Low administrative burden	+++	+++/---	--	--	--
Low regulations	---	--	=	=	+++

Source : Clutier et al 2007 p.22

+++ major competitive advantage; --- major weakness; +++/--- indicates where huge discrepancies in countries within a region exist.

6.1 Price structure of goods within the sector

Demonstrating the trend towards the transfer of manufacturing capacity – and jobs – offshore, research conducted by the Allwood et al (2006), and illustrated in Table 6, shows how the value in the supply chain lays within higher value wholesale and retail operations by highlighting the price structures of a number of products and where they are produced as different phases of manufacture.

Looking back to how the sector in England has been developing, this is a situation that is actively occurring.

Table 6: Price structure of goods paid by UK consumers

T-Shirt		Blouse		Carpet	
Retail UK	£7.00	Retail UK	£22.00	Retail UK	£30.00
Wholesale UK	£2.65	Wholesale UK	£7.00	Wholesale UK	£18.00
Knitted T-shirt China	£1.96	Woven blouse India	£3.21	Manufactured carpet UK	£10.35
Knitted fabric China	£1.08	Woven Fabric India	£1.55	Carpet pile	£9.37
Cotton yarn USA	£0.55	Viscose yarn India	£0.70	Secondary backing	£0.83
				Primary backing	£0.83

Source: Allwood et al 2006

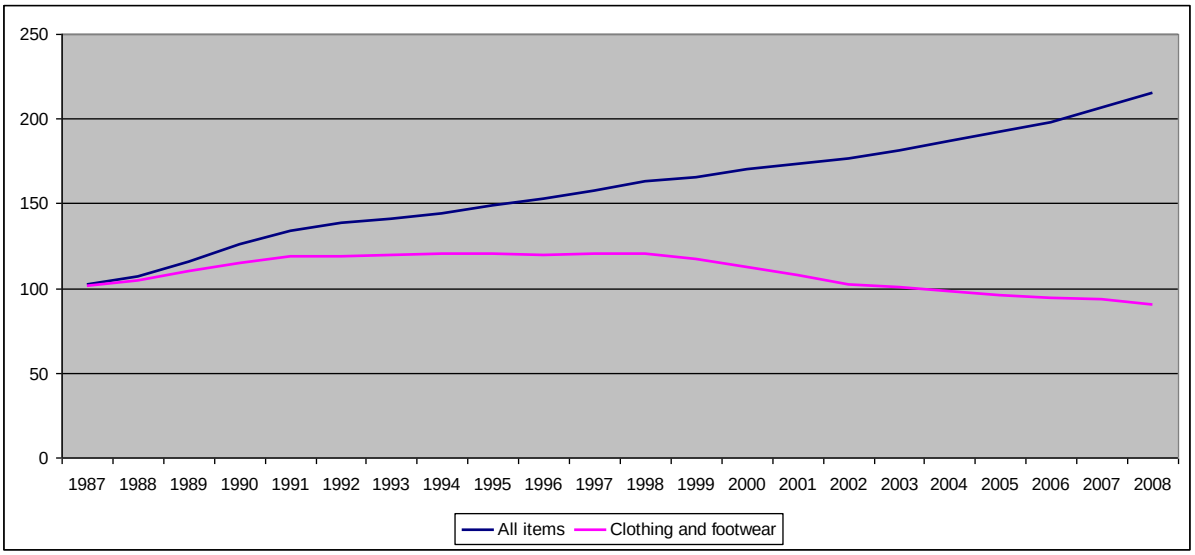
In this analysis, Allwood et al (2006) recognise that, "despite the exit of manufacturing in clothing and textiles from the UK, the sector continues to be highly valuable, as the biggest profits in the sector are at the end of the supply chain – in retail and branding. The cost and price structure of the sector globally is now characterised by there being potential for high profit from innovation, marketing and retailing but low profit from sourcing, production, assembly, finishing, packaging and distribution."

6.2 Consumer Price Index for Clothing and Footwear

This pressure on costs through outsourcing production of lower value fashion and textiles manufacturing has seen the consumer price index for clothing and footwear uncouple itself from other consumer items as low cost imports have now become key to satisfying domestic consumer demand.

As Figure 13 demonstrates, whilst the price of goods within the wider economy have more than doubled since 1987, the price of clothing and footwear has remained at roughly the same level.

Figure 13: CPI for clothing and footwear 1987=100



Source: ONS Monthly digest of statistics

6.3 Developing countries percentage share of manufacturing of clothing and textiles

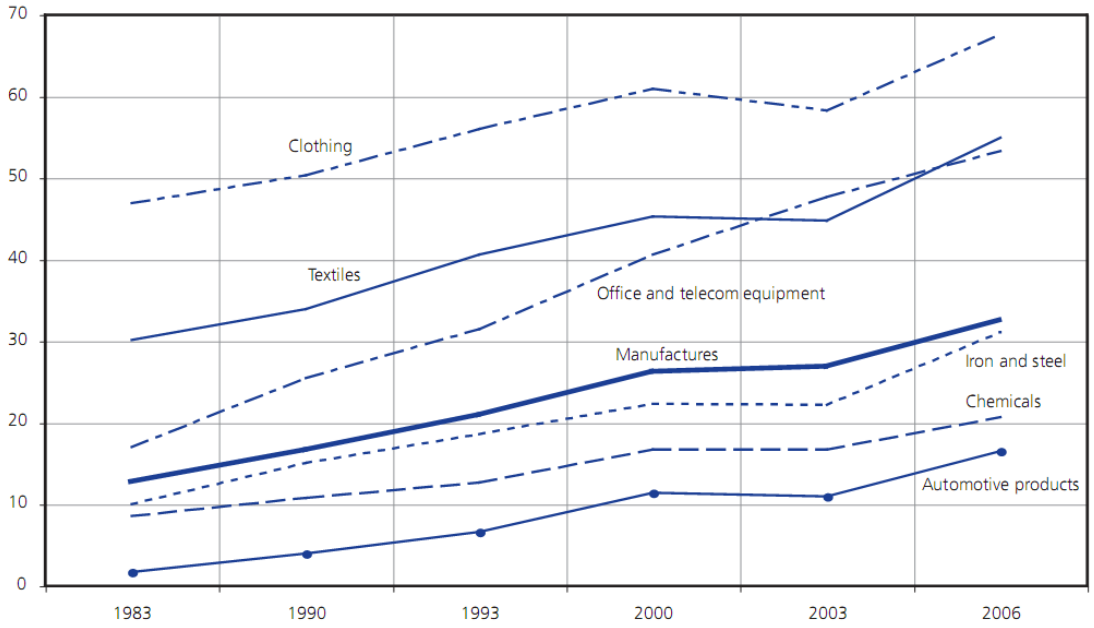
The impact of outsourcing is indicated by figures from the World Trade Organisation (WTO, 2008) and illustrated in Figure 14. Their annual report shows how these changes have

facilitated the rise of China as a low waged textile and clothing manufacturing nation, increasing its export base in textiles by 19% and clothing by 16% within an eight year period.

This though must also be seen in the context of taking fashion and textile production from other Asian countries who have seen falls in production and that the value of European textiles and clothing manufacture has increased in the same period. However, it must be noted this value is related to the role of Central and Eastern European countries as manufacturing nations who themselves enjoy competitive wage advantages.

This situation and movement of lower cost manufacturing may not be significantly altered by the recent fall in the value of sterling and consequent upward pressure on the cost of imported goods. Indeed, this factor may well be offset by the continuing process of trade liberalisation.

Figure 14: Developing countries percentage share of manufacturing of clothing and textiles

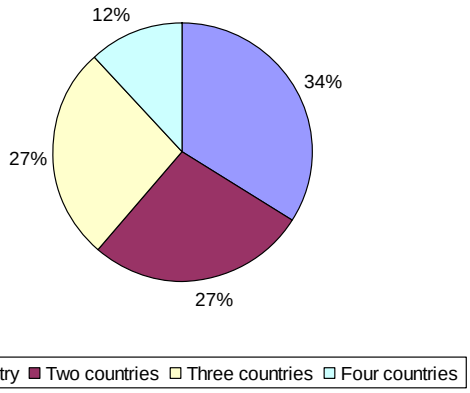


Source: WTO World Trade Report 2008 (p.25)

6.4 Sourcing of products

How such changes have impacted on firm behaviour, a recent research report commissioned by NESTA (Karra, N 2008) found that of the 51 fashion companies sampled, many were using a range of countries within their supply chains to create their products as reflected in Figure 20.

Figure 15: Companies involved in the production supply chain for designer fashion



Source: Karra, N 2008 based on 51 fashion companies

6.5 The fashion and textile sector's current position and ability to improve market conditions

Within this backdrop, a scenario planning exercise commissioned by Skillfast-UK in 2005 identified the key sub-sectors within the UK fashion and textiles footprint that were most at risk from these changes, and were identified as lower value cost sensitive production.

Although areas such as dyeing and finishing within high value production, heritage crafts and bespoke product development pre-recession had not been impacted as much as predicted, the Table below has largely offered a correct assessment of the previous five years as borne out by both the business registration/de-registration and GVA per head figures for England.

Table 7: The fashion and textile sector's current position and ability to improve market conditions

		Ability to improve market position		
		Low	**Medium**	**High**
Current Market Position	**Strong**		• Branded outdoor performance clothing • Technical textiles, finished products	
	Average	• Carpets • Wool system fabrics • Fabrics - Linen, silk, etc • Apparel lace • Merchant converting • Knitted fabrics • Wool/early processing	• Branded fashion; bespoke products • Home furnishings • Technical textiles fabrics • Speciality leathers • Importing and wholesaling • Corporate wear • Work wear and protective clothing • Leather-goods	• Designer apparel • Speciality MMF • Smart garments
	Poor	• Chain store own-label • Household textiles • Regular MMF • Yarn spinning • Cotton system woven fabrics • Commodity leather • Dyeing and finishing • Printing • Technical consumer goods		

Source: David Rigby Associates 2005

6.6 Movement towards a new typography

These forces of globalisation have at present seen a movement towards a new typography for the UK fashion and textiles sector and are illustrated in research undertaken by David Tyler (2003).

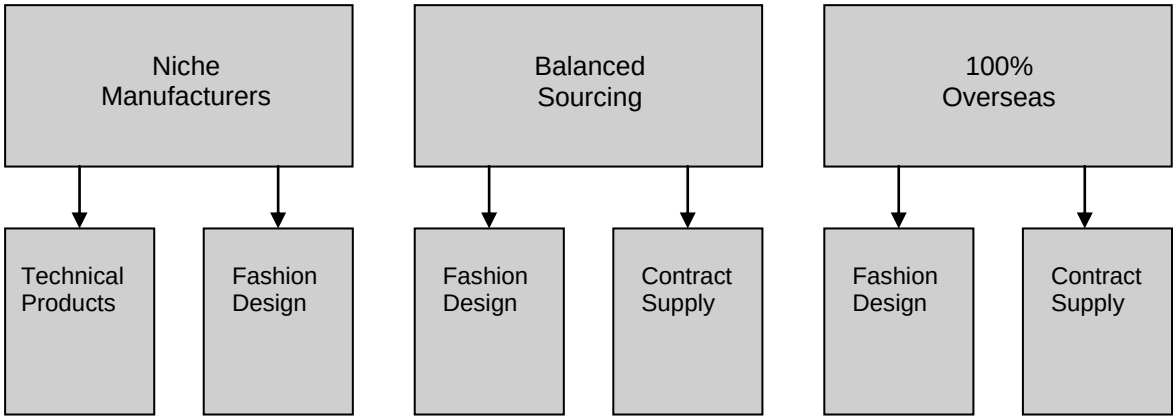
Tyler recognises there are three different strategies firms are currently following to maximise their competitive position within the fashion and textiles sector and the evidence suggests are typographies fashion and textile companies are looking to pursue. These are:

Niche manufacturers – these businesses serve markets requiring small batch sizes of products commanding a higher margin. They rely on the development of technical products or a high level of design innovation to command a market.

Balanced sourcing suppliers – these businesses have a UK manufacturing base for sampling and a small batch production for a quicker response. Larger orders are sub-contracted to low cost countries. These businesses rely on a combination of design innovation and contract supply skills.

100% overseas suppliers – these companies have moved completely out of UK manufacturing, although they may retain a facility for sampling. As with balanced sourced suppliers, the key priorities for these firms are to ensure their designs are responsive to consumer demand and place a great deal of emphasis on managing, in some instances, large complex and multi-staged supply chains.

Figure 16: The new manufacturing typology



Source: Tyler 2003

6.7 Changes to occupational composition

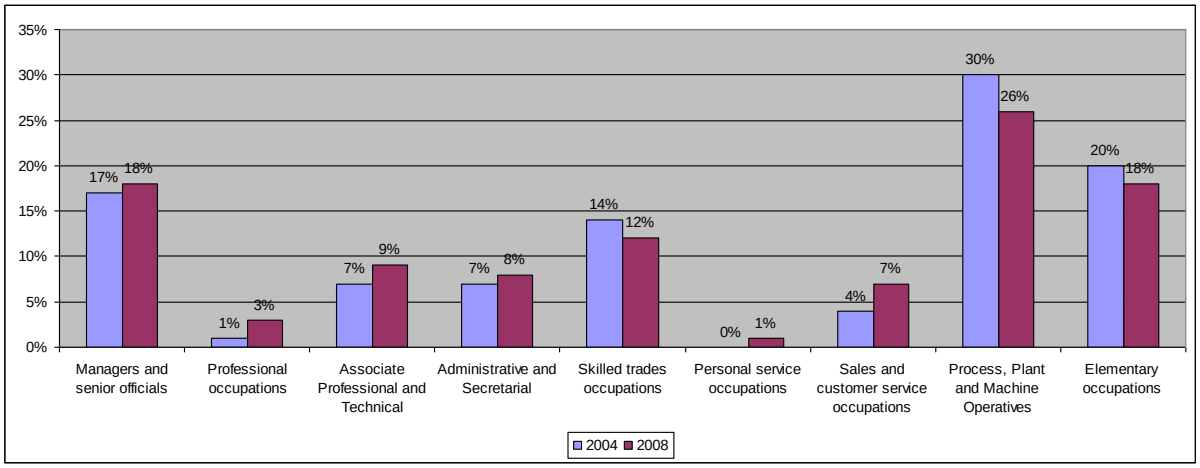
What these strategies have meant for the UK in terms of the composition of the fashion and textiles sector can be demonstrated by looking at the major occupational groups and qualifications held by people within the sector.

Taking into account the decrease in workforce numbers in recent years, what Figure 17 shows is that there has been a continued proportional decline in operative and elementary level occupations relative to this movement. Whereas in 2004 these occupational groups made up 50% of the workforce, by 2008 they had decreased to 44%.

Conversely, the figures show there has been a proportional increase in the number of managers and senior officials, associate professional and technical, administrative and sales and customer service occupations.

All of these changes in workforce composition reflect the way fashion and textile companies within the sector are now utilising skills their resources in following the strategies underlined by Tyler's new typography.

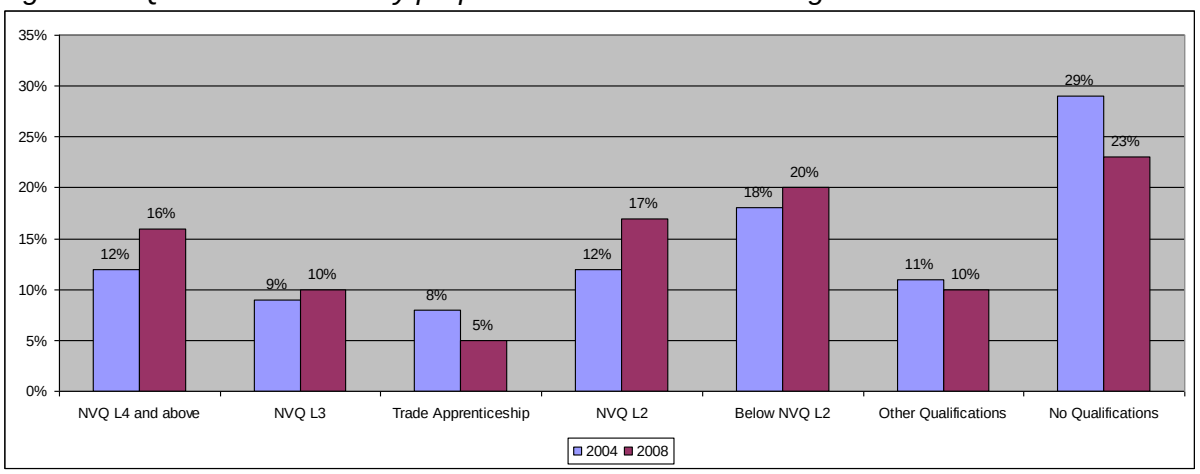
Figure 17: Occupational make-up of the sector 2004 vs 2008 in England



Source: APS 2004 & 2008 (based on SIC 17-19, 2470, 5271 & 9301)

This change in sector outlook is also reflected in the qualification composition of the sector as low skilled jobs are lost out and with it a continuing decline in the number of people without qualifications. There has also been a large proportional increase in graduate level skills within the sector as management roles and the scope of their activities have gained further importance. These are all important changes to note given the way the focus of the sector has changed using Tyler's typography as a guide and the associated skills required to enable these changes.

Figure 18: Qualification level by proportion 2004 vs 2008 in England



Source: APS 2004 & 2008 (based on SIC 17-19, 2470, 5271 & 9301)

Hitherto, high level technical functions such as design, product development, production management and quality control have typically been retained in the UK by suppliers or retailers. However, as the capability of overseas producers improves there is a threat that these functions will also be transferred and must be monitored with care.

7. Drivers of Skill Demand

Given the backdrop of the economic climate and the impact of globalisation on sector performance, the key drivers of change identified by Skillfast-UK that impact on the level and mix of skills demand within the sector in England are[1]:

7.1 Technical textiles

Technical textiles are a growing area for traditional textile companies to branch into as their traditional textiles base has been eroded and new market opportunities afforded by branching into technical textiles production become apparent. A recent DTI report put the contribution of technical textiles to the UK economy at £1.5 billion. (DTI 2007).

Technical textile products are synonymous with the servicing of a number of end-user products including[2]:

- Automotive and Aerospace;
- Composite Textiles;
- Industrial Biotechnology;
- Nanotechnology;
- Cross-cutting performance clothing and workwear

Relevant to this is a study conducted into the North West's technical textile sector (David Rigby Associates 2007). Given the North West represents almost a third of English textiles employment, a detailed analysis of the North West Advanced Flexible Materials (AFM) showed how traditional textile skills were now being used within textile development and present opportunities within non-woven and woven product development alike.

Within this context, technical textiles worth to the UK and English economy has been illustrated through the recent £6 million Yorkshire Forward and European Regional Development Fund investment in the Textiles Innovation Programme run through the Textiles Centre of Excellence in Huddersfield.

This fund will allow manufacturers to work closely with experts and academic researchers to develop expertise and knowledge to help develop a range of products and solutions within this growing sector. (Yorkshire Forward 2009)

7.2 Fast fashion

The rise of fast fashion to satisfy changing consumer tastes has put increasing pressures on companies to supply their retail markets quickly and cheaply. This has meant firms have had to think carefully on how best and most quickly they can satisfy the needs of the end user.

[1] This analysis draws mainly on Skillfast-UK (2005), *Skills Needs Assessment for apparel, footwear, textiles and related businesses*, including more recent sectoral developments
[2] Please see Annex 4 for a fuller explanation of the technical textile markets

This process has also greatly impacted the role of the design function to ensure products are suited to the fashions developed that season and meet consumer demand for the latest styles.

Whilst fast fashion has traditionally been driven by the reliance on efficient supply chains to allow for overseas manufacture, a number of interesting developments have been occurring in that the fast servicing of home markets may even see a return of a manufacturing base to the UK. Chinamex, the Chinese governments trading platform is currently investigating the proposal to create a "textile city" in Wigan that will create a large number of operation jobs as Chinese companies look to service European markets more efficiently and quickly by producing closer to the home market.[3]

7.3 The British style

There is a distinctive "British style" which is recognised in world markets which adds generally to the attraction of UK branded goods in segments such as formal outerwear, cashmere knitwear, men's shoes and worsted suiting fabrics. This style typically relies on a high level of product quality from UK manufacturers. The British style can be seen to being driven by both domestic and overseas market demands.

For instance, as the figures show both apparel and footwear sales in recent years have successfully found export markets, signifying strong growth areas for British and English producers. For instance, despite recessionary pressures, sales reported by Burberry within European and Asia pacific have shown large increases as overseas demand continues.[4]

Given London is the largest apparel centre in the UK and the importance of London Fashion Week, this key area of the demand for a British style is best reflected though figures provided by the Department for Culture, Media and Sport (DCMS) showing sizable growth for the designer fashion sector within the UK and illustrated in Table 8.

DCMS report that between 1997 and 2006, GVA for designer fashion grew from £280m to £450m, businesses from 1,400 to 2,800 and employment from 80,700 to 130,700 as firms have been increasingly successful in finding a successful niche in the market, both in domestic and export markets based on high quality British styled goods.

[3] http://www.nwda.co.uk/news--events/press-releases/200801/china-town.aspx
[4] http://women.timesonline.co.uk/tol/life_and_style/women/fashion/article6993343.ece

Table 8: Designer fashion sector growth

Year	GVA at current prices £ millions	Creative employment GB	No. Businesses
1997	280	80,700	1,400
1998	270	88,800	1,300
1999	300	93,500	1,300
2000	360	98,500	1,300
2001	320	103,000	1,300
2002	320	115,000	1,300
2003	330	113,200	1,300
2004	380	110,400	1,400
2005	430	115,500	1,400
2006	450	118,700	1,500
2007		130,700	1,500
2008			2,800

Source: DCMS 2009

7.4 Adoption to changing technology

The competitiveness of the sector partly relies on the ability of companies to harness continually emerging technologies in a whole host of areas, including computer-aided design, materials technologies, processing technologies and lifecycle management.

The 2005 UK Fashion and Textiles Sector Needs Agreement (Skillfast-UK 2005) notes how the application of technology has major implications for the sector's skills requirements. For instance, key applications were recognised to span the following:

- Computer aided design and computer controlled machinery
- Production and resource planning
- Labour saving textile production technologies such as 3D knitting
- Supply chain management and industrial sales (including the use of EDI by larger manufacturers and traders to manage relationships with retail customers)
- Virtual networking and collaboration in the areas of production development, engineering and design
- The development of innovative materials such as new generation of non-woven fabrics, new fibres and technical textiles

In addition, there is substantial evidence that collaborates with employer feedback that firms are now opening up their products to online retailing and selling direct from source. This opens up the sector to new possibilities in commercial terms and increases firms ability to stimulate their own demand through the easier management of production and supply chains.

7.5 Migration

The fashion and textiles sector has been greatly affected by the significant influx into the UK of migrant labour, much of it skilled, particularly from Poland following its accession to the EU in 2004. This has led to improved access to skilled labour and reduced labour costs for the sector.
However, whilst employers were able to take advantage of this boon in skilled labour, the recent recession and the loss of many migrant workers returning back to their home nations

as evidenced by Home Office figures, a key challenge for the sector will be ensuring there are enough skilled people within the system who can ensure the sector can continue to compete and innovate.

This trend has been confirmed by the recent Skillfast-UK employer survey which confirms that whilst the recruitment of Eastern European workers is not a priority for English employers, skills shortages in important areas of their businesses persist.

7.6 Image of the sector

A recent survey of 14-19 year olds conducted by Skillfast-UK (Skillfast-UK 2009) found that fashion and textiles was ranked ninth out of a selection of ten industry sectors in terms of its attractiveness as a career option.

Whilst sectors that enjoy either a high profile or visible career routes such as media, health and retail were the top ranking sectors, the fashion and textiles sector is an attractive one to work in with females more likely to want to work within the sector.

The research confirmed that the perception of the sector is affected greatly by the awareness of job roles available within the sector. The respondents were aware of the roles of fashion designers and buyers with over half of the respondents claiming to know a little or a lot about their function.

However, key occupations that are expected to contribute to the continued success and future strength of the sector and expected to see major staffing needs in the short-medium term all suffer from a lack of awareness as to the role carried out. Occupations such as fashion production managers that are responsible for ensuring the quality of production across the supply chain, and technical occupations that are currently shaping the direction of the sector that are areas that are not well understood.

7.7 The sustainability agenda

The one major skills driver that has increased in prominence since the publication of the Skillfast-UK SSA in 2005 has been the increasing importance of the sustainability agenda on company behaviour.

Recent research conducted by Skillfast-UK (2009b) has highlighted four main drivers on company behaviour in the fashion and textiles sector to modify their behaviour and how the skills needs of firms were being changed by the legislation. This is described through how the offerings of professional bodies, trade associations and providers were being adopted to allow firms to meet their objectives including:

- Legal regulations
- Taxes
- Consumer demand
- Preparation for expected increases in energy and resource prices

The Skillfast-UK research found that companies were keen to deliberately use the sustainability agenda as a marketing tool to differentiate their business, and stimulate consumer demand for sustainable products. Indeed, membership of organisations that differentiate their products as being sustainably produced such as the Soil Association were key drivers of behaviour.

In September 2009, the Department for Environment, Food and Rural Affairs (DEFRA) published a Sustainable Clothing Action Plan (DEFRA, 2009) which has attracted a large number of retailers and manufacturers, and encouraged companies such as Marks and Spencer to publish a 100 step sustainability plan for its textiles and clothing business.

This is on top of existing EU legislation (EU, 2007) such as the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH), which came into force in 2007 and involves EU member nations ensuring all manufacturers and importers of chemicals must identify and manage risks linked to the substances they manufacture and market. This impacts the UK fashion and textiles sector as a downstream user of chemicals.

Other EU legislation such as the Integrated Pollution Prevention and Control (IPPC) that entails plants for the pre-treatment (operations such as washing, bleaching, mercerisation) or dyeing of fibres or textiles where the treatment capacity exceeds ten tonnes per day are subject to the IPPC Directive, and are required to obtain an authorisation (environmental permit) to operate.

The EU biocides directive and Emissions Trading system are also pieces of legalisation that may impact areas of the sector.

8. Skills Implications

In summary, the operation of these drivers points to a strategy of differentiation being the optimal one for the sector rather than one of cost leadership. In view of this, there are a number of key factors for success which have important implications for human resources in the sector in both the UK and England.

8.1 Design creativity

Many firms in the sector rely on creative design to add value to products, build brands and secure a competitive advantage in world markets. To realise this creativity, design excellence needs to be allied to strong technical skills/knowledge and commercial awareness.

Comparative research (Owen, 2003) looking at parts of the UK and Italian sectors at a micro level also places a significant emphasis on the importance of skills in areas such as design, marketing and garment construction to the overall superior competitiveness of the sector in Italy.

8.2 Branding and marketing

Successful UK companies differentiate their offer from that of low-cost competitors through the development of strong brands. This calls for specialist skills, as does the requirement to identify and exploit new product and geographic markets in order to remain one step ahead of competitors.

8.3 New product development and commercialisation of new technologies

To develop the products needed to compete in technical markets identified in Table 7, firms in the sector need access to specialist technologists, such as textile technologists, as well as graduates across a wide range of Science Technology Engineering and Maths (STEM) disciplines, including chemistry and engineering.

New product development also typically entails process development, creating a need for upskilling at technician and operator level to facilitate these changes.

8.4 Ability to compete in premium and niche markets on a global level

The UK's competitive advantage in this area typically relies on low-cost, small scale manufacturing of high added value and difficult to make products. Success in this area depends, in turn, on specialised craft skills such as tailoring and shoemaking. These skills are typically "tacit": they cannot be easily documented and must be passed on through hands-on experience over a considerable period of time

8.5 New business start-ups

As seen in the increasing rate of businesses in the sector registering for VAT, the emergence and growth of niche markets has led to a high start-up rate of businesses seeking to meet this new demand, adding to an already large micro business population in the sector. Owner-managers require a combination of business/management skills and technical knowledge.

8.6 Overseas sourcing

UK firms' focus is increasingly on the management of overseas supply chains. This function requires direct experience and understanding of the production environment together with knowledge of materials / product technology.

8.7 Cost reduction

There are some capital-intensive elements of the sector where scope lies to maximise productive efficiencies and reduce unit labour costs. An issue that is especially pertinent in the current financial climate. This creates a need for upskilling and multi-skilling, particularly at operator level.

8.8 Management and leadership

The sector performs poorly in terms of attracting its fair share of graduates into management positions and many managers lack wider experience and formal management knowledge having been promoted from within the company. This is a key problem when strong leadership is required in a time of rapid change and when there is a need to maximise the contribution of workers.

The recent research report by NESTA (2009) highlighted that designers and manufacturers have mismatched expectations and don't understand each others' business operations. Key points of tension include on-time delivery, quality, high cost (particularly for small orders), payment terms and their effect on designer cash flow, lack of specialist skills, lack of investment in technology, and trust.

8.9 Ageing workforce

As noted in the sector demographics, over a fifth of the workforce are aged over 55 and a high proportion of workers in key technical roles are nearing retirement. The requisite technical skills are in short supply as a result of a long-term decline in apprenticeships and other development mechanisms. Moreover, the negative image of the sector restricts employers in their efforts to bring in new recruits to fill core technical roles.

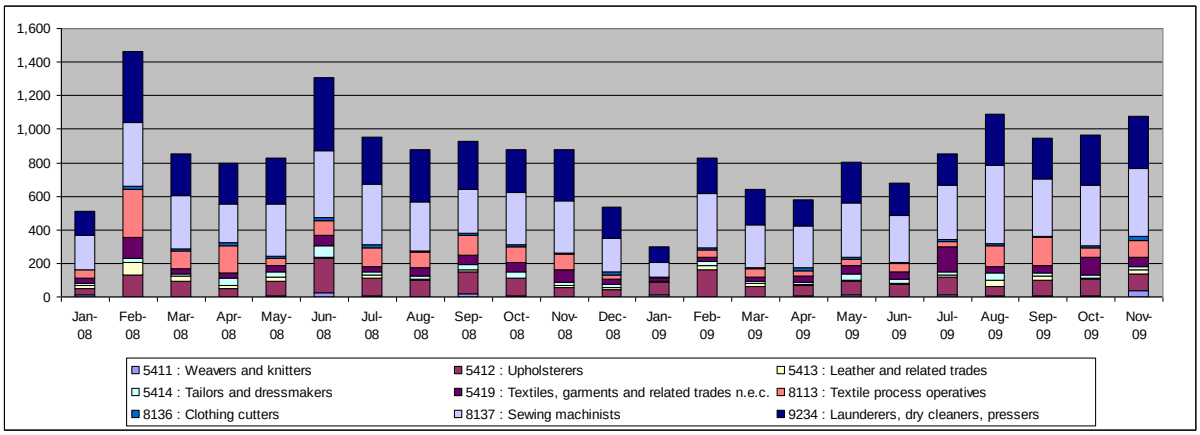
9. Impact of the Recession

Whilst there has been a lot of structural change occurring within the English fashion and textiles sector, it is important to summarise these changes within the context of the economic climate it is operating in. Within this regard, a number of key indicators exist that help to demonstrate the current outlook for the sector.

9.1 Vacancies notified to Job Centre +

One key indicator is vacancies notified to the sector by Job Centre+. Although not all jobs are advertised through this avenue, it acts as an important barometer of the job market. The latest figures indicate that whilst there was a dramatic slump in vacancies throughout late 2008 and early 2009, by the end of 2009 it is possible see a small increase in demand for jobs. The November 2009 monthly total was for instance at a far higher level than seen in November 2008.

Figure 19: NOMIS vacancy rates for key fashion and textile positions in England



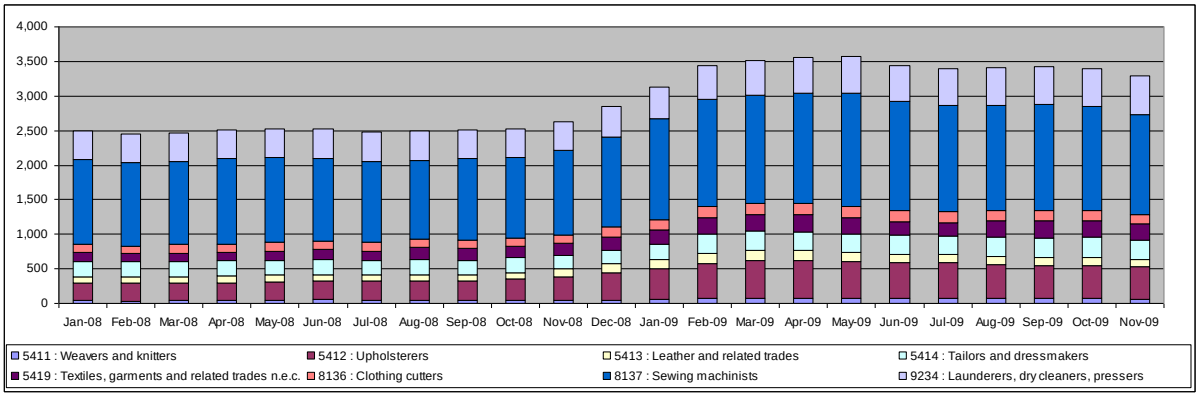
Source: Job Centre Plus via NOMIS

9.2 Claimant count by sought occupation

The claimant count by sought occupation is of particular interest. This count shows how the end of 2008 and beginning of 2009 saw a sharp increase in people signing on looking for fashion and textiles related work within England. Again though, and in unison with the productivity figures, claimant sought occupations peaked in early 2009 and by the end of the year they have remained persistently high.

Using these figures, it was people looking for sewing machinist and laundry/dry cleaning roles who have been particularly badly affected by the recession. This indicates set-backs in both manufacturing and service sub-sector activity as consumer discretionary spending is reduced.

Figure 20: Claimants sought occupation by job role in England



Source: DWP via NOMIS

9.3 Skillfast-UK consultation with employers

The recession has meant companies still see a need to upgrade skills but may not be in a position to invest in the short to medium term. Our recent consultations with sector employers (Skillfast-UK, 2009a) indicate that the skills needs previously identified persist but that the balance of priority relative to other business issues has shifted in the light of economic circumstances.

- There are still shortages of skilled people to fill technical roles at operative / craft level, eg sewing machinists, tailors that is consistent with the figures drawn from the vacancy report.
- Companies still face the problem of an ageing workforce and a need to bring in capable recruits – this will be critical in the medium term and needs to be addressed now.
- Management and leadership skills are a priority, in terms of managing the workforce and developing the people skills needed to engage with suppliers and customers in a difficult environment.
- For those companies undertaking investment there will be a need to upskill the workforce, eg new technology in laundry will create demand for technicians at expense of shop floor operatives.
- Companies acknowledge that without skills investment they may not be able to respond adequately to the upturn when it comes and some companies report that a shortage of skilled people threatens their ability to maintain or grow a manufacturing base in the UK. This is a concern since the fall of sterling has strengthened the business case for manufacturing on-shore.

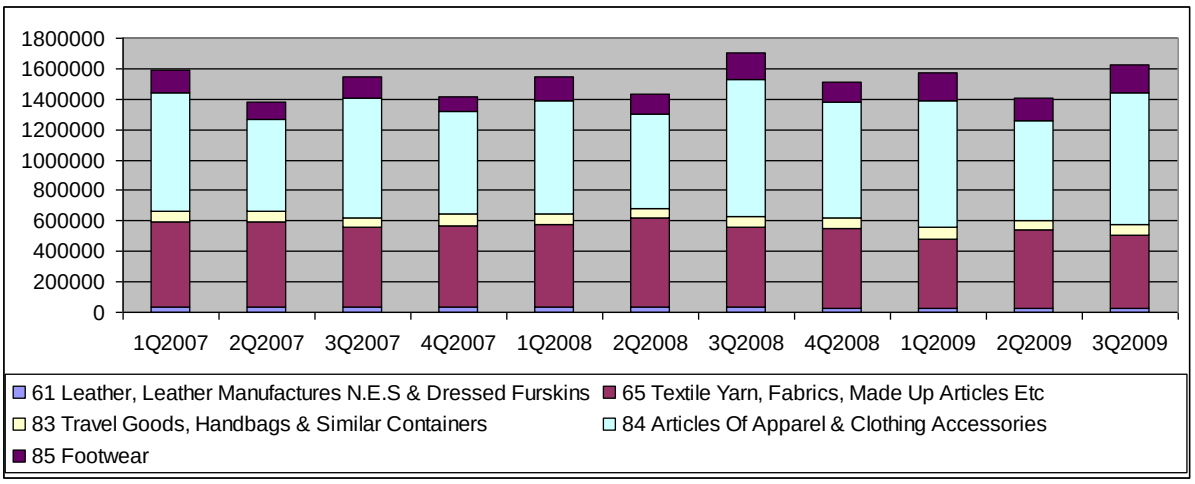
9.4 Export performance

Despite the visible impact of the recession on the job market, export activity within the English fashion and textiles sector has remained steady throughout this period.

Indeed, the value of exports when comparing quarterly returns over the past two years have shown little discernable difference. Within this context, apparel and clothing, textiles and footwear have all seen resilient performance, indicating a continuing appetite for English

produced goods in overseas markets despite continuing falls in domestic demand driven by low cost substitutes.

Figure 21: Value of English exports by SITC per quarter (£ 000's)



Source: HMRC

10. Current Skills Needs

The following section examines the level and nature of skills needs in the sector, focusing specifically on recruitment problems and the shortfalls in the skills and knowledge of existing employees in the sector workforce as employers seek to meet new challenges arising out of the marketplace, emerging technologies and other factors.

It has been shown that the occupational structure of the sector workforce is very different to that of the broader economy. This factor strongly influences the character of skills needs in fashion and textiles.

It should be noted that much of the data relating to skills deficiencies originate from before the recession and the sharp change in labour market conditions seen since then must be factored into any assessment of the current situation. Nonetheless, consultation with the sector in recent months indicates that the profile of skills issues has retained the pattern set out below. This section therefore examines:

- vacancies
- skill shortages
- skills gaps
- skills priorities based on support from the training system
- higher educational skills needs with design occupations

10.1 Vacancies

Vacancies as a proportion of employees are slightly lower, but in line with what was reported for England at an all sector level. Employers reporting vacancies were also in line with the fashion and textiles sector in the other home nations.

In terms of hard-to-fill vacancies as a proportion of employees, again the English fashion and textiles rate was in line with the all sector level and the fashion and textiles sector for the home nations.

However, hard-to-fill vacancies as a proportion of all vacancies were higher than reported at an England all sector level. This reflects the specialist nature of jobs and image problems that impact the sector when trying to recruit. This is in line with what has been reported by the fashion and textiles sector in Wales although Scotland and Northern Ireland face greater difficulties in tackling hard-to-fill vacancies.

Table 9: Vacancy issues

Vacancy type	Skillfast-UK England	England All Sectors	Skillfast-UK Scotland	Skillfast-UK Wales	Skillfast-UK N.Ireland
Vacancies as % of employees	2%	2.8%	2%	2.5%	1.3%
Hard-to-fill vacancies as proportion of employees	0.7%	1%	1%	1.4%	0.9%
Hard-to-fill vacancies as a % of all vacancies	35%	30%	51%	57%	61%

Source: NESS 2007, SESS 2006, FSW 2005, NISMS 2008

10.1.1 Impact of hard-to-fill vacancies

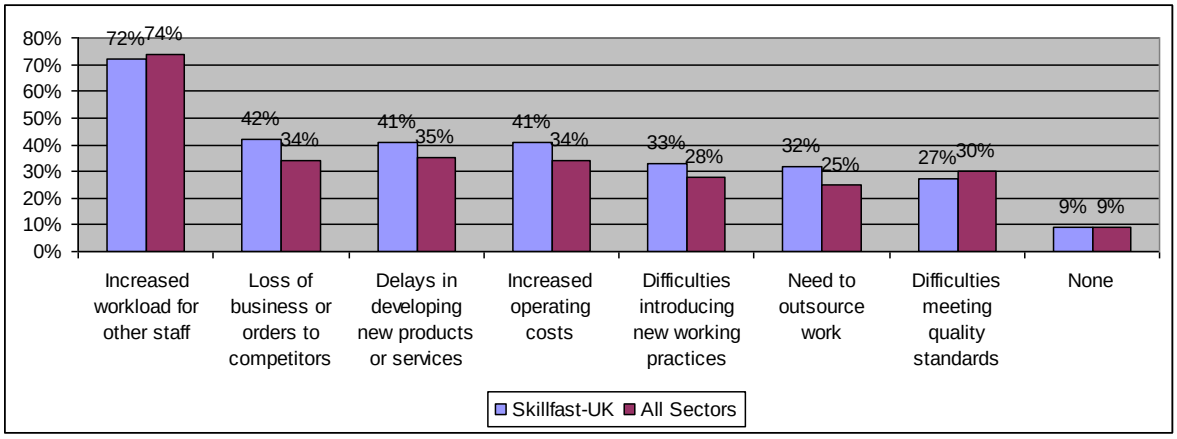
The impact of having these hard-to-fill vacancies is far greater in the fashion and textiles sector than is being reported at an all sector level in England. Three quarters of employers state these lead to increased workload for their staff, which is in line with the pattern set out at an all sector level.

However, when it comes to the productivity and profitability of their businesses, two fifths of employers report that these hard-to-fill vacancies impact in a loss of business or orders to competitors, delays in developing new products or services and increased operating costs, all above the all sector figure.

This issue highlights the drivers and pressures the fashion and textiles sector is under and how the lack of suitable candidates for jobs is profoundly impacting the performance and competitiveness of firms in a times of rapid change for the sector.

This question that will become even more pertinent as the ageing demographic will mean employers will have to fill these positions. Yet with over a third of vacancies recognised as hard-to-fill, this issue looks likely to be perpetuated and continue to handicap company performance.

Figure 22: Impact of hard-to-fill vacancies



Source: NESS 2007

10.1.2 Actions taken to overcome hard-to-fill vacancies

Actions taken by employers within the Skillfast-UK footprint in England is consistent with the picture that occurs at an all sector level with the vast majority using recruitment related activities rather than internally facing solutions. However, 16% reported they had done nothing to attempt to alleviate their recruitment problems.

Table 10: Actions taken to overcome hard-to-fill vacancies

	Skillfast-UK	All Sectors
Increasing advertising/recruitment spend	43%	44%
Using new recruitment methods or channels	23%	24%
Nothing	16%	13%
Increasing/expanding trainee programmes	8%	7%
Increasing the training given to your existing workforce in order to fill the vacancies	6%	10%
Redefining existing jobs	5%	6%
Increasing salaries	4%	4%
Making existing staff work longer hours	2%	3%

Source: NESS 2007

10.2 Skills shortages

Skills shortages are defined as those vacancies that are proving hard-to-fill because of a shortage of candidates with the required skills, qualifications or experience.

National survey data indicate that the incidence (proportion of establishments reporting shortages) and density (shortages expressed as a proportion of the workforce) of skills shortage vacancies are both low in absolute terms, although both are in line with estimates for the wider economy.

In England, the total number of skills shortage vacancies is equivalent to 0.5% of the workforce. However, it should be noted that the sector has a low rate of labour turnover and it is perhaps more meaningful to look at skills shortages as a proportion of total vacancies, which is somewhat higher in the sector at 25% compared with a whole economy average of 21%.

This points to the fact that whilst employers in the English fashion and textiles sector have a fewer number of vacancies, vacancies when they occur are difficult to fill. This illustrates the technical nature of jobs within the sector and specialist skills employers require.

Table 11: Skill shortages as a % of employees and of all vacancies

	Skillfast-UK England	All sectors
Skills shortages as % of employees	0.5%	0.6%
Skills shortages as % of all vacancies	25%	21%

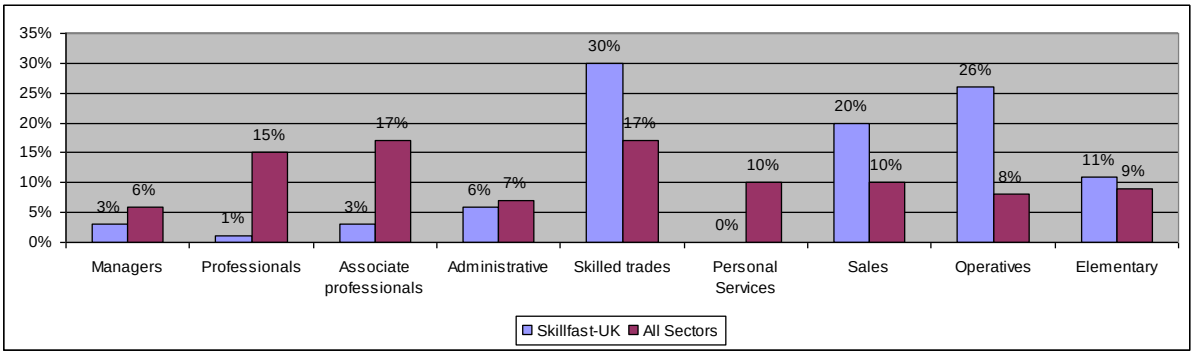
Source: NESS 2007

10.2.1 Skills shortage vacancies by occupational grouping

The fashion and textiles sector in England reports the proportion of skills shortage vacancies as being primarily within the skilled trades and operative occupations.

Skilled trades within the sector include occupations such as carpet fitters; weavers and knitters; leather and related trades and tailors and dress makers. Operatives include sewing machinists; textile process operatives; chemical and related process operatives and clothing cutters. Also pertinent is the increased proportion of sales staff with skills lacking. As already highlighted, firms are increasingly dependent on marketing and selling their products directly to new markets and are increasingly reliant on these roles.

Figure 23: Profile of skill-shortage vacancies by occupation



Source: NESS 2007

10.2.2 Skill shortages by specific occupation

The findings from NESS are confirmed by the 2008 Skillfast-UK employer survey. Employers were asked about the specific technical areas for which skilled candidates are in short supply. 57% of respondents to the survey reported skills shortages when looking to recruit. This study identified shortages at associate professional level as well as for skilled trades and operative level jobs. In particular, the survey found the following issues reported by employers and illustrated in Table 12.

Table 12: Absolute numbers of skills shortages

Level of skills	Occupation
Operative level	Sewn products operations
	Textile process operations
	Laundry and dry-cleaning operations
Skills trades	Garment alteration and repair
	Pattern cutting and grading
	Hand-craft garment making
Higher level technical skills	Designers
	Textiles technologists

Source: Skillfast-UK employer survey 2008

Each of these areas has a significant level of employment coupled with a significant incidence of reported shortages. However, there are also niche areas in which companies employ few people in these occupations yet are characterised by a very high incidence of shortages reported by employers.

The footwear and leather sub-sector, in particular characterises this situation, with the various specific occupations within this sub-sector ranked highest across the whole of the fashion and textiles sector in terms of the incidence of technical shortages.

This demonstrates the nature of very specialist skills within this sector that are no longer passed on due to the decline in employment within the sector in the recent past and therefore the skills are no longer being learnt to a vast degree.

The overriding message is that employers are currently unable to attract candidates of a specific calibre to these job roles. With an ageing workforce with further retirements and an increasing demand for replacement staff forecast, employers within the sector will be in need of skilled staff as a matter of urgency.

Table 13: Skills shortages by occupation in England

Role	Sector Coverage	Estimated number of businesses employing people in this role (England)	Estimated number of people employed in role (England)	% who said there is a shortage of skilled candidates (base includes "don't knows")
Leather process***	Footwear & leather	81	850	88%
Footwear manufacturing***	Footwear & leather	173	954	87%
Leather technology roles***	Footwear & leather	375	1,468	80%
Leather goods*** manufacture	Footwear & leather	242	1,769	79%
Footwear technology***	Footwear & leather	314	960	78%
Shoe repair	Footwear & leather	1,398	2,908	70%
Tailoring/ Handcraft garment making	Apparel & SP, Design	2,213	4,996	67%
Pattern cutting	Apparel & SP, Design	2,824	6,178	63%
Garment alterations	Apparel & SP, laundry & dry-cleaning	5,261	8,453	61%
Sewn products	Apparel & SP, Design	6,831	35,877	58%
Garment technology	Apparel & SP, Design	1,405	3,601	57%
Sampling role	Apparel & SP, Design	2,081	5,312	55%
Laundry/dry cleaning maintenance	Laundry & dry-cleaning	820	1,765	54%
Dry cleaning operations	Laundry & dry-cleaning	4,032	10,951	54%
Textile and Fabric tech	Apparel & SP, Design, Textiles	2,197	22,853	53%
Textile process	Textiles	722	14,665	50%
Production management	All sub-sectors	5,131	11,029	47%

Design	Textiles, Apparel & SP, Footwear & leather, Design	7,009	16,888	45%
Laundry operations	Laundry & dry-cleaning	3,331	15,395	32%
Supply chain management	All sub-sectors	4,669	14,093	28%
Any skill shortage				**57%**

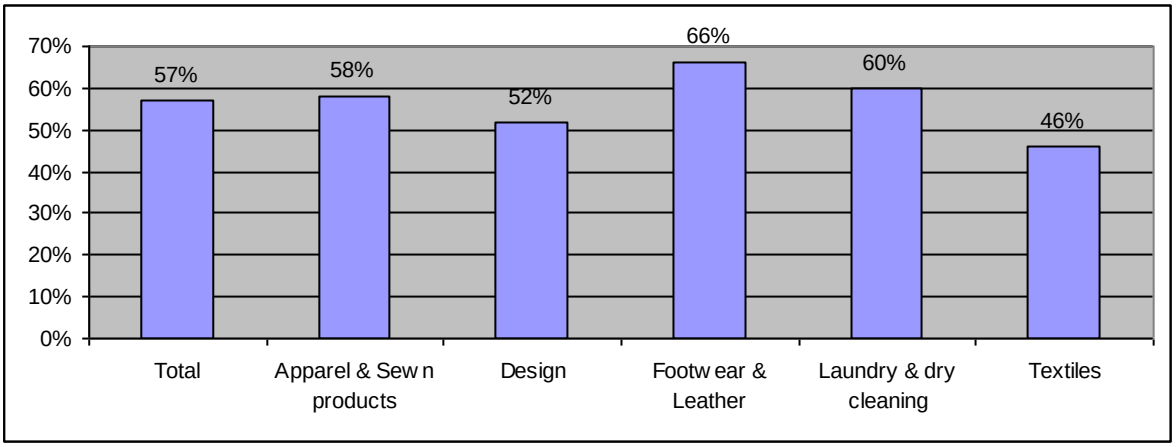
Source: Skillfast-UK survey of employers 2008 Note: individuals may have been allocated to more than one category as part of the survey process, reflecting multi-skilling of some roles. ***detonates small sample numbers so figures are for indicative purposes

10.2.3 Skills shortages by sector board

Looking at skills shortages when looking to recruit by individual sector board, it can be seen the footwear and leather sector perceive the greatest difficulties when looking to recruit indicating the tacit skills required within this sector. Employers within the apparel and sewn products sector board also reported above average skill shortages.

Interestingly, despite the high level of shortages reported for textiles process operatives and technologists, this sub-sector reports the lowest incidence of skills shortages. However, responses still represented half of employers within this sub-sector who still saw skills shortages as an issue.

Figure 24: Skills shortages by sector board



Source: Skillfast-UK survey of employers 2008

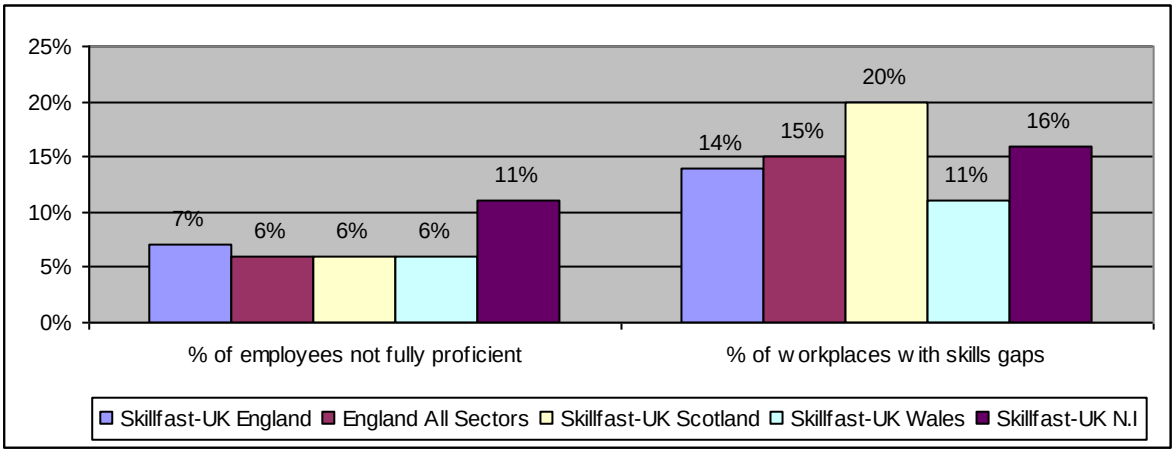
10.3 Skills gaps

Skills gaps are skills deficiencies identified by employers within their existing workforce. Using national datasets, it can be seen that the English fashion and textiles sector has a greater incidence of employees that are not fully proficient than at an England all sector level. This is also slightly higher than seen within the other home nations within the fashion and textiles sector.

England's fashion and textiles sector also reports less workplaces than at an all sector level reporting a skills gap and is also below the rate experienced by the other home nations. This can be attributed to a settled workforce and low turnover of staff.

However, the figures still highlight how over one in eight workplaces does have a skills gap which given the large number of skills shortage vacancies, means that it is unlikely that these gaps can be addressed through staff replacement.

Figure 25: Employees not proficient and skills gaps

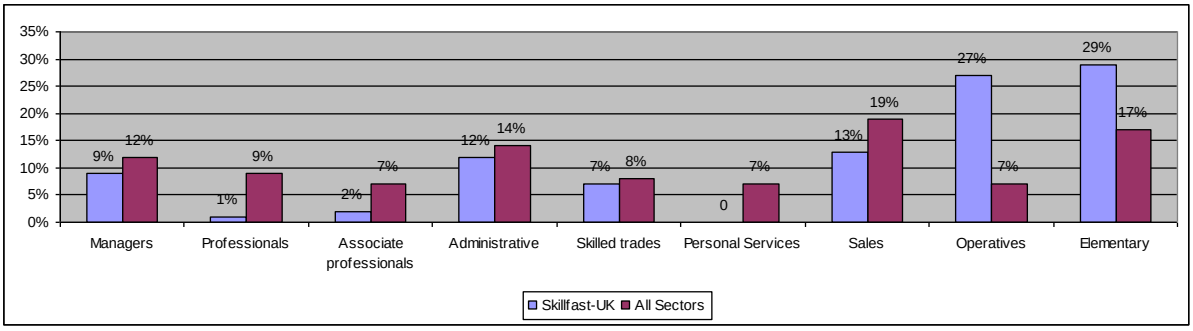


Source: NESS 2007, SESS 2006, FSW 2005, NISMS 2008

10.3.1 Distribution of skills gaps by occupation

The figures demonstrating the distribution of skills gaps show that in the English fashion and textiles sector the largest proportion focus on the operative and elementary occupations. These occupations between them account for 56% of all reported skills gaps.

Figure 26: Distribution of skills gaps by occupation



Source: NESS 2007

10.3.2 Skills gaps by detailed occupation

The Skillfast-UK employer survey from 2008 also adds further detail to this by illustrating which specific job roles employers felt skills gaps were most prevalent. 16% of respondents recognised skills gaps within their employees.

Whilst the overall level of skill gaps shows a consistent pattern with the national datasets, there is a lot of variety within the occupations reporting deficiencies.

As with skill shortages, in absolute terms the occupations identified by employers as having skills gaps in absolute terms were designers; supply chain managers; production managers; sewing machinists and dry cleaning operatives.

Although niche occupations, footwear and textile/fabric technology roles were reported as the occupations with proportionally the highest lacking the required skills within the workforce.

Table 14: Skills gaps reported by job role reported in England

Role	Sector Coverage	Estimated number of businesses employing people in this role (UK)	Estimated number of people employed in role (UK)	% who said existing staff need to improve / broaden skills (base includes "don't knows")
Leather goods manufacture***	Footwear & leather	242	954	31%
Textile process	Textiles	722	14,665	28%
Leather technology roles***	Footwear & leather	375	1,468	24%
Footwear manufacturing***	Footwear & leather	173	954	19%
Design	Textiles, Apparel & SP, Footwear & leather, Design	7009	16,888	15%
Garment technology	Apparel & SP, Design	1405	3,601	15%
Pattern cutting	Apparel & SP, Design	2824	6,178	15%
Textile and Fabric tech	Apparel & SP, Design, Textiles	2197	22,853	15%
Supply chain management	All sub-sectors	4669	14,093	14%
Sampling role	Apparel & SP, Design	2081	5,312	14%
Laundry/dry cleaning maintenance	Laundry & dry-cleaning	820	1,765	14%
Tailoring/ Handcraft garment making	Apparel & SP, Design	2213	4,996	13%
Dry cleaning operations	Laundry & dry-cleaning	4032	10,951	13%
Production management	All sub-sectors	5131	11,029	12%
Leather process***	Footwear & leather	81	850	12%
Footwear technology***	Footwear & leather	314	960	11%
Sewn products	Apparel & SP, Design	6831	35,877	9%
Laundry operations	Laundry & dry-cleaning	3331	15,395	8%
Garment alterations	Apparel & SP, laundry & dry-cleaning	5261	8,453	6%
Shoe repair	Footwear & leather	1398	2,908	5%
Any skills gap				**16%**

Source: Skillfast-UK survey of employers 2008 Note: individuals may have been allocated to more than one category as part of the survey process, reflecting multi-skilling of some roles. ***detonates small sample numbers so figures are for indicative purposes

10.4 Nature of skills gaps

Almost every three in five employers identified technical and practical skill gaps as the nature of reported cases. This is slightly higher than the all sector figure yet, worryingly, it has been established that technical and practical skills are highly relevant to the continued health of the fashion and textiles sector.

Team working and problem solving skills were also strongly identified by employers and on a scale higher than reported at the all sector level.

Oral communication, customer handling and written communication were recognised by over a third of employers for contributing to their skills gaps.

Literacy and numeracy is also an issue for the sector in England for a quarter of employers, well above the all sector figure, signifying English fashion and textiles employers have a significant need for these skills and are currently not available within the workforce.

Table 15: Nature of skills gaps

	Skillfast-UK	All Sectors
Technical and practical	58%	51%
Team working	50%	40%
Problem-solving	45%	35%
Oral communication	40%	41%
Customer handling	35%	41%
Written communication	35%	27%
Management	30%	26%
Literacy	28%	19%
Numeracy	25%	15%
General IT user skills	15%	22%
Office admin	12%	18%
IT professional skills	7%	12%
Foreign languages	6%	9%

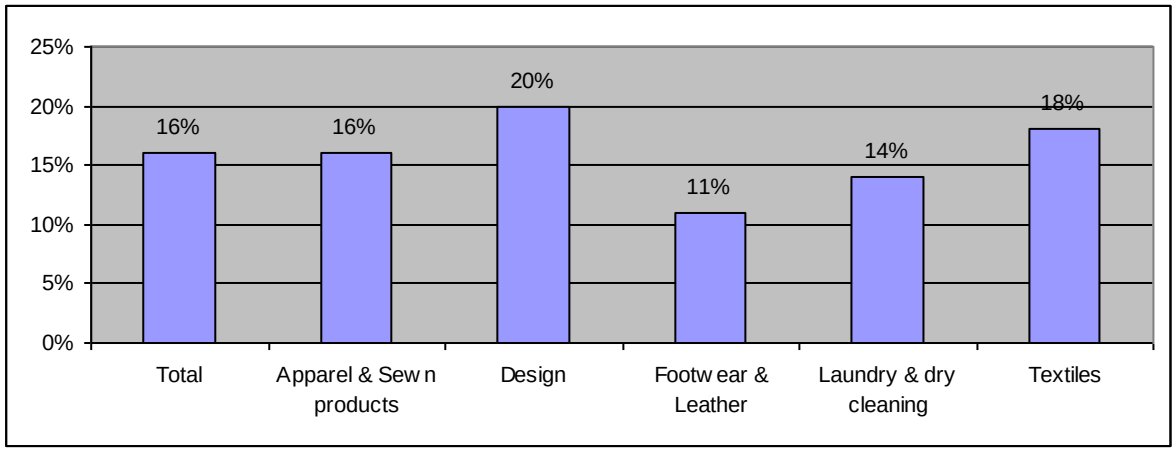
Source: NESS 2007

10.5 Skills gaps by sector board

Employers who work within the design sector board reported the highest level of skill gaps with a fifth of employers reporting skills gaps within their workforce and collaborates the high level of skills gaps for the designer occupation.

Employers within the footwear and leather sector board report the lowest number of skill gaps within their present workforce despite the highest level of shortages. This information again reinforces the highly technical skills required by workers within this sector and the fears of employers when looking to replace established members of staff.

Figure 27: Skills gaps by sector board



Source: Skillfast-UK survey of employers 2008

10.6 Skills priorities for the education and training supply system

Turning to generic skills, the Skillfast-UK 2008 survey asked employers in England to rate a number of issues in relation to importance to their business where the training and education system could help improve their workforce.

What the survey identified was that overall for employers within the Skillfast-UK footprint in England, the issues of importance were recorded into four very distinct areas and all linked to either the existing demographic of the workforce or the current direction of future sector success.

Whilst these areas will be expanded on, it is important to contextualise how these issues are seen in importance in relation to the direction the sector has recently taken.

Tallying with the messages form NESS, almost half of employers placed great importance on the need for the education and training system to help improve numeracy and literacy skills, sales and marketing skills, including the skills needed for international trading, recruiting young people to replace workers nearing retirement and improving management, leadership and supervisory skills within their operations.

Table 16: Skills priorities based on support from the educational system in England

Identified priority	
Recruiting and retaining able young people to replace workers who are nearing retirement	48%
Improving management leadership and supervisory skills	47%
Improving sales and marketing skills, including the skills needed for international trading	47%
Improving the quality of in-house training, eg through development of in house coaches	41%
Improving numeracy literacy and other basic skills	40%
Finding colleges and/or training providers that can deliver relevant training in technical skills	38%
Finding graduates with the right practical and commercial skills and knowledge	27%
Implementing new productivity techniques such as lean manufacturing approaches	23%
Attracting science and technology graduates who can help to develop new products and processes	15%
Bringing in and training migrant workers from Eastern Europe and elsewhere	11%

Source: Skillfast-UK employer survey 2008 (% based on important or very important)

10.7 Skills priorities for the education and training supply system by sub-sector

Responses from the different facets of the English fashion and textiles sector show there are a number of variations that exist between the sub-sectors and act as useful indicators to skills needs.

With the increasing reliance on competing in a global market, it is noted how the sub-sectors most exposed to the global market place, namely the apparel and sewn products, design and textiles sub-sectors all place emphasis on improving sales and marketing skills, including the need for the international trading.

In contrast, domestic service sectors such as laundry and dry cleaning have little need for these skills, reporting their greatest priority around recruiting and retaining able young people, although this was a common theme through all of the sub-sectors.

A common theme reported by all five sub-sectors that were reported on, saw the need for better recruitment and retention of young people and improving management and leadership skills as skills priorities they were keen for the education system to deliver.

Table 17: Skills priorities by sub-sector

No	Apparel & Sewn Products	Design	Footwear & Leather	Laundry & Dry Cleaning	Textiles
1	Improving sales and marketing skills, including the skills needed for international trading	Improving sales and marketing skills, including the skills needed for international trading	Recruiting and retaining able young people to replace workers who are nearing retirement	Recruiting and retaining able young people to replace workers who are nearing retirement	Improving sales and marketing skills, including the skills needed for international trading
2	Recruiting and retaining able young people to replace workers who are nearing retirement	Improving management leadership and supervisory skills	Improving the quality of in-house training, eg through development of in- house coaches	Improving management leadership and supervisory skills	Improving management leadership and supervisory skills
3	Improving management leadership and supervisory skills	Finding graduates with the right practical and commercial skills and knowledge	Improving management leadership and supervisory skills	Improving the quality of in-house training, eg through development of in- house coaches	Recruiting and retaining able young people to replace workers who are nearing retirement
4	Improving the quality of in-house training, eg through development of in- house coaches	Finding colleges and/or training providers that can deliver relevant training in technical skills	Improving numeracy, literacy and other basic skills	Improving numeracy, literacy and other basic skills	Finding colleges and/or training providers that can deliver relevant training in technical skills

Source: Skillfast-UK employer survey 2008

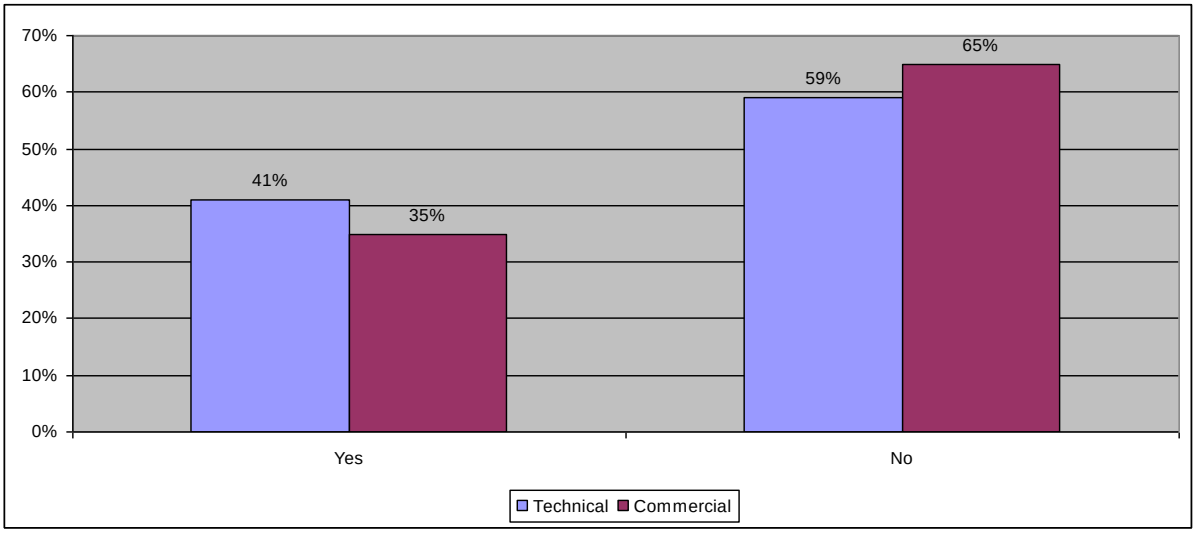
10.8 Higher educational skills in the design sector

36% of employers within England employ someone within a design function. Given the continuing and growing importance of design jobs to facilitate growth within the English fashion and textiles sector, it is important to understand the skills needs employers felt they needed from recent graduates.

The Skillfast-UK 2008 survey asked employers in England as to their opinion of the design and technical skills graduates have and if they are adequate to their firms needs. The findings of this survey were that of the companies who work within the design sector, 59% saw deficiencies in graduate technical skills, with 65% reporting deficiencies within commercial skills.

Whilst there were a large number of don't knows within the responses (without the don't knows the number responding "no" would have been 77% and 78% respectively), there were few employers who believed graduate standards in these two areas were adequate for their firms needs. With design firms dependent on these types of skills to allow them to compete in the global market place, employers are showing a high level of concern at the current situation.

Figure 28: Do you believe that recent graduates have the right level of technical skills needed for design jobs within your business?



Source: Skillfast-UK employer survey 2008

11. Scenario planning

As noted, there are a wide number of forces and drivers at play on the fashion and textiles sector. How these forces and drivers will shape the sector's future is a point of much conjecture with a number of scenario plans and analysis existing that illustrate this point. This is especially true for the English fashion and textiles sector as it has exhibited such sensitivity and structural change in the recent past to globalisation.

With the recent slowing down of loss of employment numbers within manufacturing after the patterns of the mid 2000's, and the growing sustainability issues, it is important to take stock of where the sector has come from and to offer an insight into the various scenarios as to where these recent market trends may lead.

The section therefore draws on the following scenario plans and modelling frameworks, each of which offers a relevance to the current and potential direction of the English fashion and textiles sector:

- Working Futures III (2007)
- Skillfast-UK's bespoke scenario planning to 2015 (2005)
- Economix's European three scenario plan (2008)

11.1 Working Futures III

Working Futures III is a forecasting scenario series produced by the Warwick Institute for Employment Research and Cambridge Econometrics. This research uses existing survey work on employment trends across the sectors to give a view of employment estimates.

Data from the latest Working Futures III study for the English fashion and textiles sector highlights the following broad level data as outlined in Table 18 below:

Table 18: England employment forecasts

						2007 - 2017		
Employment Levels (000s)	**1987**	**1997**	**2007**	**2012[5]**	**2017**	**Net Change**	**Replacement Demand**	**Total Required**
England Skillfast-UK Footprint	643	445	235	214	199	-36	81	46
UK Skillfast-UK Footprint	770	543	272	246	228	-44	94	50
England All Sector Employment	22,682	23,872	26,341	27,185	28,064	1,723	9,700	11,423

Source: Working Futures III

[5] The projections in this study were forecast before the recession impacted the economy and employment levels. For this reason the longer term 2017 figures must be used to give a clearer indication of future trends.

Key highlights from the Working Futures III data for England are:

Overall sector picture

Working Futures III forecasts the numbers working within the Skillfast-UK footprint in England will have begun to stabilise by 2017. This follows the dramatic falls in recent times as the erosion of the fashion and textiles manufacturing base that has seen the collapse in employment at operative level.

Despite the continued modest decline in the gross number employed, the sector is forecast to experience modest positive net employment requirements. This is due to the large proportion of people forecast to leave the sector through retirements and the need to fill these emerging vacancies. In all, over a third of the present workforce will require replacement by 2017.

Compared to the sector at a UK level, the English fashion and textiles sector is forecast to see a slightly lower drop in net workforce numbers. This indicates the English fashion and textile sector has been more successful as it finds its optimum employment levels and is a picture borne out by the relatively smaller decline in GVA and employment in England than the other home nations.

In contrast to the pattern forecast to be exhibited in the fashion and textiles sector, England at an all sector level is expected to increase its gross employment needs to 2017 by 7%. Whilst overall employment in England will continue to rise, there will be little additional domestic demand for Skillfast-UK sectors products stemming from the extra working population. This trend demonstrates the continued reliance on the export markets to drive the English fashion and textiles sector manufacturing base.

Structural changes

Table 19 below highlights Working Futures III predictions on sectoral changes by occupation up to 2017 and has profound implications for the English fashion and textiles sector.

Table 19: Occupational make-up

SOC 2000 Major Groups				Net Change	Replacement Demand	Total Requirement
Employment Levels (000s)	**2007**	**2012** [6]	**2017**			
Managers and Senior Officials	43	43	44	2	15	17
Professional Occupations	14	15	15	0	5	5
Associate Professional and Technical Occupations	29	29	29	0	9	9
Administrative, Clerical and Secretarial Occupations	17	13	10	-7	7	0
Skilled Trades Occupations	27	24	21	-6	9	3
Personal Service Occupations	14	12	12	-2	5	3
Sales and Customer Service Occupations	23	22	21	-2	8	6
Transport and Machine Operatives	43	33	27	-16	15	-1
Elementary Occupations	26	23	20	-6	9	3
Total	**235**	**214**	**199**	**-36**	**81**	**46**

Source: Working Futures III

Data for England suggests the largest fall in both real and proportional terms will occur at an operative level with a 16,000 or 16% decline in the number of people required at this level. Likewise elementary, clerical and secretarial and skilled trades occupations are all forecast for net employment losses.

The sum of these changes suggests a continued movement of manufacturing and process based to operators overseas through off-shoring and outsourcing is set to continue, albeit at a much slower rate than has been seen previously. However, this movement can be seen in that the overall sector perspective will have begun to stabilise by 2017.

The one occupation forecast to make up a larger part of the workforce and with it requiring a larger total requirement taking into account replacement demand needs are managerial positions. Professional and associate professional, technical and sales and customer service occupations, whilst remaining broadly flat in terms of net demand, will all require a large replacement demand requirements.

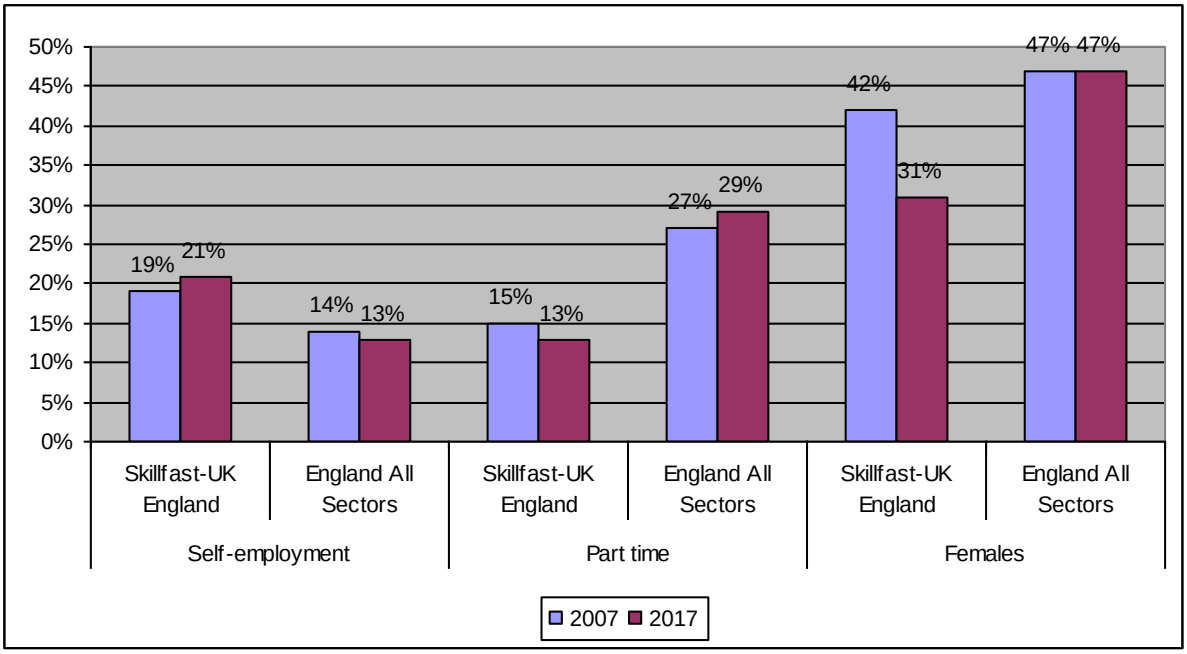
As companies spend a greater amount of time managing processes such as the supply chain and customer relations, the level of technical expertise, both in terms of processes employed and ICT needs will require extra recruitment to these roles.

The reduction in operative level recruitment opportunities and the need for management level skills illustrates the point that the sector will require far less employees with lower level skills (below NVQ level 2) and more with higher level skills (level 3 and above) to enable the sector in England to compete.

[6] Working Futures III was conducted before the recession. Therefore the longer term 2017 figure offers a more accurate indicator than the 2012 projection

International research (Jagger, 2005) suggests that there is an association between growth in total factor productivity (TFP) in a country's fashion and textiles manufacturing sector and the presence of intermediate skills (up to and including S/NVQ level 3 equivalent) in the sector's workforce. The research highlighted that whilst the UK was above average for TFP, TFP growth figures were poor in comparison. Given the continuing changes to the sectoral structure, it is viable that these issues with TFP may well be accentuated.

Figure 29: Demographic make-up of the English fashion and textiles sector



Source: Working Futures III

Reflecting the continued niche and micro level that the sector operates at, and is continuing to work to, self-employment will be a key feature of the sector compared to all sectors in England, rising slightly to over a fifth of the workforce by 2017.

Conversely, part-time working in the Skillfast-UK footprint in England, will continue to decline. This is in contrast to the high proportions the all-sector in England figure currently enjoys and is predicted to remain stable.

The share of female employment is forecast to continue to decline with the proportion reducing from 42% of the workforce to less than a third of total employment. This again reflects the high level of structural change that is occurring within the sector as operative and elementary occupations that are traditionally the domain of females, (especially within clothing and textiles manufacture) are lost. This again is in contrast to the England all sector figure that will see stable employment figures for females.

11.2 Skillfast-UK's bespoke scenario planning[7]

In 2005, Skillfast-UK commissioned David Rigby Associates (DRA) to scenario plan the potential future direction of the UK fashion and textiles sector to 2015. What was reported

[7] This section draws directly on a specially-commissioned scenario planning study 'The UK Apparel, Footwear and Textile Industry in 2015', David Rigby Associates, 2005 as published in the 2005 Skillfast-UK Sector Needs Analysis

formed the scenario planning for the 2005 Sector Skills Agreement. Reviewing the evidence, what DRA reported has largely come to pass to where we now are in 2010.

Drawing directly from the Skilfast-UK SNA (2005), the study was conducted with the assumption there are no variables that could potentially change the direction of the core UK apparel, footwear and textiles industry which over the next decade could conceivably lead to particularly significant differences in the way the sector will evolve.

For the core manufacturing and wholesale elements of the sector, the patterns of evolution of several key drivers were already well established and seen unlikely to change significantly. It was also assumed that any conceivable changes over the next decade in the world economy, exchange rates or in available technologies were unlikely to lead to significant changes in the UK sector's market position, prospects or future industry structure.

Overall, the industry which will exist in 2015 was predicted to be focused on producing higher added value and differentiated products for world markets as the pattern to where we are in 2010 demonstrates has been occurring. The key influences, activities and actions to ensure the future competitiveness of the sector were identified as illustrated in Table 20.

Table 20: Sector Futures to 2015

Predicted Sector Influences	Key Activities	Competitiveness of the Sector
• Competition from low-cost countries • Continuing liberalisation of world trade • Increasing demand for fashion products among a growing world middle-class • An unwillingness to invest in the UK in volume manufacturing of sector products • Globalisation of tastes in clothing and footwear • Higher ethical standards in both production and consumption	• Brand creation and development and the international marketing of branded products • The application of new technologies in all areas of the business • Creative design of both aesthetic and technical products • Low-cost, small scale manufacturing of high added value and difficult to make products • International sourcing of both materials and other finished products • Supply chain planning and management • The creation, exploitation and protection of intellectual property and proprietary know-how • The industry will employ fewer people than now, and in manufacturing, many fewer. There will be a growth, however, in the number of qualified staff in all other functional business areas	• Better customer service • Brand creation and development • Commercialisation of new technologies • Creative design • Customer relationships • Strong craft and operator skills • International marketing and distribution • Manufacturing and/or sourcing overseas • Marketing, not just selling • New product development • Strong customer relationships • Supply chain management

Source: DRA 2005

Scenarios for the dry cleaning and textile/leather servicing sub-sector

Due to its nature of being a service led sector, the DRA analysis offered a separate perspective for the dry cleaning/laundry and textile/leather servicing sub-sectors. The future of this sub-sector was considered separately because of the service-based nature of its activities and the distinctive nature of the external driving forces that act upon it. The scenario presented for these sub-sectors are as follows:

Table 21: Scenarios for the dry cleaning and textiles/leather servicing sub-sector

Key Drivers	Most Optimistic 5% Annual Growth	Most Likely 1% Annual Growth	Most Pessimistic 5% Annual Decline
• Clothing and shoe technology (such as the growing availability of easycare garments) • The availability of home cleaning options • Economic conditions (which have a direct impact on consumer and corporate demand for the sub-sector's services) • Demographics and lifestyles (the trend towards casual dressing and the ageing of the population)	• No further technology, reducing the need for professional aftercare • Smart dressing increases • Strong UK economy • High employment and consumer confidence	• Some new disruptive fabric and clothing technologies and aftercare products • Slow growing UK economy • Higher unemployment. • More fragile consumer confidence	• Many disruptive technologies • Weak UK economy • Increased unemployment • Low consumer confidence

Source: DRA 2005

Scenarios for the textile, clothing and leather-goods aftercare sector

The textile, clothing, shoe and leather-goods aftercare sector was seen as relatively mature in the analysis. At best, it was envisaged to achieve only modest rates of growth and therefore could actually suffer a significant decline as a consequence of further technical advances.

Therefore, in all three of the scenarios, strategies and action plans appropriate to a mature service sector were identified to allow businesses operating in this sub-sector to increase market share and profitability. These strategies and action plans include:

- reducing costs
- market segmentation; identifying profitable niches
- introducing new and/or improved products for target segments
- improving customer service
- improving staff skills in line with all these

The SNA 2005 reported that in the case of scenario three occurring and a fall off in demand, this sector would require special actions and assistance to help with the changes brought about by downsizing and business closures.

11.3 Building on the premise of the DRA scenario study

What was reported in the scenario planning of the 2005 SNA report has been seen to have occurred, although the uncertain economic climate has seen fluctuations in business fortunes.

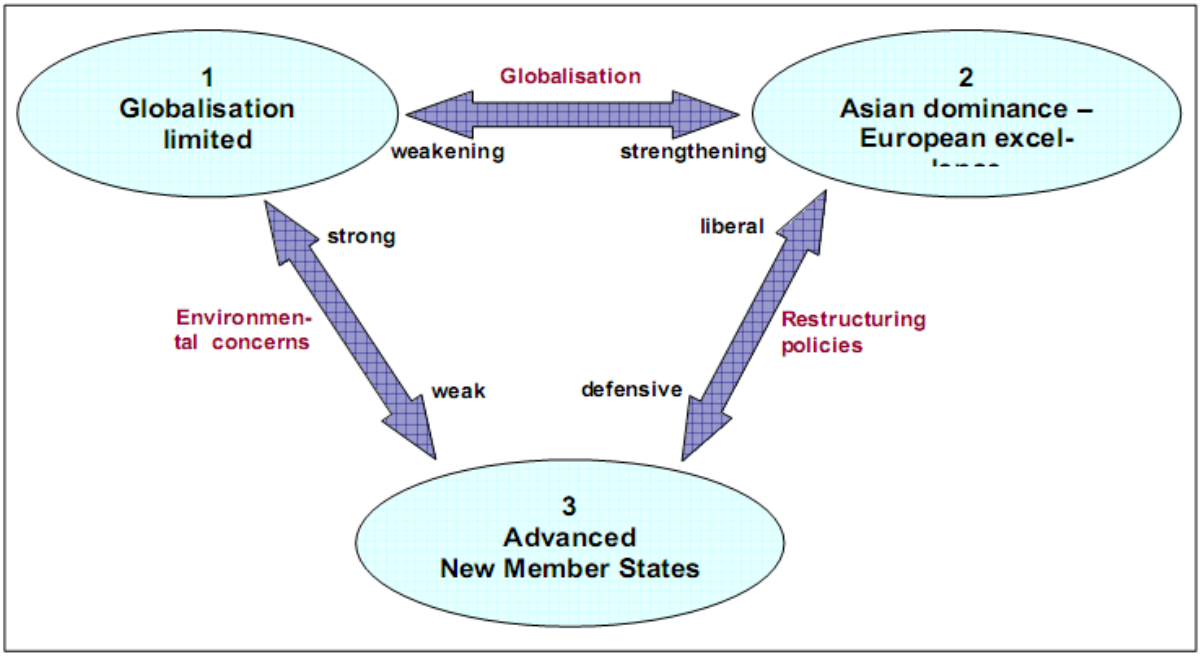
However, what needs updating since the publication of the report in 2005 is the way differing drivers such as sustainability and environmental issues, the demands of fast fashion and in itself the uncertain global economy, have begun to impact the sector and how this could lead to a variety of interesting directions in which the fashion and textiles sector manufacturing base can progress.

Setting the UK fashion and textiles sector in the global environment using Economix's scenario planning on a European level

Vogler-Ludwig and Valente (2008) propose three potential scenarios to the year 2020 of the future direction for the European fashion and textiles sector and its implications for current high value manufacturers such as the UK and England. The reported scenarios in each of these instances impact differently on the European fashion and textile sector that likewise will have ramifications for the UK fashion and textiles skills base and with UK and England.

The three scenarios put forward in this paper are "Globalisation Limited", "Asian Dominance-European Excellence" and "Advanced New Member States." Each of these scenarios are based on how the three major sector drivers of globalisation, environmental concerns and the restructuring of trade and economic policies will play within the fashion and textiles sector.

Figure 30: Vogler-Ludwig K and Valente A C *three scenarios*



Source: Vogler-Ludwig K and Valente A C (2008)

The three scenarios can therefore be summarised as such:

Scenario 1: Globalisation Limited

Globalisation limited sees the effects of climate change and the environmental agenda change the way in which consumers, the Government and producers all currently make their decisions. This in turn sees production return to a European base as manufacturing production is desirable to be carried out closer to the home market.

Whilst this pattern reduces the level of outsourcing and off-shoring that has been seen in the recent past, the employment implications for Europe as a whole are still negative with a 20-25% cut forecast from current levels.

Scenario 2: Asian Dominance – European Excellence

Asian Dominance reports the present trends the market has seen in the recent past of strengthening globalisation and continued liberalisation of trade policies. Placed in these terms, the fashion and textiles sector will continue as it has been with industrial manufacturing continuing to be outsourced and off-shored to lower waged countries as the developing world is able to improve the quality of the products offered. EU countries will strengthen their technological lead and dominance of the high value, high technology market.

This scenario will see the greatest falls in employment terms for the European economy with a halving of current employment forecast. However, this scenario will have positive impacts for future employment within skilled and technical occupations as European producers continue to innovate and command a market lead in high value production.

Scenario 3: Advanced New Member States

This scenario sees the lower cost EU Accession countries will continue to offer a production facility for the EU to continue manufacturing. As globalisation continues to negatively impact manufacturing employment, policy will be targeted at ensuring an integrated role for Europe. This will produce strong demand for production related skills in lower waged European countries and professionals in high-cost countries in an attempt to prevent the erosion of the manufacturing capability from within the European Union.

Again, as with Globalisation Limited, it is forecast this scenario will see a 20-25% cut in European employment levels to 2020. However, the configuration of jobs will be different with a great loss of trade workers with far greater emphasis on administration and the management of supply chains within a European context than at present.

Skillfast-UK recognises that this model is the one which is most likely not going to occur, given the large amounts of manufacturing already sourced to Asian countries that still offer cheaper alternatives.

Each of the key drivers at play and how that will influence each scenario is highlighted in Table 22 overleaf:

Table 22: Key drivers of change for the scenarios

Driver	Scenario 1 Globalisation limited	Scenario 2 Asian dominance- European excellence	Scenario 3 Advanced New Member states
Environmental Costs	Rising significantly; Climate risks are strongly visible; Environmental policies with limited efficiency	Rising; Environmental policies are effective; Climate risks remain manageable	Rising; Environmental policies are effective; Climate risks remain manageable
Markets	Consumers strongly concerned about climate risks; Global economy disintegrates due to environmental conflicts; Slow macro growth	Consumers appreciate environmental politics; Global market for top qualities; Global labour division is further developed; Strong macro-growth	Consumers prefer job creation and remain price-sensitive; Medium macro-growth
Knowledge Base	Innovation concentrated on ecological technologies; Revival of traditional crafts; switch from foreign productivity to energy productivity	Strong product innovation for speciality textiles; Design marketing and sales very important; Management of the value chain	Mainly process innovation provided by machinery and organisational changes; Strong increase of labour productivity
Competitiveness	Declining competitiveness of emerging countries due to high environmental costs; Ecological and social criteria have strong impact on competitiveness	Strong position of emerging countries on low and medium quality segments; Strong position of European production of high value markets and speciality textiles	Strong position of low-cost areas in Europe on medium quality segments; Strong position of high-cost areas on high value markets and speciality textiles
Branch Structures	Locally concentrated value chains due to high transport cost; small sized production networks; Rising share of craft business	Closure of mass production; small sized innovation companies; Global networks of producers; Highly specialised crafts businesses	Mass production remains in European low-cost areas; Switch from subcontractors to independent suppliers; Top qualities and international brands in high-cost areas
Foreign Trade	Low growth of world trade	Strong growth of world trade	Medium growth of world trade
Employment Change 2006-2020	-25%	-50%	-20%
Skills Needs	Revival of production related trades; More managers and professionals in low-cost areas; Specialists for traditional crafts; General need for ecological competences	Strong decrease of production related trades; Limited demand for highly specialised craftsmen; Strong increase for technical and commercial specialists; Computer professionals	Strong demand for managers and commercial professionals in low-cost areas; Limited demand for technical specialists in high-cost areas; Decrease of production-related trades and craftsmen

Source: Vogler-Ludwig K and Valente A C (2008)

Impacts on employment by occupation

Taking the above drivers as a norm, how each of these scenarios will impact the skills mix on a European level which in turn has implications for the sector at a UK and England level is presented in Table 23 below:

Table 23: Occupation changes in the textiles and manufacturing sector impacted by the three scenarios

Occupation	Scenario		
	1	2	3
Managers	+	+	+
Computing professionals, associate prof	+	++	++
Engineers, associated engineers	+	++	++
Business professionals, associated prof	-	+	+
Other professionals	--	=	+
Office clerks and secretaries	--	=	+
Service and sales workers	=	+	++
Textile, garment and related trade workers	++	--	--
Pelt, leather and shoemaking trades workers	++	--	--
Other craft related trade workers	+	+	--
Textile, fur and leather products machine ops	=	--	--
Plant and machine operators, assemblers	-	--	-
Labourers	-	=	-
European employment impact to 2020	**-20-25%**	**-50%**	**-20-25%**
++ strong increase; + increase; = no change -- strong decrease; - decrease			

Source: Vogler-Ludwig K and Valente A C (2008)

Scenario 1: Globalisation Limited

The implication of this scenario will be that the domestic demand for UK and English produced goods driven by the sustainability agenda (and to an extent increasingly less advantage of wage drivers to off-shore and outsource) will continue to find a market.

Assuming specialisation on existing operations occurs, there will be a large increased demand for trade workers within the apparel sector. At the same time this change will also see moderate returns for managers, computing professions (in relation to increasing technological changes in both production and management of supply chains functions) and engineers to enable this process to happen.

Scenario 2: Asian Dominance – European Excellence

The trend that has occurred over the past ten years will continue to impact on the UK. Textiles and clothing firms continue to move production away from the UK as the duel impact of increasing sophistication of overseas competitors able to replicate current high value goods produced in the nation. Whilst this has large negative effects on the industry, it does create opportunities at managerial, computing, engineering and business professional levels as design functions and management of supply chain activities become an even more prominent function and vital to the on-going success of UK businesses to manage global supply chains closer to home.

Scenario 3: Advanced New Member States

The UK will experience continuing structural changes as supply chains reconfigure themselves once more. Production slowly creeps to new EU member states driven by increasing consumer demands for fast fashion and the sustainability agenda. The ability of UK producers to compete lies in their ability to cultivate customer relations and manage production from design through to branding and marketing activities.

Required competencies

Recapping these competencies, Vogler-Ludwig K and Valente A C (2008) offer the following thoughts in Table 24 on how the sectors skill needs will be dictated depending on which of the three scenarios occurs.

What is interesting to note is that the competencies listed by the firms within the Skillfast-UK analysis sit easiest within the Asian Dominance-European Excellence model, although Working Futures III analysis does not envisage the steep decline in job losses, this scenario does. Whilst this has the greatest issues in terms of potential loss of employment, the competencies needed to take full advantage of global opportunities as reported in the priorities from the education sector, suggest employers at this moment in time believe this model is the one that will drive forward the sector.

However, pre-recession, given the slowing down of the rate of decline in employment and businesses within the UK fashion and textiles sector, monitoring of the situation is something that must be taken into account.

Table 24: Critical competences

	Scenario 1 Globalisation Limited	**Scenario 2 Asian Dominance-European Excellence**	**Scenario 3 Advanced New Member states**
General Management	Change management Network management	Strategic, visionary, intercultural	Quality management, market orientated
Marketing and Sales	Consumer-orientated, socially and environmentally responsible	Client orientated, technical know how, trend-setting, intercultural	Competition-orientated, Market knowledge; Intercultural
Administration	Environmental legislation (REACH)	International business	International business
Research & Development	Sustainable products and technologies; Traditional techniques	Interdisciplinary; Multi-skilled Creative	Market –orientated Efficiency orientated Creative
Process Engineering	Energy and emission control; Cost control	Supervision of global supply chain	Cost control Quality control
Production	Small-scale, specialised, crafts-orientated	Client orientated, Technical know-how	Quality orientated; mass production
Quality Control	Environmental standards Network operations	Diversified standards	Large-scale control systems Network operations
Logistics	Energy-efficiency-orientated	Delivery-time orientated	Delivery-time-orientated

Source: Vogler-Ludwig K and Valente A C (2008)

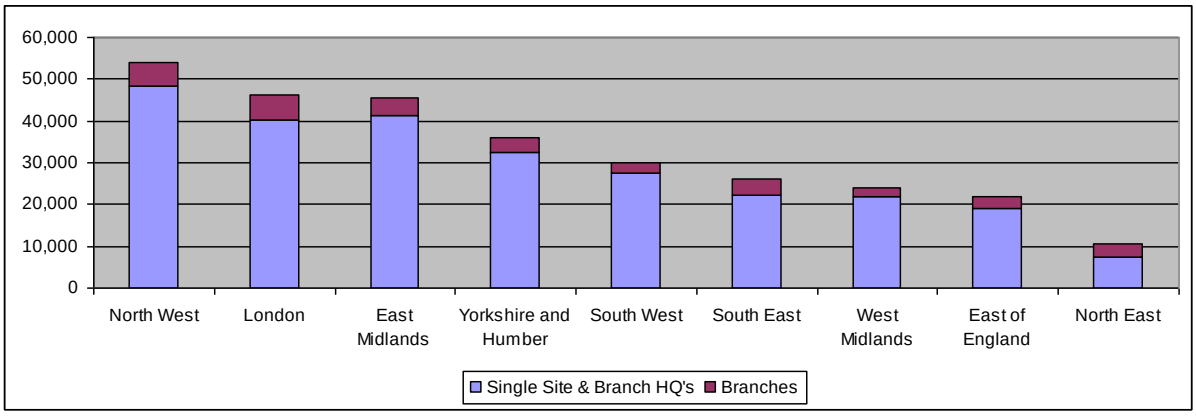
12. Geography

As has been noted, the scale of skills deficiencies varies between the four home nations. The profile of these skills needs also varies as a result of differences in detailed industry and occupational profile in each of the English regions, although there are strong common elements.

12.1 Understanding the regional variation of employment within England

Using the tbr resizing exercise, it is possible to see that the North West is the largest employing English region with almost 55,000 employees within the sector. This is followed by London and the East Midlands whilst Yorkshire and the Humber and the South West are also sizable employers. Both the North West and London also have the highest proportion of branch employment.

Figure 31: Employment by English region



Source: tbr 2008

However, to enable the contextualisation of skills shortages and gaps reported when described within a regional context, it is important to understand the location of employment and the impact these issues have on of the four Skillfast-UK sector boards that are reportable.

On closer inspection of employment levels using ABI data[8] in Table 25, it can be seen that the North West of England is proportionally the highest employing region and accounts for a quarter of all textiles sector board activity.

The East Midlands has a substantial representation in each of the four boards and whilst it is the smallest of the reportable sector boards, a third of all footwear and leather activity takes place there. Similarly, London is the largest apparel and sewn products producer whilst representing the high urban density and penetration of service users such as hotel businesses, accounts for almost a quarter of laundry and dry-cleaning activity.

Laundry and dry cleaning activity due its service activity nature has a fairly even distribution relative to the population size of each nation/region.

[8] The use of ABI data excludes all self-employment and underestimates the total size of the sector as discussed in relation to the tbr resizing exercise. However, the ABI data is able to be disseminated at sub-GB and sector board level. APS data would exclude wholesale.

Table 25: Employment by sector-board within the English regions

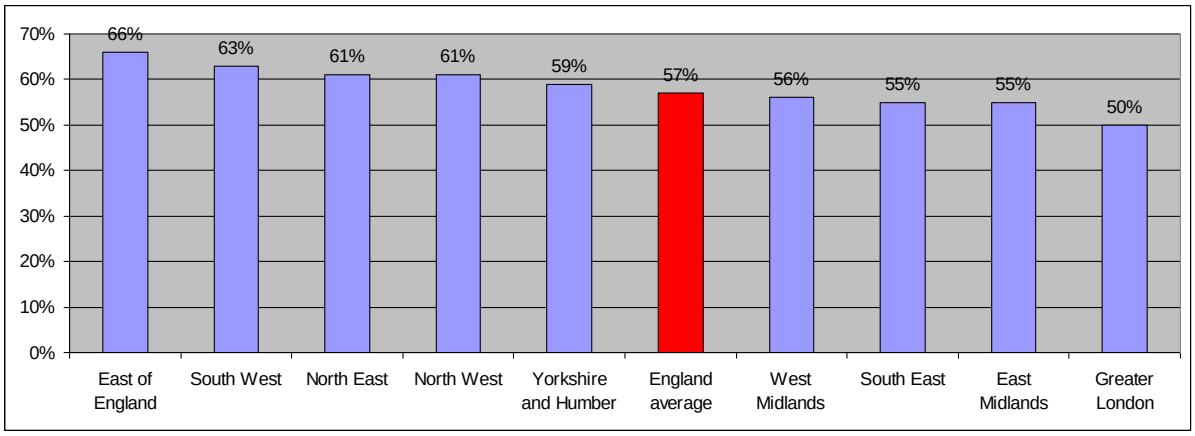
	Total	Apparel & Sewn Products	Textiles	Laundry & Dry Cleaning	Footwear & Leather
North West	20%	17%	29%	12%	16%
East Midlands	18%	19%	18%	9%	33%
London	17%	24%	7%	23%	12%
Yorkshire & Humber	13%	10%	20%	7%	6%
West Midlands	8%	8%	7%	10%	10%
East	7%	7%	5%	12%	4%
South East	7%	6%	5%	13%	5%
South West	7%	5%	6%	11%	13%
North East	3%	4%	3%	2%	2%

Source: ABI 2007

12.2 Contextualising skills shortages using the Skillfast-UK employer survey

Whilst 57% of employers within the Skillfast-UK employer survey recognised a skills shortage if they were looking to recruit, it can be seen that employers in the East of England recognised the largest perceived difficulties although the South West, North West and North East also saw higher than average concerns.

Figure 32: Skills shortages by English region



Source: Skillfast-UK employer survey 2008

These categories, however, conceal many detailed variations in the nature of processes, products and associated skills, which mainly arise from the traditional nature of industry clusters in particular areas of the UK.

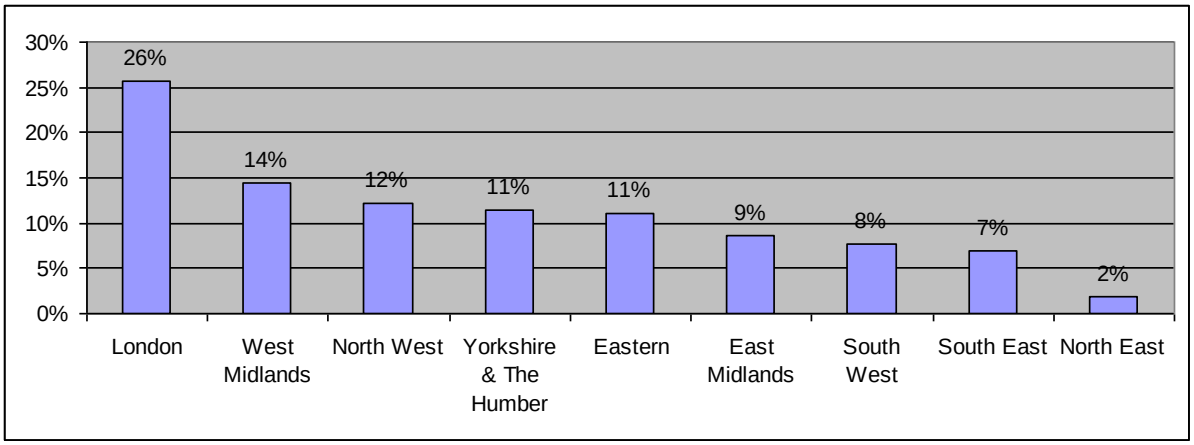
For instance, the footwear and leather industry which is mainly focused around the East Midlands has a large amount of skills shortages within this sub-sector, whilst given London's large number of apparel and sewn products representation ensures there is a high level of need for designers with the required attributes.

12.3 Skills shortages within the English regions

Within England there are also variations in the scale and nature of skills deficiencies at regional level, according to the National Employers Skills Survey. The regions reporting the greatest number of skills shortage vacancies are London, West Midlands and the North West.

With the exception of the North West, which is the largest employment area for the sector, the density of skills shortages is high relative to the number of people employed in each region.

Figure 33: Proportion of skills shortage vacancies by English region



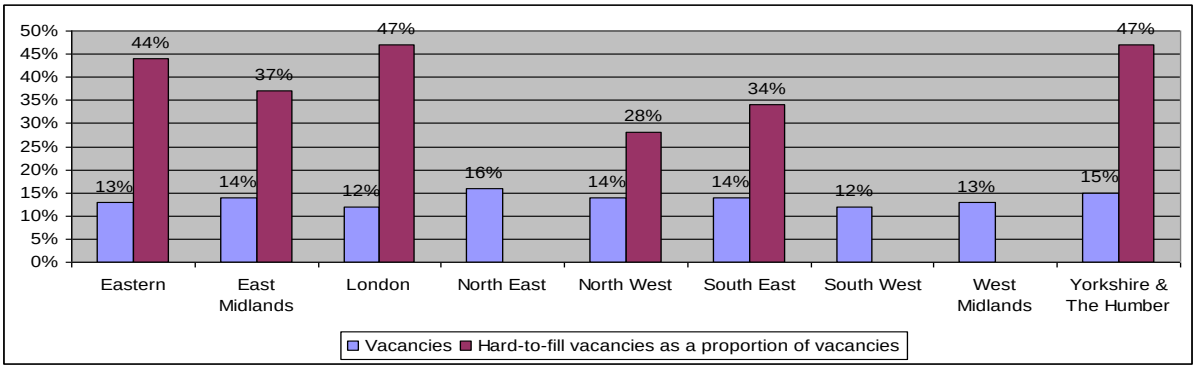
Source: NESS 2007 (based on 644 skills shortage vacancies: weighted employee base)

12.4 Vacancies and hard-to-fill vacancies as a proportion of vacancies by English region

Another key indicator of skills needs lies within the figures for the English regions. Employers within the Skillfast-UK footprint before the recession reported proportionally fewer vacancies than exist at an all sector level within each region.

However, hard-to-fill vacancies were proportionally higher than reported as a whole within their regions (North West, East of England and the South East are the only exceptions) with the South West, West Midlands and the East of England reporting hard-to-fill vacancies levels that were over 10% greater than experienced in all sectors.

Figure 34: Vacancies and hard-to-fill vacancies as a proportion of vacancies

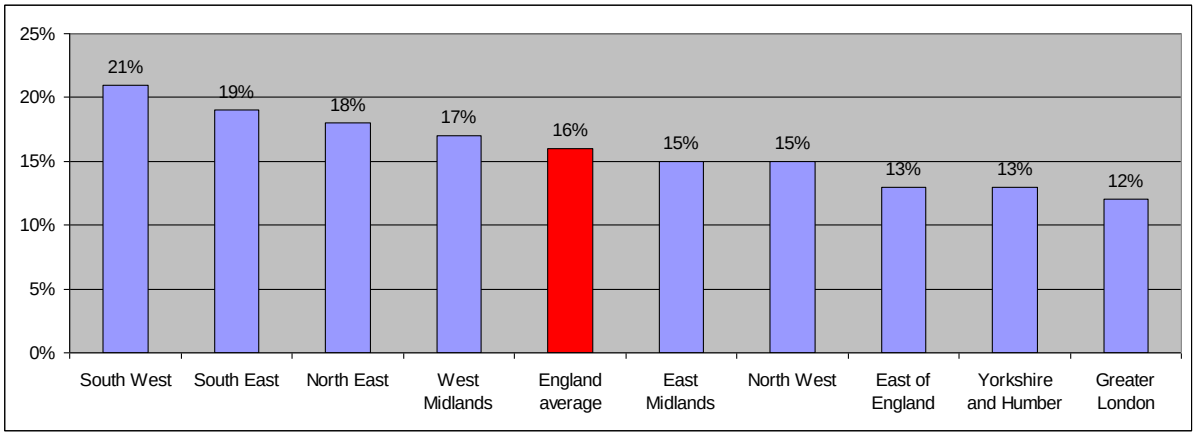


Source: NESS 2007 (weighted employer base) n.b North East, South West and West Midlands are below the baseline of 25 responses for hard-to-fill vacancies as a proportion of vacancies to report.

12.5 Skills gaps by English region

Reporting from the Skillfast-UK employer survey, it is noted that the South West and South East report the greatest levels of skills gaps within their workforces. Linking this back to the employer survey and ABI employment data, the South West has large skills gaps in important sectors for the region such as footwear and leather whilst the South East reports issues within production management, sewn products and dry-cleaning operations.

Figure 35: Skills gaps by English region



Source: Skillfast-UK employer survey 2008

12.6 Skills deficiencies by occupation

There are key differences in skills priorities across the English regions, based on variations in the level of employment within occupational/functional areas and the incidence and density of skills deficiencies within these areas.

According to Skillfast-UK's 2008 survey of businesses, examples of notable priorities that diverge from the list of regional priorities highlighted above, include:

- textile process operations in the North West and Yorkshire and the Humber
- sampling and pattern cutting and grading in the East Midlands and London
- laundry operations in the South East

As we have seen from both the ABI and Skillfast-UK employer survey data, footwear and leather is a niche area in employment terms and therefore does not feature at the top of the skills priority rankings at regional level but is subject to a high intensity of skills needs in key regions including the East Midlands, West Midlands, North West, South West and the East of England where this industry is still of importance.

12.7 Skills gaps by English region

As reported with skills shortages, skills gaps were of particular prevalence in absolute terms within London with again almost a quarter of all skills gaps being reported there. This is despite employers in London reporting below average skills gaps in the Skillfast-UK employer survey.

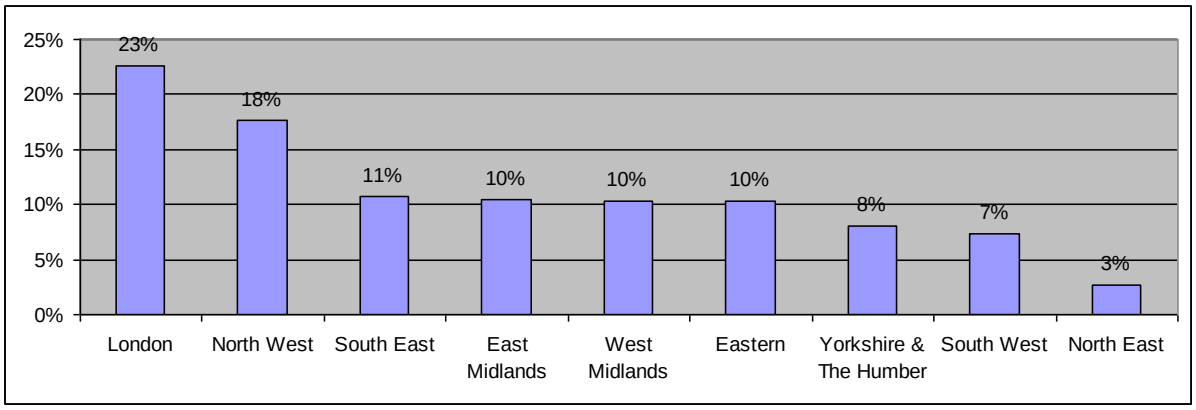
However, further analysis shows this is due to high levels of shortages in design functions that is not an occupation required by all businesses whilst a prevalent one in London. These

figures also might suggest firms in London recognise more individual skills gaps within their workforce even if a smaller number of employers are affected by the,.

Employers in the North West accounted for almost a fifth of reported skills gaps with employers in the South East also reporting large net requirements.

Equating this figure into the density of skills gaps (expressed as the number of employees with a skills gap), the East of England, London and the South East all have high levels of reported skills gaps within their workforces.

Figure 36: Absolute number of skills gaps by English region



Source: NESS 2007 (based on 2,431 skills gaps reported: weighted employee base)

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14. Appendices

14.1 Annex A: Skillfast-UK sector boards

The Skillfast-UK sector boards defined by four digit Annual Business Inquiry. NB - this analysis is based on the four sector boards for which is possible to gather information on. It therefore excludes the role of design and man-made and technical textiles in the analysis.

Apparel and Sewn products

1821 : Manufacture of work-wear
1822 : Manufacture of other outerwear
1823 : Manufacture of underwear
1824 : Manufacture of other wearing apparel and accessories not elsewhere classified
5116 : Agents involved in the sale of textiles, clothing, footwear and leather goods
5142 : Wholesale of clothing and footwear

Textiles

1711 : Preparation and spinning of cotton-type fibres
1712 : Preparation and spinning of woollen-type fibres
1713 : Preparation and spinning of worsted-type fibres
1714 : Preparation and spinning of flax-type fibres
1715 : Throwing and preparation of silk including from noils and throwing and texturing of synthetic or artificial filament yarns
1716 : Manufacture of sewing threads
1717 : Preparation and spinning of other textile fibres
1721 : Cotton-type weaving
1722 : Woollen-type weaving
1723 : Worsted-type weaving
1724 : Silk-type weaving
1725 : Other textile weaving
1730 : Finishing of textiles
1740 : Manufacture of made-up textile articles, except apparel
1751 : Manufacture of carpets and rugs
1752 : Manufacture of cordage, rope, twine and netting
1753 : Manufacture of non-wovens and articles made from non-wovens, except apparel
1754 : Manufacture of other textiles not elsewhere classified
1760 : Manufacture of knitted and crocheted fabrics
1771 : Manufacture of knitted and crocheted hosiery
1772 : Manufacture of knitted and crocheted pullovers, cardigans and similar articles
2470 : Manufacture of man-made fibres
5141 : Wholesale of textiles

Footwear and Leather

1810 : Manufacture of leather clothes
1830 : Dressing and dyeing of fur; manufacture of articles of fur
1910 : Tanning and dressing of leather
1920 : Manufacture of luggage, handbags and the like, saddlery and harness
1930 : Manufacture of footwear
5124 : Wholesale of hides, skins and leather
5271 : Repair of boots, shoes and other articles of leather

Dry-cleaning and laundry

9301: Washing and dry cleaning of textile and fur products

14.2 Annex B: Employer SWOT analysis

Employer SWOT analysis

Strengths	**Weaknesses**
▪ Image of British style ▪ Strong brands in some areas of the market ▪ Strong presence in export markets ▪ Design creativity ▪ Now leaner, nimbler organisations with reduced cost base ▪ Flexibility (quick response, small orders) and delivery performance ▪ High standard of customer service ▪ Many long established family-owned businesses with good reputation, strong technical skills and loyal, stable workforce	▪ Lack of willingness of financiers to invest in large scale AFT production in UK ▪ Negative image of industry held by potential recruits ▪ Ageing workforce in some parts of the sector ▪ Premium goods particularly vulnerable to economic downturn ▪ Cost base of most firms high in global terms
Opportunities	**Threats**
▪ Develop sourcing, branding and marketing operations ▪ Investment in technology – enhance productivity and product quality ▪ Increasingly ethical consumption (and production) ▪ Globalisation of consumer tastes ▪ Increasing middle class spending power in developing countries such as China ▪ Removal of tariff and non-tariff barriers by developing countries ▪ Move towards less minimalist UK furnishing fashions ▪ Increasing number of migrants to UK, offering potential supply of skilled and unskilled labour ▪ New production, materials and product technologies that have the potential to be commercialised ▪ Development of internet and opportunity to tap into global market through e-commerce	▪ Downturn in global economy ▪ Impact of slowdown in UK housing market, particularly on retail sales of household goods such as carpets and soft furnishings ▪ Downward pressure on retail prices and therefore on UK manufacturers' margins, resulting from cheaper imports ▪ Continued migration of production to Asia, following withdrawal of quotas ▪ Increasing competition from recent entrants to EU ▪ Affect of appreciation of sterling on exports ▪ Direct sourcing from overseas by large retailers ▪ Cost of compliance with regulations

Source: SSA interviews 2005

14.3 Annex C: Technical textiles end user markets

Sector	Products	Key Drivers
Automotive and Aerospace	• Airbags and seat belts • Upholstery yarns and fabrics • Needle-punched headliners, carpets, boot-liners, sound-proofing and insulation • Lightweight non-wovens used in filters • Tyre cord fabrics • Clothing for space suits – lightweight and highly flexible • Mechanical rubber goods (MRGs) ie hoses and belts • Various composites	• European 'space race' and potential commercial flights • Continuous reviewing of safety standards • New materials producing improved performances • Improved flexibility raising new standards creating new markets
Composite Textiles	• Aerospace components (tails, wings, fuselages propellers) • Boat and scull hulls • Bicycle frames and racing car bodies • Fishing rods, storage tanks, and baseball bats • The new Boeing 787 structure, including the wings and fuselage is composed largely of composites.	• Develop product development and service capabilities to assist users with individual design • Application and technical troubleshooting issues • Provide QR manufacturing and distribution capabilities to cope with a wide variety of individual customer specifications and supply requirements • Supply and service increasingly global markets
Industrial Biotechnology	• Medical textiles, including all those textile materials used in health and hygiene applications • Incontinence pads, and diapers • Artificial veins • Prosthesis etc • Breathable, temperature-regulating materials • Lightweight shock-proof materials • Water and dirt repellent materials	• High crude oil prices • End consumer 'pull' for green biotech products • Bio-based based materials v crude oil based materials • Concerns about greenhouse gas emissions • Scientific progress, ie advancements in synthetic biology
Nanotechnology	• Nano-sized whiskers protrude from the fabrics, allowing any spill to be easily wisped away without damage to the fabric. • Antimicrobial and anti-mosquito protection into a vast array of products. • Leather degreasing • Textile dewatering • Applications of nanotechnology in textile production • Electronic textiles • Fibre modification • Textile pressure and strain sensors, used in clothing that can measure heart rate and respiratory rates, and to detect movement in buildings and structures • Electrically conductive textile materials, used in health monitoring garments, utilised by the military for inconspicuous communication tools, and for fashion items i.e. Ipod jackets or mp3 players integrated into snowboarding gear	• Less-invasive procedures and pressures for medical conditions, all point to nanotechnology as offering a new approach in healthcare materials • World textile and clothing overview • Macro and micro value chain of the textiles industry • Overview of the market potential for nanotechnology in textiles • Nanotechnology in the textile-related categories of; technical/non-woven/industrial textiles, high-performance textiles, multifunctional textiles and Smart/intelligent textiles
Others, eg cross cutting performance clothing, work-wear and technical textiles	• High visibility clothing (for joggers etc) that incorporates reflective materials • Protective clothing is another related area that includes garments which offer a higher level of protection than offered by standard work wear garments	• Growth of sporting and outdoor pursuits demanding performance apparel

Source: Adopted from UK Technical Textiles: A Strategy for Growth (2004-2009)