COMING BACK?

Capability and Precarity in UK Textiles and Apparel

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Executive Summary

This report considers the prospects for the UK textiles and apparel sector at a time when, as the current Green Paper on Industrial Strategy demonstrates, there is growing interest in whether a renewed industrial policy can help to rebalance the economy. In this context, the report addresses the question of how to understand the potential and limits of reshoring and rebuilding a textile and apparel industry which is sustainable, because it pays decent wages and offers owners a moderate reward.

Based on statistical analysis, international comparisons and in-depth studies of three sub-sectors, the report finds that the extent to which firms can develop capabilities that contribute to sustainability depends on specific conditions or ecologies. The authors argue that industrial policy in a mundane industry like textiles and apparel needs to recognise such ecology, in the form of supply chain relationships, firm size and density and the ability of firms to charge prices sufficient to cover the costs of UK production. The structure and argument of the report is summarised below.

Chapter 1 starts with an overview of the development of the sector, highlighting declining output and employment; the dominance of small and micro firms; and low investment, skills, wages and productivity (pp.12-19). This analysis also recognises the heterogeneity across textiles and apparel and, therefore, the limitations of any sector-wide generalisations about prospects. On this basis, the report uses an ecological concept of the firm as a set of capabilities in marketing, production and finance which, when aligned, allow sustainability through adaptation.

The alignment of capabilities is difficult and too often ends in precarity, with firms unable to deliver decent wages and modest returns to owners. This ecological concept emphasises uneven environmental conditions because the challenges and opportunities are specific to sub-sectors (pp.20-27). What is then required is first to understand how these diverse sub-sectoral conditions shape precarity and sustainability for an individual firm, and second to outline policies which tilt the conditions towards sustainability or curb the effects of adverse conditions. To do this, chapters 3, 4 and 5 of the report focus on three sub-sectors - carpets, woollens & worsted and apparel.

Chapter 2 extends the national level analysis by adding international comparisons of the conditions of capability to explore how the industries in Italy and Germany have responded to similar patterns of decline in different ways (pp.28-32). The German story is one of successful reinvention of a smaller sector, which delivers sustainability; Germany developed technical textiles as a successful new sub-sector with its own marketing and productive capabilities, adjunct to the German industrial machine (pp.23-36). The case of Italy and industrial districts like Prato is a much more ambiguous scenario of resistance to decline which adds low wages to established productive and market capabilities. The story here is of the import of Chinese labour and entrepreneurs to work in an informal parallel sector that delivers a low wage take on Made in Italy; while indigenous Italian producers continue to struggle (pp.36-40).
Neither country offers a model because the UK lacks the Mittelstand ecology that helps to support large scale technical textiles, while Italian-style low wages support a large sector but are not socially or economically sustainable (pp.40-2).

Chapter 3 focuses on carpet manufacturers and offers a distinctive UK example of adaptive capabilities. This is based on finding mid-market opportunities in the home (and export) markets, with a mix of domestic and commercial customers. Firms are larger than typical textiles firms and operate in an activity that is capital intensive, pays higher wages and, in some cases, make enough profit to sustain a stock market quotation and attract financialised investors like private equity (pp.43-48).

Firms are co-located in traditional carpet producing areas like Kidderminster, but not clustered or interdependent; however, these larger firms have managed coordinated and concerted action in marketing which supports productive abilities and, in doing so, are better able to manage their risks (pp.49-57).

Chapter 4 considers the different ecology of the West Yorkshire woollens and worsted producers around Huddersfield, where surviving firms operate within a cluster which collectively has the marketing and productive capability to make high end exports (pp.58-64). This has allowed specialist firms with turnover of around £5 million to survive despite the overall decline in the region, and a few of these to grow significantly in recent years to more than £20 million turnover (pp.64-69).

This is, however, a low-density cluster with a handful of firms providing specialist key functions for others in the area. The mix of adaptive and survival capability creates some uncertainty for the cluster as a whole, with a challenge of how to sustain the portfolio of productive and marketing capabilities, especially in owner-managed firms which must deal with succession (pp.69-81).

Chapter 5 focuses on the (larger) apparel sector, which comprises a very diverse group of firms in terms of scale, performance and opportunity facing distinctive ecological conditions of falling retail prices and a vanishing middle market (pp.82-91). The sub-sector includes: more secure survivors, often selling to high end customers; precarious firms, where an excess of committed ownership/ immobile capital keeps firms in the industry; as well as firms struggling to build capabilities of different kinds to strengthen their position (pp.92-97).

The report outlines two areas of challenge for this sub-sector: the first is that the supply chain generally acts as a block on developing ‘Made-in-Britain’ in clothing; the second is limited capabilities inside most firms and access to few resources outside (pp.97-102). Many firms find it difficult to develop either risk sharing partnership along the supply chain or co-operation with powerful chain retailers which is an obstacle to adaptive capability.

Chapter 6 draws on the analysis of national cases and UK sub-sectors to explore the scope for industrial policy in textiles and apparel in the context of the 2017 government consultation on the development of industrial strategy (p.104-108). Two key issues are outlined. First, conventional industrial policy tends to view the firm as an input-output model which leads to a
focus on improving the quality or availability of inputs, such as workforce skills or finance. Second, industrial policy ignores mundane industries, such as food and furnishings, which account for a large proportion of UK manufacturing, with the more glamorous, high profile and high-tech sectors the subject of most attention through sector deals and other actions.

The implication of this report is that industrial policy also needs to focus on how to support and build adaptive capabilities, recognising specific ecological conditions (pp.110-116). Thus, in a sub-sector like carpets, the potential challenges come through finance capabilities, where a change in ownership might threaten the sustainability of UK production. In woollens and worsted, the policy challenge relates to sustaining a cluster of firms to ensure that productive and marketing capabilities are safeguarded and developed, particularly at points of succession as owners. In much of the apparel sub-sector the supply chain relations inhibit the development of adaptive capabilities. Precarity is a more normal state and effective industrial policy for these firms includes enforcing minimum wages, encouraging partnership and supporting new kinds of distribution and co-operation between producers. Recognising and supporting grounded firms which have the scope to grow with support from professional management, can help sustain local communities as well as contributing to the external resources (organisational, networking and distribution based, as well as political) which can be a collective benefit to the sector.
Chapter 1 The UK textile and apparel industry: background and current context

1.1 Introduction

Until recently, the UK textiles and apparel (T&A) sector\(^1\) has been considered largely a part of the UK’s industrial past, not its future. The sector has been in long term decline since the 1970s so that, by the mid-2000s, more than two-thirds of manufacturing capacity had been wiped out and, with improved productivity, nine-tenths of the employment had disappeared. The retreat of Marks & Spencer from its commitment to British-made goods\(^2\) was a symbolic moment reflecting a wider set of pressures that seemed to make decline inevitable in a globalising industry.\(^3\) Stark differences in labour costs between the UK and newly-industrialising countries was a particular problem in the labour-intensive apparel sector, as the withdrawal of the multi-fibre agreement (MFA) progressively removed protection for European manufacturers; today, more than 80% of the UK’s annual consumption(by weight) of clothing and textile products is manufactured abroad.\(^4\)

Policy makers at the Department for Trade and Industry (DTI) tried unsuccessfully to halt decline around 2000 through the National Strategy for the UK Textiles & Clothing Industry\(^5\), when jobs in clothing were being lost at a rate of 30,000 per year continuously.\(^6\) Industry and government then came up with a 12-point plan to provide support for reforming the supply chain, supporting designers, technical textiles, export, e-commerce, education and training, innovation and investment. The plan was in many ways worthy, creative and sensibly-resourced. It made a positive contribution to the re-orientation of the London clothing industry into a global fashion centre; however, it failed to stem the decline of T&A manufacturing and, when industrial policy was more generally revived after 2008, textiles were not on the agenda.

After the 2008 financial crisis, there was official support at the Department for Business, Innovation and Skills (BIS), under Peter Mandelson and Vince Cable for a revival of manufacturing to help rebalance the economy away from finance; and this priority was briefly

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\(^1\) The term textiles and apparel is used to cover both the production of yarn, cloth, carpets, non-wovens etc. (textiles) and wearing apparel. Appendix 1 contains a note about how different statistical sources are based on different definitions.


endorsed by Chancellor Osborne with his rhetoric about the ‘march of the makers’. But textiles did not figure as ‘advanced manufacturing’, nor was it included in lists of key sectors like automotive and aerospace which received attention and resources through catapult centres. Nonetheless, there has been recent interest - especially in Greater Manchester - in the extent to which textiles could be revived, including by bringing production back from overseas, following some excitement about the reshoring phenomenon in the US.

The Alliance Project based in Greater Manchester, with support from retailer N. Brown, has taken up the role of championing the industry, with considerable success at winning support from Government: two waves of the Textile Growth Programme have made available around £30m of grants since 2013 to support investment in firms in the North West of England, Yorkshire & Humberside and other regions outside London. The Alliance Project initially suggested that 5,000 new jobs could be created nationally, on the basis of an apparently modest replacement of 1% of current imports with UK production (equivalent to a 5% increase in domestic production). Meanwhile the enthusiasm of consultants PWC led to a much higher estimate of a possible 20,000 new jobs by 2025 if the expansion of UK production could be sustained.

This target did not indicate sustainable long-term growth because this is an industry that hired more than one million three and a half decades ago and had been shedding jobs at a rate of 30,000 per year continuously only a decade ago. Given current employment levels, 20,000 jobs by 2025 represent a seemingly significant 20% increase. But data presented in section 1.3 shows that, from 2013 to 2015, jobs in T&A have already increased from 82,000 to 101,000 because of an uptick of output. There is now huge uncertainty about whether this represents the beginning of a new secular trend or whether this is just a blip on a downward curve as in earlier years. Meanwhile, other reports have documented the low wages and poor working condition of some apparel workers within the UK, raising questions about what kind of domestic manufacturing sector could be rebuilt, given global competition from low wage producers.

So our question is: how do we understand the potential and limits of reshoring and rebuilding a textile and apparel industry which is sustainable, because it pays decent wages and offers owners a moderate reward. The answer in this report is that this is a diverse and heterogeneous sector so that we must engage with the specifics of particular sub-sectors, as we do in the later chapters of this report. But before we can do this, we take up two tasks. First, we outline how, in the aggregate, the textile and apparel sector is like the rest of British manufacturing, but rather

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10 Under the Regional Growth Fund (RGF) 4, The National Textiles Growth Programme was established with £111m of grant. This was extended with a further award of £19.5m in 2015. By March 2015 134 grant applications had been funded, using £10.8 of the grant and leveraging £34m of private funding. Greater Manchester Local Enterprise Partnership Board, Alliance Textiles Project Update, 18 May 2015.
12 See figure 1.4
worse by the performance criteria of investment and value added measures; while it also operates with the added structural handicap of a missing Mittelstand\textsuperscript{14} because decline has stripped out the large and medium firms. Second, the chapter outlines a framework for understanding this kind of sector though a capabilities approach to the firm, set in the context of a broader ecological understanding of the interaction between firm and environment.

1.2 Like British manufacturing (only worse)

Since the 1950s, British manufacturing has been productively defined by low investment and low value added which together imply low wages; since the 1970s, British manufacturing is defined by its inability to find new markets so that real output has fluctuated cyclically but shown no sustained increase. Against these benchmarks, textiles and apparel is like the rest of British manufacturing only worse because it has a bottom-of-the-class position on investment and value added; and the trend of output is not cyclical fluctuation, but secular decline which has produced sector specific structural problems about the absence of medium and large firms.

The basic data on investment is summarised in figure 1.1. This shows that aggregate manufacturing investment is cyclical and that, as a percentage of output, investment in manufacturing in the 2010s runs at lower levels than in the 1980s. Overall, British manufacturing invested no more than 2 to 3% of output in recent years. By this low standard, the textiles sector does worse so that investment in textiles runs at between 1.5 and 2.0% of output, while apparel now invests no more than 0.5 to 1.5%. And, if we look back to the 1990s, the margin of inferiority has increased: in the late 1990s textiles and apparel sustained respectable levels of investment to turnover of 3-4% in textiles and 2-3% in apparel. Given low wage competition in many subsectors of textiles and apparel, higher British labour costs need to be recovered through efficiency and process and/or product innovation. But, overall, British textiles are not making the necessary investment and apparel is increasingly an experiment in competing without investment.

The dismal corollary of underinvestment is low pay, because too many employers in T&A, especially apparel, are competing on generic, low-value-added products and squeezing labour costs is the only outlet (in what is formally a high minimum wage country). In terms of wages paid, manufacturing is diverse. High wages are paid to workers in continuous process manufacturing and flow assembly; so that, as figure 1.2 shows, the workers producing man-made fibres, chemicals and steel are part of a relatively high paid group. Whereas, more generally, workers in textiles and clothing are at the bottom of the league table of manufacturing pay and so significantly worse than those employed in food processing, which is - in terms of employment - the largest sector of British manufacturing.

\textsuperscript{14} For a broader discussion of the missing Mittelstand as a regional problem, see L. Brill et al.,(2015) \textit{What Wales Could Be}. http://www.cresc.ac.uk/mediibrary/research/Final\textasciitilde20Cresc\textasciitilde FS\textasciitildeF\textasciitildeReport\textasciitilde20FOR\textasciitildeRELEASE\textasciitilde20(1).pdf
One alarming development is the emergence of an informal sector in apparel where wages are below the legal minimum. Nikolaus Hammer and colleagues at the University of Leicester estimate that the majority of garment workers around the Leicester sourcing hub (the most important area in the UK for garment manufacture) are paid less than the National Minimum Wage (NMW), have no employment contract and are subject to ‘intense and arbitrary work practices’. For example, the Leicester case study found frequent use of underpayment by employers who factored in welfare payments when paying wages claimed to be at the NMW: actual pay is estimated to be around £3 per hour which means that the Leicester industry relies on tax payer subsidy through welfare payments. The task of policy must, therefore, be not only to encourage re-shoring but also to block the on-shore race to the bottom so that the industry has a productive base that is financially and socially sustainable.

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15 Changes to SIC classes were made in 2007.
The revival of industrial policy has led to concern with skill level and skill shortages which would be exacerbated by any sustained overall growth in the industry as the Alliance Project Report has noted.\textsuperscript{18} The Skillfast UK 2010 Strategic Skills Assessment notes that 42\% of the sector’s workforce is qualified at below NVQ level 2, with over a fifth holding no qualifications, compared with 23\% of the wider English workforce. N/SVQ level 3 and equivalent qualifications are lacking in the sector compared to the UK average. Only 17\% are qualified to degree level (N/SVQ level 4) and above, compared with a national average of 34\%.\textsuperscript{19} Research by New Economy on pay and skills in Greater Manchester shows that this national picture is reflected in the Greater Manchester area, where the difference between textiles and all other sectors shown is striking (see figure 1.3). In the context of sustained under-investment and low wages, it is doubtful whether this is a problem that can be rectified by adding training. Across large parts of textiles and apparel, the industry is incapable of paying the wages and offering the conditions and


\textsuperscript{19} National Guidance Research Forum based on Strategic Skills Assessment for the Fashion and Textiles Sector in UK 2010: https://www2.warwick.ac.uk/fac/soc/ier/ngrf/imifutretrends/sectorscovered/clothing/education/
prospects that would attract new local entrants either possessing or aspiring to higher level qualifications.

**Figure 1.3:** Greater Manchester skill levels in low pay sectors

![Bar chart showing skill levels in low pay sectors](chart.png)

Source: New Economy, based on Labour Force Survey

Output trajectory is the other major contrast between textiles and apparel and manufacturing as a whole. As figure 1.4 shows, the real output of British manufacturing fluctuates cyclically but shows no sustained increase since the late 1960s or 1970s; and this of course explains a trade deficit currently running at around 6% of GDP because of the large-scale import of manufactured goods. The trajectory of textiles and apparel is different because it shows uneven but continuous decline so that the real value of T&A output currently is no more than one-third of the mid 1960s peak. As figure 1.4 shows, the rate of decline has slowed since the mid-2000s but this looks like stabilisation around a very low base because the sector now represents only 3% of total manufacturing output.

If we separate textiles from apparel (see figure 1.5), we can see a very slight divergence in trends since 2013, as apparel output has risen while textiles has continued to decline. The uptick in apparel has generated much interest in industrial revival, though it represents no more than a relatively modest growth back towards 2010 output levels.
**Figure 1.4:** Textile industry* and total manufacturing output 1948-2015 (seasonally adjusted) 2012=100

![Graph showing textile industry and total manufacturing output](image)

Source: ONS
Notes: * Textiles industry refers to the manufacture of textiles, wearing apparel and leather products.

**Figure 1.5:** Index of production* of the UK textiles and apparel industry 1997-2015

![Graph showing index of production](image)

Source: ONS
Notes: * Chained volume measure, seasonally adjusted
Because manufacturing productivity increases year by year, real output has to grow if employment is not to fall. When real output falls continuously as in T&A, the decline in employment is dramatic. As figure 1.6 shows, in 2012 when employment reached its lowest point, T&A employed no more than 10% of the number employed in 1978. Since then, employment has recovered slightly, led by the apparel sector. But this does no more than begin to repair recent catastrophic employment loss in the late 1990s and early 2000s. The industry which employed 376,000 in 1998, employed no more than 97,000 in 2014 and clearly most of these lost textile jobs will not be found again.

**Figure 1.6:** UK T&A industry employee jobs 1978-2015 (yearly average, including full-time & part-time), in thousands

Industrial decline on this scale has all-pervasive consequences for the sector because it stripped out the large and medium firms and left behind a sector without a Mittelstand, which is dominated by micro firms. Again, this needs to be set in the context of national developments in UK manufacturing. Across the UK, factories have been displaced by workshops: as table 1.1 shows, the UK has no more than 2,000 manufacturing establishments employing more than 200 workers; and three-quarters of manufacturing establishments now employ 10 or fewer. More precisely, through mergers and acquisitions of public companies, most of the factories have been sold to foreign owners; foreign owned firms employ on average 200 workers and they account for one-third of British manufacturing employment.20

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Table 1.1: Size distribution of UK manufacturing establishments

<table>
<thead>
<tr>
<th>Size band</th>
<th>1983</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of</td>
<td>Share of total %</td>
</tr>
<tr>
<td></td>
<td>establishments</td>
<td></td>
</tr>
<tr>
<td>1-10 employees</td>
<td>53,067</td>
<td>51.8</td>
</tr>
<tr>
<td>11-49 employees</td>
<td>35,770</td>
<td>34.9</td>
</tr>
<tr>
<td>50-199 employees</td>
<td>9,076</td>
<td>8.9</td>
</tr>
<tr>
<td>200 or more</td>
<td>4,532</td>
<td>4.4</td>
</tr>
<tr>
<td>Total</td>
<td>102,445</td>
<td>140,781</td>
</tr>
</tbody>
</table>

Source: CSO and ONS.

Here again textiles and apparel represents a more extreme case because there is a stronger shift to micro firms, associated with a sharp decline in average firm size and the exit of medium and large firms. During the late 1990s and early 2000s, large corporates like Coats Viyella, Courtaulds, Bairds and Dewhirst either disappeared, moved production overseas or re-oriented towards sourcing. The ONS Annual Business Survey reports that between 1995 and 2014 the number of enterprises in the T&A industry fell from 16,554 to 7,868 and the remaining firms were much smaller in terms of UK employment. As table 1.2 shows, the average firm employed 25 in 1998, which had fallen to 13 in 2015. Micro firms – those hire less than 10 employees - accounted for almost 80% of the population in 2015, rising from 68% in 1998. Almost all of the large and medium-sized firms had exited in the intervening years. As table 1.2 shows, in 1998 there were 270 firms employing more than 200 workers; by 2015, there were no more than 20 firms employing more than 250 in all of textiles and apparel. Table 1.3 breaks down textiles and apparel. In the apparel sector, just 5 firms employ more than 250 and less than 1% of apparel firms employ more than 100 people. As table 1.3 shows, the size distribution of textiles firms produces a relatively larger number of bigger firms, but even here more than three-quarters of firms employ less than 10 people.

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21 In the source, numbers are rounded to the nearest 5 giving a potential range of 3-7. We believe the actual number to be at the lower end of the range.
Table 1.2: Size distribution of UK textile and apparel firms, 1998 and 2015

<table>
<thead>
<tr>
<th>Firm size band by number of employees</th>
<th>0-9</th>
<th>10-49</th>
<th>50-99</th>
<th>100-249</th>
<th>250+</th>
<th>Total</th>
<th>Total employee jobs (’000)</th>
<th>Average employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 – no. of firms</td>
<td>6,130</td>
<td>1,300</td>
<td>145</td>
<td>90</td>
<td>20</td>
<td>7,685</td>
<td>101</td>
<td>13</td>
</tr>
<tr>
<td>% of total</td>
<td>79.8%</td>
<td>16.9%</td>
<td>1.9%</td>
<td>1.2%</td>
<td>0.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998 – no. of firms</td>
<td>8,725</td>
<td>3,130</td>
<td>450</td>
<td>305</td>
<td>270</td>
<td>12,880</td>
<td>328</td>
<td>25</td>
</tr>
<tr>
<td>% of total</td>
<td>67.7%</td>
<td>24.3%</td>
<td>3.5%</td>
<td>2.4%</td>
<td>2.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: ONS, with total employment from JOBS03, firm size band from UK Business: Activity, Size and Location. All numbers are rounded to the nearest 5 by ONS.

Table 1.3: Size distribution of UK textile and apparel firms, respectively, 2015

<table>
<thead>
<tr>
<th>Size band by number of employees</th>
<th>0-9</th>
<th>10-49</th>
<th>50-99</th>
<th>100-249</th>
<th>250+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles (number of firms)</td>
<td>3,010</td>
<td>725</td>
<td>90</td>
<td>70</td>
<td>15</td>
<td>3,910</td>
</tr>
<tr>
<td>% of total</td>
<td>77.0%</td>
<td>18.5%</td>
<td>2.3%</td>
<td>1.8%</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>Apparel (number of firms)</td>
<td>3,120</td>
<td>575</td>
<td>55</td>
<td>20</td>
<td>5</td>
<td>3775</td>
</tr>
<tr>
<td>% of total</td>
<td>82.6%</td>
<td>15.2%</td>
<td>1.5%</td>
<td>0.5%</td>
<td>0.1%</td>
<td></td>
</tr>
</tbody>
</table>

Source: ONS, UK Business: Activity, Size and Location. All numbers are rounded to the nearest 5 by ONS.

One interesting aspect of this change was that textiles and apparel vanished from the stock market because nobody in the sector could reliably create shareholder value. In 1999, there were in total 76 companies listed on the London Stock Exchange (LSE) under the sub-sectors of ‘Clothing & Footwear’, ‘Furnishings & Floor Coverings’ and ‘Other Textiles & Leather Goods’. In 2014, the word ‘textiles’ had disappeared from LSE’s company profile description, leaving two sub-sectors that are relevant to the T&A industry - ‘Furnishings’ and ‘Clothing & Accessories’ - which together listed only 17 British firms. The more damaging consequence of change was the exit of virtually all the large firms from the T&A sector, which leaves a huge structural gap because large firms typically play a leading role in workforce training, management development, research & development and organising the political representation of the industry. These effects are reinforced by the missing Mittelstand: of the 20 firms employing more than 250 in UK textiles and apparel our guesstimate is that less than ten are Mittelstand firms of the German kind employing more than 750.
1.3 Understanding heterogeneity and theorising sustainability

It is possible to tell a story about overall trends in the textile and apparel sector over three decades or more, as we have done in the previous section, but sector-wide generalisations can only be a starting point because they overlook the many, very different, stories within sub-sectors. Moreover, any attempt to discuss the future of the industry and the possibilities for its development needs to reflect different experiences and prospects in sub-sectoral activities. Because of the precipitous decline, our investigation is a study of survivor firms; and our question is: how do we start to think about the sustainability and potential of what remains? Our answer is: by maintaining a strong empirical focus on sub-sectors that illustrate different trajectories; and by developing a new kind of theory of the firm, which explains the development of capabilities that feed sustainability and recognises that precarity is the norm for most firms and sub-sectors in textiles.

The diversity of textiles and apparel is immediately confusing. While firms in the industry undertake different roles in relation to the supply chain - including spinning, dyeing, weaving, knitting and CMT (cut, make and trim) - differences in materials and markets create very different kinds of productive opportunities from low to high end. These range from simple processes where labour costs are the most critical factor, to highly specialised processes which produce distinctive products where there may be few competitors. Technical textiles include the making of fabrics, intermediate and final products, yet these are often more closely linked to other industries (such as automotive, aerospace or healthcare etc.) in terms of market conditions. Indeed, there are good arguments for classifying technical textile firms not as part of textiles but as part of automotive, aerospace or whatever, according to their major customer.

Table 1.4 shows the decomposition of the UK textiles industry into the key SIC classes, highlighting the diversity of activities included within this category. There are clear differences in terms of scale: for example, there are fifty percent more firms engaged in weaving of textiles (SIC 13.2) compared with carpets and rugs (SIC 13.93), yet total output is one-third less and employment more or less equivalent. As we have already seen, there are differences between textiles and apparel in investment, productivity and labour costs. In response, we decided to sample diversity with case studies of three sub-sectors – carpets, woollen & worsted cloth and apparel - chosen because they empirically illustrate heterogeneity.
Table 1.4: What’s in the UK textile and apparel industry in 2014

<table>
<thead>
<tr>
<th>Standard Industrial Classification (SIC) (2007 classification)</th>
<th>Description</th>
<th>Number of enterprises</th>
<th>Total turnover £ m</th>
<th>GVA at basic prices £ m</th>
<th>Total employment '000</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Manufacture of textiles</td>
<td>3,878</td>
<td>5,373</td>
<td>1,927</td>
<td>63</td>
</tr>
<tr>
<td>13.1</td>
<td>Preparation and spinning of textile fibres</td>
<td>123</td>
<td>409</td>
<td>85</td>
<td>3</td>
</tr>
<tr>
<td>13.2</td>
<td>Weaving of textiles</td>
<td>210</td>
<td>634</td>
<td>212</td>
<td>*</td>
</tr>
<tr>
<td>13.3</td>
<td>Finishing of textiles</td>
<td>859</td>
<td>686</td>
<td>331</td>
<td>*</td>
</tr>
<tr>
<td>13.9</td>
<td>Manufacture of other textiles</td>
<td>2,686</td>
<td>3,644</td>
<td>1,299</td>
<td>45</td>
</tr>
<tr>
<td>13.91</td>
<td>Manufacture of knitted and crocheted fabrics</td>
<td>77</td>
<td>139</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td>13.92</td>
<td>Manufacture of made-up textile articles, except apparel</td>
<td>1,915</td>
<td>1,751</td>
<td>666</td>
<td>29</td>
</tr>
<tr>
<td>13.93</td>
<td>Manufacture of carpets and rugs</td>
<td>122</td>
<td>898</td>
<td>286</td>
<td>6</td>
</tr>
<tr>
<td>13.94</td>
<td>Manufacture of cordage, rope, twine and netting</td>
<td>74</td>
<td>70</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>13.95</td>
<td>Manufacture of non-wovens and articles made from non-wovens, except apparel</td>
<td>17</td>
<td>139</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td>13.96</td>
<td>Manufacture of other technical and industrial textiles</td>
<td>183</td>
<td>393</td>
<td>159</td>
<td>4</td>
</tr>
<tr>
<td>13.99</td>
<td>Manufacture of other textiles n.e.c.</td>
<td>298</td>
<td>254</td>
<td>107</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Manufacture of wearing apparel</td>
<td>3,415</td>
<td>2,915</td>
<td>921</td>
<td>34</td>
</tr>
<tr>
<td>14.1</td>
<td>Manufacturing of wearing apparel, except fur apparel</td>
<td>3,199</td>
<td>2,574</td>
<td>806</td>
<td>*</td>
</tr>
<tr>
<td>14.11</td>
<td>Manufacture of leather clothes</td>
<td>47</td>
<td>8</td>
<td>2</td>
<td>*</td>
</tr>
<tr>
<td>14.12</td>
<td>Manufacture of workwear</td>
<td>263</td>
<td>184</td>
<td>49</td>
<td>*</td>
</tr>
<tr>
<td>14.13</td>
<td>Manufacture of other outerwear</td>
<td>1,732</td>
<td>1,731</td>
<td>473</td>
<td>*</td>
</tr>
<tr>
<td>14.14</td>
<td>Manufacture of underwear</td>
<td>152</td>
<td>124</td>
<td>54</td>
<td>*</td>
</tr>
<tr>
<td>14.19</td>
<td>Manufacture of other wearing apparel and accessories</td>
<td>1,005</td>
<td>527</td>
<td>228</td>
<td>*</td>
</tr>
<tr>
<td>14.2</td>
<td>Manufacture of articles of fur</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>14.3</td>
<td>Manufacture of knitted and crocheted apparel</td>
<td>209</td>
<td>337</td>
<td>114</td>
<td>*</td>
</tr>
<tr>
<td>14.31</td>
<td>Manufacture of knitted and crocheted hosiery</td>
<td>42</td>
<td>175</td>
<td>39</td>
<td>*</td>
</tr>
<tr>
<td>14.39</td>
<td>Manufacture of other knitted and crocheted apparel</td>
<td>167</td>
<td>162</td>
<td>75</td>
<td>*</td>
</tr>
<tr>
<td>15</td>
<td>Manufacture of leather and related products</td>
<td>575</td>
<td>1,030</td>
<td>391</td>
<td>*</td>
</tr>
<tr>
<td>15.1</td>
<td>Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness; dressing and dyeing of fur</td>
<td>393</td>
<td>533</td>
<td>152</td>
<td>*</td>
</tr>
<tr>
<td>15.11</td>
<td>Tanning and dressing of leather, dressing and dyeing of fur</td>
<td>43</td>
<td>289</td>
<td>53</td>
<td>*</td>
</tr>
<tr>
<td>15.12</td>
<td>Manufacture of luggage, handbags &amp; the like, saddlery &amp; harness</td>
<td>350</td>
<td>244</td>
<td>99</td>
<td>*</td>
</tr>
<tr>
<td>15.2</td>
<td>Manufacture of footwear</td>
<td>182</td>
<td>496</td>
<td>239</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: ONS Annual Business Survey (ABS)
* Information suppressed to avoid disclosure
.. not available
- nil or less than half the level of rounding
To understand this heterogeneity, we have developed a heterodox approach to the firm which combines firm level analysis with an account of the organisation’s interaction with a broader environment. Our analysis of the firm transposes Amartya Sen’s theory of individual capabilities22 so that we can understand the firm is a set of heterogeneous capabilities which ideally allows sustainability through adaptation. At the same time, we recognise that sustainability is also affected by the inter-relations between firm and environment and therefore, use the lens of an ecological analysis which we have previously used in a study of the Welsh regional economy23 and now apply to sectoral analysis.

Following Sen’s capabilities approach we can start from an argument that the firm is a bundle of beings and doings. This is very narrowly understood in economics and the related business school literatures, from early Porter24 to resource-based theory,25 which are in different ways derived from textbook micro-economics. Here, the firm pursues profit by combining inputs to create outputs that are sold in a product market, against an industry of firms using similar technologies to produce competing products. Resource-based theory adds the argument that profit depends on some kind of tradeable resource or internal capability that cannot be easily imitated by other firms, and therefore serves as the basis for abnormal profit. The problems with this position are well known: it is tautological and circular because firms which achieve profits and market share are, through what Rosenzweig26 terms the halo effect, credited with wise management and internal resources, until they inexplicably fail.

Hence our interest in a different approach to understanding firm trajectory and outcomes which we obtain by transposing the categories Sen develops for analysing individuals and applying them to understanding the firm. Sen’s apparatus starts from an idea of basic ‘functionings’, or what the individual can do, grouped into sets of ‘capabilities’ which should allow worthwhile or ‘valuable’ acts or states of being; value is not related to some simple achievement (like an income level) but to the freedom to make decisions. For the individual, this means freedom to choose different types of life. So, using one of Sen’s examples, access to a bicycle is not in itself of value without, for example, the physical ability to ride it, the infrastructural provision of roads or tracks and a socio-cultural context that makes it acceptable for all citizens to travel by bicycle, regardless of gender or status. This schema has been operationalised through the UN Human Development Index and, in our view, it can be transposed, with some changes, to create a theory of the firm which uses the word capability but is very different from orthodox resource-based theory.

We group the being and doing functionings of the firm into three distinct sets - productive, market and supportive capital (financial) capabilities – related to the three generic functions which are found in every firm. The desired outcome at firm level – corresponding to the

individual’s freedom of choice - is sustainability through adaptation. That is, the firm develops and applies its human-cum-technical capabilities in new and existing markets so that it does not simply survive as an organisation but it is capable of self-action through taking decisions and then executing them in ways that help to adapt to changing circumstances. In a market economy, the challenge for the individual firm is always to create the conditions for sustainable cost recovery. Put simply, firm survival depends on the ability to sell products at a price that covers the cost of production, including an appropriate return to the owner over the medium term, allowing further investment, development and commitment. But, all firms must endure the vicissitudes of changing markets and production technologies, and accept that competitive advantage of any kind is generally short lived unless it has the legal protection of property rights.

The capable firm then has the resources to play the part of an actor with initiative; it can pursue cost recovery rather than be a victim of changing circumstance which undermines cost recovery. We can think of this as adaptive capability: the firm has sufficient scale and professional skills which allows it to deploy its capabilities and over time enhance them by buying in additional resources when needed or when opportunities arise. These conditions are not always possible and in other cases firms are characterised by survival capability. In this case, firms are able to use capabilities to survive cyclical and/or structural downturns: for example, productive skills make them key players in a particular niche and market conditions are such that they can charge prices that allow a suitable financial return over a cycle. However, while they are capable of survival, their ability to make significant shifts is constrained, by a lack of management resource or (as we outline below) the nature of the environment in which they operate.

From this perspective, the interesting observation is that many firms do not achieve capability of either kind, but must endure precarity. Table 1.5 outlines the divergent outcomes of capability and precarity, in terms of different sets which interface between the firm and its environment. Positive capabilities in production, marketing and supportive capital limit uncontrolled price competition, allow various kinds of product differentiation and, with the backing of patient capital, allow the firm to exploit existing markets and enter new ones. By way of contrast, the precarious firm has very limited capacity to upgrade production or prospect new markets, and is trapped in markets which are commodified or under pressure without the financial margins to do anything different. As table 1.5 shows, these processes play differently in low end and high end and in terms of result, produce very different kinds of ideal type exemplars.

If the problem of the firm can be simply stated, why do so many owners and managers fail to solve it? The answer is that the one set of capabilities is not enough because that is a necessary but not sufficient condition: the three sets of capabilities have to be present and aligned before adaptive or survival capability can be achieved. Thus, many small firms are good at production but not marketing, or vice versa. The alignment of three sets of capabilities is difficult to achieve when firms have limited resources and operate in unsupportive environments. To this extent, firm management is rather like playing a fruit machine: it is easy but fairly unrewarding to get one or two cherries lined up, but much more difficult to line up three fruits and win a worthwhile prize. The analogy is imperfect of course: in most firms, sustainability does not mean a jackpot prize but the ability to carry on without massive disruption from outside. Moreover, firms with
adaptive and survival capabilities cannot be complacent, even though they start from a strong position.

Table 1.5: Alignment of conditions for sustainable cost recovery in UK textiles and apparel

<table>
<thead>
<tr>
<th>Condition</th>
<th>Positive capabilities</th>
<th>Negative capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Productive set</strong></td>
<td>- Product or process advantage through quality, design, materials or flow ex equipment, lay out, capacity, skills</td>
<td>- Vicious circle of old equipment, poor capacity utilisation, low value added</td>
</tr>
<tr>
<td></td>
<td>-&gt; limited exposure to price-based competition and/or secured low cost producer status</td>
<td>-&gt; low end precarity: willingness to fulfil small orders with speed &amp;/or flexibility; little defence against price pressures or buyer whims</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-&gt; high end precarity: pressure on margins and quality differentiation; margins weak despite higher prices.</td>
</tr>
<tr>
<td><strong>Marketing set</strong></td>
<td>- Branded product, location associated heritage or manufacturer collective identity</td>
<td>- Commodified product</td>
</tr>
<tr>
<td></td>
<td>- Control of distribution e.g. via direct selling, retail agreements + partnership opportunities</td>
<td>- Identity-less manufacturers; commodity-like competition</td>
</tr>
<tr>
<td></td>
<td>- Market portfolio e.g. exports supplementing domestic demand and buffering cyclicality</td>
<td>- Adverse power relations e.g. vis-à-vis uncommitted retailers varying orders and prices; intermediaries add a claim on margins</td>
</tr>
<tr>
<td></td>
<td>- Collective marketing; supply chain partnership</td>
<td>- Inability to move out of dead end markets</td>
</tr>
<tr>
<td></td>
<td>-&gt; high(er) prices + margins from supply chain position or differentiated product</td>
<td>- Inability to build collaborative or partnership relationships</td>
</tr>
<tr>
<td><strong>Supportive capital set (ownership &amp; finance)</strong></td>
<td>- Patient finance: low return targets, acceptance of inevitable cyclicality</td>
<td>- Immobile capital and management, with low exit rates: no alternative uses for owner’s labour and capital</td>
</tr>
<tr>
<td></td>
<td>- Continuity of ownership; ownership separated from professional management</td>
<td>- Owner managers with a limited span of capabilities + network contacts; without cluster organisation + external resources which allow specialist firms</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>-&gt; financial resources to take the longer term view on building capabilities to exploit existing markets and enter new ones</td>
<td>-&gt; precarity: thin margins &amp; no buffers e.g. to pay higher minimum wages</td>
</tr>
<tr>
<td><strong>Ideal type exemplar</strong></td>
<td>Grounded firms create value from ‘Made in Britain’ &amp; add community contribution via long serving employees</td>
<td>Dark side firms competing by removing the social floor to competition</td>
</tr>
</tbody>
</table>
With these points made, it is easy to see that much of the classic literature on firms and their organisation is about the types of firm, or the characteristics of inter-firm organisation which have been promoted because they supposedly deliver positive outcomes by aligning productive, market and financial capabilities. The giant firm was the organisational fix of the 1960s, while the German Mittelstand firm and the industrial district were enthusiastically recommended from the 1980s onwards. The implication of this classic literature is that, while the individual firm as actor may be important, sectoral structure is a crucial determinant of productive and market capabilities: such capabilities can be collective to groups of firms not individual firms, or equally can be dependent on the presence of individual firms of a specific size.

In the 1960s, the giant public firm was represented as a superior organisational form: hence Chandler’s\(^{27}\) eulogy to the m-form because it freed the management of diversified firms to concentrate on product and market strategy, while allocating capital to divisions. As giant American firms were increasingly financialised, so enthusiasts shifted to recommend the German way and Third Italy. Hall and Soskice\(^{28}\) discovered the German form of capitalism where the Mittelstand firm had a leading role: the Mittelstand firm was a large SME which had grown to the point where it could combine family ownership and professional management with supportive bank finance. As for Piore and Sabel,\(^{29}\) their enthusiasm was for ‘flexible specialisation’ in an industrial district where the collective capability of many small firms could deliver the adaptability to differentiated demand which was beyond Fordist mass production.

The idea of an ‘industrial district’ can be traced back to Alfred Marshall’s discussion of localization of industry in book IV of his *Principles of Economics*\(^ {30} \); and has been continued more recently through Porter’s discussion of clusters as a source of competitive advantage. This is a reminder that firms are always embedded in some kind of environment through multiple links. Co-location in firm clusters may be a striking exception but, given the limits on vertical integration, most firms are embedded in local or global supply chains which link the providers of goods and services - from raw to processed materials and finished goods - from upstream to downstream customers. As global commodity chain analysts like Gereffi\(^ {31} \) argue, supply chains involve economic exchanges mediated by power relations so that, for example, retailers or brand controllers often dominate a chain where they capture a disproportionate share of profits.

If we want to think more broadly and in a less sequential way about inter-firm relations, we could suppose that individual firms or sub-sectors exist in environments which are supportive, challenging or hostile to alignment of the three sets of capabilities that could deliver adaptive capability. Consider a firm which is part of a sub-sector caught in a commodified activity, with price-based competition between many small firms supplying a few large customers who are themselves under pressure. In this case, the opportunity for positive alignment are negligible and it is much more likely that the small suppliers will be precarious, caught in destructive forms

\(^{27}\) Chandler, A. (1962) *Strategy and Structure*

\(^{28}\) Hall, PA and Soskice, D. (2001) *Varieties of Capitalism*


\(^{31}\) Gereffi, G. and Korzewiewicz, M. (1994) *Commodity Chains and Global Capitalism*
of competition where slim margins are earned by sweating labour so that there are social costs to the mode of operating.

Against this background, firms make path-dependent choices about co-creation of capability and alignment or independent action. For example, a cluster of firms is a sunk investment in the co-creation of alignment so that the classic cluster has collective capabilities which no one firm has and the individual firms are largely interchangeable, replaceable entities. Within a cluster, firms can develop survival capability in a way that delivers a sustainable financial position. But, while they benefit from the resources of the cluster, they may lack the scale, internal management capabilities and/or willingness to access external debt or equity that may allow adaptation over time; they may also be exposed to succession risk. By contrast, a Mittelstand-type firm aims to be large enough to create its own opportunities and to access the external financial system; such firms are more likely to be the bearer of adaptive capability and can operate in an independent way, even while they take advantage of collective infrastructure around training or trade associations.

The complications are, therefore, such that a firm-level analysis of the three sets of capabilities needs to be complemented with a broader ecological analysis. The two analyses fit together because the economy is a habitat that sustains a population of firms and the capabilities set analysis explores differences in firm type and interaction which together help explain the relative positions of capability and precarity. Mainstream economics has a thin and standardised understanding of such issues, primarily derived from its theory of the firm in product markets, where good (high productivity) firms are encouraged through competition after liberalising product and labour markets; the approach to policy is generic because all sectors require skills training and grants to support capital expenditure and early stage innovation.

One further complication needs to be recognised before we turn to analyse the textiles and apparel sector. The alignment of conditions must be pursued under historical conditions not of the firm’s choosing, so that sectoral trajectory and legacy effects are powerful influences. There is a huge literature on comparative economic development where Gerschenkron introduced the idea that economically ‘backward’ late industrialisers would move along different trajectories. We have now reached the rather dismal point where we might begin the comparative study of deindustrialisation and start by recognising that sectoral trajectory and legacy effects are both resource and incubus for survivor firms in downsized sectors like mechanical engineering or textiles.

The exit of many large firms and an absence of medium sized firms contributes to a particular ecology where surviving firms are small, dispersed and with a limited supporting infrastructure. During retreat, surviving firms can benefit from closing down sales as second hand machinery, experienced managers and skilled workers are all readily available. But feast leads to famine in one generation as ambitious managers see career opportunity elsewhere; and the training of skilled workers is complicated when cohort size is too small for the local further education college. Over time, the legacy human resource will dissipate and equally the supply infrastructure decays so that it is, for example, more difficult to maintain specialised and modern

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32 Gerschenkron, A. (1962) Economic Backwardness in Historical Perspective
equipment or the last specialist firm performing a key function exits when the owner-manager retires.

This framework is used in our report to explore capability and precarity in three cases.

➢ *Chapter three* focuses on carpet manufacturers, which have found mid-market opportunities in the domestic market. Firms are larger than typical textiles firms and operating in an activity that is capital intensive, pays higher wages and, in some cases, make enough profit to sustain a stock market quotation and attract financialised investors private equity. Firms are co-located in traditional carpet producing areas like Kidderminster, but not clustered or interdependent; however, firms have managed coordinated and concerted action in marketing and provide an example of adaptive capability.

➢ *Chapter four* considers the West Yorkshire woollens and worsted producers around Huddersfield, where surviving firms operate within a cluster which collectively has stable ownership and the marketing and productive capability to make high end exports. This has allowed some specialist firms with turnover of around £5million to survive, and a few of these to grow significantly in recent years to more than £20 million turnover. This is, however, a low-density cluster (very different from an industrial district) with one or two firms providing key functions for smaller players. The mix of adaptive and survival capability creates some uncertainty for the cluster as a whole.

➢ *Chapter five* focuses on the (larger) apparel sector, which includes a much wider diversity of firms in terms of scale, performance and opportunity. This includes more secure survivors, often selling to high end customers; precarious firms, where an excess of committed ownership/ immobile capital keeps firms in the industry; as well as firms struggling to build capabilities of different kinds to strengthen their position. All find it difficult to develop either risk sharing partnership along the supply chain or co-operation with powerful chain retailers which is an obstacle to adaptive capability.

Each chapter ends with a discussion of the implications of the case for understanding the textile and apparel sector more generally. In the final chapter, chapter 6, we draw on these cases and their implications to explore the place for industrial policy to support firms and ecologies in ways that limit precarity and encourage development of capability.
Chapter 2 Different national stories: German reinvention and Italian resistance

2.1 Introduction
In applied economics in the 1960s and 1970s, comparative national studies were taken seriously because this benchmark could instruct and inform about the nature and conditions of industrial success. By the 2010s, they have been quietly dropped by policy makers. The last official comparative study of the T&A sector dates from 2003, when the UK Department of Trade and Industry (DTI) compared UK and Italian woollen cloth production as one of a series of studies aimed at understanding ‘the approach and methods adopted by more successful industries in other countries’.33 The more recent Alliance Project report contains a one-page case study of Italy which discusses the success of Prato, which is used to argue that skills are particularly important in allowing development of competitive and innovative products.34 Neither of these reports however recognises the more complex, and darker, story we tell in this chapter about Prato’s increasing reliance on Chinese migrants.

Within our framework, we can better understand the conditions of capability if we supplement analysis of British sub-sectors with some comparative national analysis of different outcomes in various European countries. In all (west) European countries, the old manufacturing base in textiles and apparel has, as in the UK, declined sharply in the face of external competition from low wage producers. But the German and Italian responses are interesting because they are different from each other and from the UK case.

The German story is one of successful reinvention of a smaller sector, which delivers sustainability; Germany developed a new sub-sector with its own marketing and productive capabilities, adjunct to the German industrial machine, so that Germany is now the leading global producer of technical textiles. The case of Italy and industrial districts like Prato is a much more ambiguous scenario of resistance which postpones collapse, rather than delivers sustainability, because it adds low wages to the old productive and market capabilities. The story here is of the import of Chinese labour and entrepreneurs to work in an informal parallel sector that delivers a low wage take on Made in Italy; while indigenous Italian producers continue to struggle. This outcome is not politically, economically or socially sustainable in West European countries wishing to maintain a social settlement that puts a floor under competition.

The chapter, which develops our comparative analysis, is organised as follows. The next section provides a brief overview of different patterns of decline in the UK, Germany and Italy, which makes the point that the UK shows the most marked deterioration in terms of key economic indicators. Sections 2.3 and 2.4 then present a more in-depth analysis of resistance in the German and Italian sectors, where there appears to be evidence of reinvention at a scale that shows up in the aggregate statistics. The final section develops the argument that neither Italy nor Germany provides a template for the UK. In the Italian case, successful resistance does not

deliver a sustainable economic and social model. In the German case, the conditions of reinvention are so specific that this success cannot be replicated in the UK.

### 2.2 British textiles & apparel (worse than German or Italian textiles & apparel)

The first point is that there is a difference of scale between Italy and all other European countries before and after retreat because Italy remains a volume producer of textiles and apparel. Figure 2.1 shows that output of Italian apparel is approximately three times that in Germany or the UK in 2012. Italy produces 25% of the textiles and 35% of the apparel in the EU and thus remains the most important regional producer (figure 2.2). Germany, like the UK, has seen a very sharp decline in apparel: between 1980 and 2001, the number of employees in the German clothing industry fell from 248,776 to 60,889 and number of firms dropped from 3,210 to 613;35 and half of the output in apparel was lost between 1990 and 1995.36 The German and British shares of apparel in the EU are now roughly equal at around 12%.

**Figure 2.1:** UK, Germany and Italy textiles (manufacture of textiles, wearing apparel, leather and related products) industry output 1995-2014 GVA*, million euro

![Graph showing textiles industry output in UK, Germany, and Italy from 1995 to 2014.](image)

Source: Eurostat, National Account, detailed breakdown by industry

* Chain-linked volumes: period to period changes of volumes (the links in the chain) are calculated using the prices (and hence weights) of the previous year.


36 Genesis-Online, German Federal Statistical Office.
Figure 2.2: European textile and apparel output in 2012

Source: Eurostat

But there are also other differences where we could bracket Italy and Germany as more competitive and higher performing than the UK. The long run trend of textiles and clothing exports in the three countries is especially interesting because exports are a rough proxy for international competitiveness. As figure 2.3 indicates, the real value of German, British and Italian textile and clothing exports was roughly equal at the beginning of the 1970s but, by 2012, Germany and Italy both export around three times as much as the UK, a marked shift from the early 1970s. The impression of sustained British weakness is maintained if we shift from output to input measures.
Figure 2.3 UK, Germany and Italy textile exports (real values), 1975-2013 (million US$)

![Textile Exports Graph](image)

Source: UN Comtrade, Classification SITC1, deflated with US Consumer Price Index (CPI, reference base year 1982)

Figure 2.4 shows that the investment rate (defined as investment/value added at factor cost$^{37}$) in the manufacture of textiles has been continuously lower in the UK (6.5% in 2012), compared to that of Germany (10.5%) and Italy (11%). Investment in the manufacture of wearing apparel is also generally at a lower rate than in textiles, with the UK level around 3% since 2008, compared with 5-6% for Germany and 6-9% for Italy.

If we turn to input/output measures of productivity, there is the same pattern where the UK appears to be lower performing at the end of the process of retreat. Table 2.1 shows trends in productivity over the 2008-2012 period, when turnover per head is much lower in the UK in both textiles and apparel. Interestingly, turnover per head is higher in the very small surviving German apparel sector: an average German apparel worker produces almost double the value of turnover of a UK worker, and almost 50% more than an Italian worker. In textiles, Germany and Italy are evenly matched in terms of productivity, with the UK once again bringing up the rear.

In aggregate, this evidence suggests that, after a long process of retreat in textiles and apparel, the German and Italian sectors have emerged in rather better shape if we consider input, output and productivity evidence. Behind the superiority of Germany and Italy, however, are two very different stories of adaptation and survival through reinvention in Germany and resistance through managing labour costs in Italy.

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$^{37}$ Investment is measured as the gross investment in all tangible goods during the reference period goods. Included are new and existing tangible capital goods, whether bought from third parties or produced for own use (i.e. capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. Investments in intangible and financial assets are excluded. Value added at factor costs is the gross income from operating activities after adjusting for operating subsidies and indirect taxes. Value adjustments (such as depreciation) are not subtracted.
**Figure 2.4:** Investment in textiles and apparel in Germany, Italy and the UK, 1999-2012:

- **a) textiles**

- **b) apparel**

Source: Eurostat

Note: The graph shows the investment rate, which is gross investment in tangible goods/value added at factor cost.
### Table 2.1: Turnover per worker in Germany, Italy and the UK, 2008-2012

<table>
<thead>
<tr>
<th>Manufacture of textiles</th>
<th>Turnover per person employed ('000 euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>Germany</td>
<td>143.6</td>
</tr>
<tr>
<td>Italy</td>
<td>139.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>110.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacture of wearing apparel</th>
<th>Turnover per person employed ('000 euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>Germany</td>
<td>184.2</td>
</tr>
<tr>
<td>Italy</td>
<td>133.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>110.6</td>
</tr>
</tbody>
</table>

Source: Eurostat

### 2.3 German reinvention: adding technik

In the 1980s, Germany was the largest producer and exporter of textiles and clothing in the world, later that place was claimed first by Italy and then by China. The story of German retreat here is very similar to the British one of withdrawal from domestic manufacturing as retailing has been transformed and large clothing firms have changed to become sourcing specialists. However the German textiles story is different from the UK because retreat is partially compensated through development of technical textiles where, by 2014, Germany had an estimated 50% of the expanding global market, and so Germany remains the world’s fourth largest exporter of textiles and a significant producer of textiles machinery.

If the headline story is about the rise of technical textiles, it is also true that the old German sector of textiles and apparel managed its own partial reinvention and sustained much less damage than the British sector. This was helped after 1989 by the availability of low wage production sites on Germany’s Eastern borders. According to Adler in 2004, the most important partners for foreign clothing production were Poland, Romania and Tunisia which together

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38 Number of persons employed is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams). It excludes manpower supplied to the unit by other enterprises, persons carrying out repair and maintenance work in the enquiry unit on behalf of other enterprises, as well as those on compulsory military service.


43 According to Eurostat data, in 2012 the German machinery manufacturing sub-sector produced output of €1,506 million. (measured as value added at factor cost), compared with Italy €797 million and the UK €54 million.
accounted for 40% of sub-contracting and outward processing; a further 20% was accounted for by the Czech Republic, Slovakia, Croatia and Hungary,\(^{44}\) though much of this has subsequently been replaced in turn by lower wage production. Although there is little comprehensive data, it is estimated that German textile and clothing companies employ twice as many workers outside Germany as at home;\(^{45}\) thus to some extent German producers have relocated eastwards rather than simply being put out of business.

The internal adjustment was nevertheless painful. Deutsche Bank estimates that by the 2010s less than 5% of clothing sold in Germany is made at home\(^ {46}\) and two-thirds of sales go through retail chains and other volume outlets. What remains is focused on specialist areas such as designer fashions, casual wear, branded products, functional apparel and sports/leisure wear, where advantages of short production runs, fast turnaround and access to designers can compensate for higher labour costs.\(^ {47}\) As mentioned above, between 1980 and 2001, the number of clothing firms fell to a fifth, with a corresponding reduction in employment to a quarter. But the outcome is very different from the UK where it entrenched the micro firm: in Germany the average German clothing firm size has actually increased from 76 in 1980 to 99 employees by 2001. Before and after the 1990s when the MFA was being phased out, the German textile and clothing industry was mainly composed of small and medium sized companies. Although 50% of German manufacturing employees worked for establishments with more than 500 employees, it was 30% in textiles and 10% clothing.\(^ {48}\) Some have argued that this structure of smaller firms provided the potential for the German textile industry to be flexible, adapting production and organisation to changes in the market.\(^ {49}\)

If clothing could not be transformed in a way that allowed German production to be internationally competitive and distinctive, technical textiles has provided the opportunity for the growth of a new export-led sector which exploits a national marketing advantage and mobilises new productive capabilities: success is built on innovation and technology in process and product development and closeness to the German customer. Technical textiles, often non-woven and composite,\(^ {50}\) are primarily bought for the functional properties of the materials and are typically sold to industrial customers. Germany’s manufacturing strengths in industries, such as automotive, provide opportunities to develop technology-based specialist textiles. Close links to the customer are important for the ability to develop distinctive products; thus, unlike in mainstream clothing, the supply chain relations are more collaborative and less based on price-led competition. The sector is now conventionally divided into product groups or areas of

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\(^{48}\) Spinanger and Piatti (1994), p..
\(^{49}\) Spinanger and Piatti (1994), p.3.
\(^{50}\) Consultants Gherzi estimated in 2011 that technical textiles accounted for 27% of global textile production (valued at $160 bn) or 22 million tons, including 7.7mt of non-wovens, 10.8 mt of traditionally knitted or woven textiles and 3.5 mt of composites (International Fiber Journal 1 April 2015 http://www.fiberjournal.com/featured-articles/germany-continues-to-lead-the-technical-textiles-sector/)
application, as defined by Techtextil the main international trade fair for technical textiles. Table 2.2 shows the relative size of these different product categories.

**Table 2.2:** Overview of application areas in technical textiles, based on the Messe Frankfurt (trade fair) classification

<table>
<thead>
<tr>
<th>Sub-sector</th>
<th>Area of application</th>
<th>Examples of products</th>
<th>% of global sales in technical textiles in 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agrotech</strong></td>
<td>Agriculture &amp; forestry, horticulture, fishing</td>
<td>Crop protection and weed control fabric, biogas membranes, safety nets, ropes</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Buildtech</strong></td>
<td>Building construction, civil engineering, renovation</td>
<td>Insulation materials, membranes, reinforcement materials, cables, ropes</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Clothtech</strong></td>
<td>Clothing &amp; footwear</td>
<td>Filler/lining materials, insoles, weatherproof and waterproof membranes</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Geotech</strong></td>
<td>Geotextiles, horticulture, agriculture, roads, storage, dyke construction</td>
<td>Drainage, separators, filters. Erosion protection, reinforcement</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Hometech</strong></td>
<td>Furniture industry, interiors</td>
<td>Furniture coverings, filler materials, ceiling, wall and floor coverings</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Indutech</strong></td>
<td>Filtration, other products</td>
<td>Conveyor belts, separators/filters, cables, ropes, straps</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Medtech</strong></td>
<td>Hygiene and other medical products</td>
<td>Dressing materials, artificial limbs, orthoses, wound applications, implants</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Mobiltech</strong></td>
<td>Vehicle construction</td>
<td>Tyre cords, seat covers, airbags, safety belts, interiors</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Oekotech</strong></td>
<td>Environmental protection</td>
<td>Emissions filters, protection fleeces</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Packtech</strong></td>
<td>Packaging materials</td>
<td>Sacks, bags, tarpaulin, Bigbags</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Protech</strong></td>
<td>Protection for personnel and equipment (buildings, vehicles)</td>
<td>Safety/protection clothing, climate/fire protection materials, ballistic protection</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Sporttech</strong></td>
<td>Components for sport and leisure products and clothing</td>
<td>Tarpaulin, rucksacks, sleeping bags, sailcloth, lightweight materials</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: Commerzbank (2014), p.6

According to a recent report by Commerzbank, the shift into technical textiles was a deliberate response by traditional manufacturers, suggesting that the story is partly one of Mittelstand reinvention from within the industry through the development of new productive and marketing

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51 Commerzbank (2014) *Technical Textiles*
capabilities. Although these firms do not comprise a coherent sector in the traditional sense of sharing a set of customers, products or processes, the scale of technical textiles – some 600 businesses employing more than 20, and producing around 6 billion euros of turnover - suggests that there is a critical mass of SME firms. In consequence, the German textiles industry has been reinvented: the IVGT (the industry association for finishing, yarns, fabric and technical textiles) estimates that technical textiles accounted for more than 50% of the turnover of the German textile industry by 2011, an increase from one third in 2001.\textsuperscript{52} This is equivalent to around 20% of the output of clothing and textiles combined.\textsuperscript{53}

Germany’s strong tradition in engineering, machinery manufacture, research and technical training provide a capabilities base for the reinvented sector. Textile SMEs have been able to draw on a network of 16 regional research centres which are credited with an important role in allowing Germany to develop such a clear lead in fast moving markets: Commerzbank estimates that 19% of German technical textile sales are of products that are less than three years old.\textsuperscript{54} Research is required to build on the inherent quality and characteristics of the materials used in various woven, knitted and non-woven fabrics, especially when used in combination. In this sense, developing the potential of the materials requires collaborative knowledge to identify applications in a wide range of industrial and customer contexts. According to the Commerzbank report author, Jürgen Grebe, the success of the sector reflects the ‘structural change’ made by producers of traditional textiles ‘to become highly technical and specialist manufacturers of high-quality textile products’.\textsuperscript{55} This technik is the basis for reinvention which has delivered sustainability.\textsuperscript{56}

### 2.4 Italian resistance: internalising low wage production

If Germany has reinvented to create a smaller, highly innovative industry based on close relations with industrial customers, Italy has defended a (mass market) apparel industry that trades on the retail appeal of the Made in Italy label. Italy is the only member of the EU15 to run a trade surplus in apparel and in 2010 was globally still the third largest apparel exporter after China and Mexico.\textsuperscript{57} However, while Italy remains an important producer of apparel and, to a lesser extent, textiles, its productive base has been defended in ways that create new kinds of tensions and precarity. Industrial districts with a dense multiplicity of small firms have traditionally accounted for the majority of production. In the case of Prato, defence has involved the creation of a parallel, low wage cluster which has become increasingly important after Italy joined the euro, removing currency depreciation as an aid to competitiveness. Chinese migrants

\textsuperscript{52} Deutsche Bank Research (2011) Textile and Clothing Industry. Innovation and Internationalisation as Success Factors, p.4.
\textsuperscript{53} iXPOS (2015)
\textsuperscript{54} Commerzbank (2014) p.10.
\textsuperscript{56} It is difficult to make direct comparisons with the size of technical textiles in the UK, given that this group of activities is spread across – and incorporated into – a number of SIC categories, including SIC 13.96 Manufacture of other technical and industrial textiles and valued at £173m aGVA in 2015 from 156 enterprises.
– first entrepreneurs, who bought up firms and invested, followed by workers to make the clothes – have developed a new low wage version of *Made in Italy* (by China); this new cluster exists alongside a much smaller group of Italian-owned firms in Prato still making textiles and apparel.

The Italian position has long been built on the ability to market fashion and style so that *Made in Italy* gained a cachet usually lacking from clothes made in Germany or the UK. Italian fashion has been marketed to the world since the 1950s, following Giovanni Battista Giorgini’s organisation of fashion shows at the Villa Torregiani in Florence, inviting buyers from the major US department stores Bergdorf Goodman, B. Altman and Lord & Taylor, as well as the press. In the same year, an Italian exposition opened in Macy’s in New York City. From then on, Italian design gained status and Milan was promoted to join Paris as a world-renowned centre of fashion.

The Italian productive capability was a collective one built on industrial districts like Prato which, from the 19th century onwards, focused particularly on woollens. The Italian industrial districts featured a dense network of interdependent, small firms which, while they compete in some respects also collaborate and engage in various sub-contracting arrangements; they jointly create and sustain labour markets, as well as developing a range of innovations so that members of the district can chose the best or more suitable. The dominance of small firms across Italian textiles and apparel was institutionally reinforced when firms with fewer than 15 workers were exempted from the Statuto dei Lavoratori of 1970 and government offered incentives and protections that were partly responsible for the shifting of economic activities from some large firms to micro enterprises in areas of new economic growth. By 2002, Italy sustained 44,000 clothing businesses (together producing 40% of the EU clothing production), compared with 5,000 each in the UK and Germany. The Italian industry is more complex than the often cartoon-like representation of industrial districts. A small number of large clothing firms still account for a significant amount of production: in 2000-01, five Italian clothing companies each had annual turnover of €1-2 bn, together accounting for 16.5% of the national turnover. These larger firms are also responsible for driving some of the structural changes in the Italian clothing industry, including mergers and acquisitions that allowed both horizontal consolidation and vertical integration. Along with this came what Dunford describes as the reshaping of value chains from being producer-driven to buyer-driven, as independent retailers became less important and chains and supermarkets

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59 Paulicelli (2014)
60 Belfanti (2014)
63 Taplin (2006), pp.177, 178.
gained market share in clothing distribution, at the same time as the mainstream fashion industry was shifting towards more frequent changes of products, rather than the traditional emphasis on the seasonal collection.\textsuperscript{64} Nonetheless, independent clothing retailers remain more important in Italy than in the UK and Germany, accounting for 56\% of apparel sales in 2002,\textsuperscript{65} which provides some support in the form of distribution channels for SME producers.\textsuperscript{66}

The productive response to external low wage competition was distinctive because it rested on government acquiescence in informality and the internalisation of low wages. Of course, there was also off-shoring because, as in the UK and Germany, low end production was shifted out of Italy following the end of the Agreement on Textiles and Clothing, as continuing cost pressures required lower wages than could be found in Italy. But the Italian government has also tolerated informal employment which offers sub-standard wages and conditions as a way of supporting the industry. Current developments in Prato were prefigured in a process of delocalisation in the 1970s and 1980s, as the more labour intensive production was moved from the north of Italy to the Adriatic coast and the south; such reorganisation was intended to reduce costs while also keeping control of quality in areas where traditional craft skills and competences were important. In doing so it also introduced a complex set of sub-contracting arrangements which encouraged use of ‘clandestine labour’, estimated to be between 30 and 90\% of the workforce—depending on the district—by the end of the 1990s. Such arrangements were tolerated as part of what Dunford describes as the Italian government’s support for the industry.\textsuperscript{67}

Recent developments in Prato replicate these developments on a larger scale. Prato is perhaps the best known of the Italian textiles and clothing districts and, while it is only the second largest in terms of turnover, in 2000 it had twice as many establishments as the next district, significantly more employees and a greater orientation to exports.\textsuperscript{68} It has a history of change and adaptation. In the 1970s, Prato morphed from a wool processing textile district to a ‘market oriented, fashion/ textile district’, with an ability to develop new products and to meet the demands of retailers for more varied, smaller orders more effectively than the larger firms could. Demand for woollen products also declined significantly, leading to excess capacity and job loss: in the second half of the 1980s, 37\% of the firms went out of business and 28\% of jobs were lost.\textsuperscript{69} However, Prato also developed new facilities, especially in finishing, and took advantage of growing international demand and the devaluation of the lira so that, by 2001, Prato supported almost the same level of employment as in the early 1990s, unlike the other industrial districts and the rest of Italian textiles.


\textsuperscript{65} The equivalents are 37\% in Germany and 13\% in the UK.


\textsuperscript{67} Dunford (2006) pp.52-3.

\textsuperscript{68} To put this in perspective, there were more employees in Prato, one industrial district in Italy than in the whole of the UK apparel industry in 2013, some 34,000.

\textsuperscript{69} European Foundation for the Improvement of Living and Working Conditions, 2013. \url{http://www.industriall-europe.eu/database/uload/pdf/EffectsRestructuringRegionalLevel-Prato.pdf}
More recently, Prato has stood as the only textile and apparel manufacturing centre that is growing whilst its peers are declining.\textsuperscript{70} This is partly or mainly because Prato is now a story of two clusters: a rapidly growing Chinese enclave in an old Italian industrial district which imports (often Chinese) cloth and sells clothes (mainly) to the fast fashion retailers; alongside, a smaller and declining Italian-owned cluster, mainly producing textiles and representing a much smaller fraction of ‘Made in Italy’.

The development of the parallel cluster began in the 1980s and accelerated in the 1990s as Chinese entrepreneurs developed and increasingly acquired firms. At first, there was a focus on knitwear and high street fashion, before vertically integrating with dyeing and garment processing firms, as well as clothing accessories and business services including transport, wholesaling and import/export.\textsuperscript{71} In just a few years between 1993 and 2001, the number of businesses registered by Chinese in Prato increased from 212 to 1,392, most of which were stitching workshops.\textsuperscript{72} Significantly, between 1991 and 2011, the number of apparel firms soared from 1,219 to 4,388, more than three-quarters of which were registered by Chinese nationals.\textsuperscript{73}

As Dei Ottati notes, the Chinese–owned firms shifted from sub-contractor roles to final producers of fast fashion as a new-style industrial district emerged; indeed, Chinese entrepreneurs are credited with bringing pronto moda (fast fashion) to Prato which had previously operated on the traditional seasonal model. The parallel cluster was organised in the traditional way with dense ties between firms that competed and co-operated but with a critical difference being the links to China so that the parallel cluster has a ‘transnational extension’.\textsuperscript{74}

Chinese entrepreneurs who started with small stitching workshops preferred to employ Chinese migrant workers for reasons of language and culture. It undoubtedly also offered significant cost advantages as Chinese workers accepted wages far lower, and living conditions far worse, than that of indigenous workers. Many of the migrants came from Wenzhou, a southern Chinese city that has a large clothing and leather sector; such workers helped to fill shortages, especially in knitting and often on a homeworking basis. Estimates of Chinese migrant workers in Prato are unlikely to be completely reliable, but it is reckoned that the number of Chinese residents in the city of Prato was 169 in 1990, rising to 11,882 in 2012; if those with temporary residence are included, the number is estimated to be around 45,000, making Prato the second largest Chinese community in Europe after Paris.\textsuperscript{75}

At the same time as Chinese entrepreneurs built an agglomeration of apparel firms, the traditional textiles activities were under more pressure. In some cases, textile business owners

\textsuperscript{70} Li, W. 2013. Evolution of the Prato Textile District Italy: Unione Industriale Pratese.
\textsuperscript{71} Li (2013) p.6.
\textsuperscript{75} \url{http://www.ui.prato.it/unionedigitale/v2/english/presentazionedistrettoinglese.pdf} p.6
have shifted into renting out premises to apparel entrepreneurs; property management became more attractive than textiles manufacture as difficult market conditions persisted. In 2008, support was sought for Prato from the European Globalisation Adjustment Fund to help with the reintegation of around 1,300 workers who were made redundant in hundreds of small companies within the textile sector.76 Between 2001 and 2008, the number of textiles enterprises decreased by 12%, representing a reduction of 1,000 businesses and 26% of turnover; from 2009-2013 a further 24% of businesses closed.77 The growth of apparel during this same period has helped to compensate in terms of aggregates of output and employment. The reliance of apparel on migrant labour means that the benefits of growth in the new parallel sector have not been shared with many of those who were displaced from textiles; nonetheless, unemployment in Prato is considerably below national and regional levels as many former textiles workers were reemployed in other industries.78

The development of a Chinese enclave within an old Italian industrial district thus reflects specific conditions. These include the pre-existing cluster and the infrastructure that allowed a new group of entrepreneurs with experience in sewing to establish businesses and develop a distinctive apparel sector. The specific conditions also cover the indemnity policy followed by the Italian government which allowed large numbers of clandestine workers to stay in Italy, to the extent that Prato and other districts drew in Chinese migrants from other European countries.79

2.5 Replicable success?
What are the lessons of these two different national stories for the UK? From an earlier era, the DTI textiles inquiry of 2003 was about lessons from ‘more successful industries in other countries’.80 From a capabilities and conditions point of view in 2016, the question is whether these alignments could or should be replicated. Each country, of course, has a different stock of firms and specific institutional conditions: the UK does not have a Mittelstand, as in Germany, or government that tacitly encourages an informal sector, as in Italy. The question is whether policy should try to change capability alignments and institutional conditions so that the British could replicate and move onto similar trajectories to those of Italy and Germany. The short common-sense answer is that industrial policy needs to play an important role in preventing the UK going down the Italian low road because that is not sustainable; and while the German high road of reinvention through technik is very attractive, policy has a massive task because the UK lacks the basic conditions for large scale success in technical textiles.

The Italian path of adjustment by internalising cheap labour could be replicated in any country where government has a mandate to dismantle the national social settlement: the basic preconditions are the suspension of health and safety regulations in the workshop sector, no

77 European Foundation (2013) p.13
78 European Foundation (2013) p. 16
79 Dei Ottati (2014) p. 6
80 Owen and Jones (2003)
enforcement of national minimum wage regulations and free in-migration of poorly qualified migrants who continuously replenish the stock of workers at the bottom of the labour market. The pragmatic centrist argument against a low wage informal sector is that it is fiscally unsustainable. The informal textile sector’s expansion depends on a high level of taxpayer subsidy (to cover access to health, education etc.) which other sectors do not receive; and thus in the UK case this kind of expansion of low wage employment is quite unsustainable because, since deregulation of the labour market, the UK already has a massive problem about the rising number of households receiving more in benefits than they pay in taxes because of low wages. On CRESC calculations, the proportion of working households receiving more in benefits than they paid in taxes increased from 27% to nearly 40% between 1979 and 2010. This problem of the dependent wage earning family was recognised by former Chancellor George Osborne who mandated a substantially higher minimum hourly wage; it would be folly not to enforce it rigorously.

The German high road of reinvention through technik is altogether more attractive. The problem is that it will be hard to replicate because the basic preconditions for large scale success in technical textiles are absent in the UK on both the supply and demand sides. First and most obviously, Germany has the stock of medium sized Mittelstand companies - firms large enough to hire professional management which can align production and marketing capabilities under supportive ownership - which is generally depleted in UK manufacturing and, as we have noted, almost completely absent in UK textiles. Second, the Germans have an infrastructure of technical training and development which supports productive capabilities. In the UK after deindustrialisation, the educational system has retreated from the technical training provided in the 1950s and 1960s by Colleges of Advanced Technology and Institutes of Science and Technology, while the tertiary education system has focused on volume production of undergraduates. Thirdly, German technical textiles firms have access to a much larger and diverse industrial base which serves as the core customer for many technical products. The German manufacturing sector is more than twice as large as that in the UK and is growing in a way that UK manufacturing is not: in the period since German reunification, the value of manufacturing output has grown from US$516 to 663 billion, while UK manufacturing output of US$245 billion in 2013 was more or less exactly the same as the US$243 billion of 1990. The home market position of British technical textile suppliers is worse than this comparison indicates because, as we have noted, the factory sector in key industries like automotive has passed into the hands of foreign owners who have integrated British assembly into their global supply chains in ways which limit opportunity for British component suppliers. A high propensity to import technical textiles is embedded in the ownership structure of British manufacturing: for example, a 2012 BIS survey showed that only 36% by value of automotive components were sourced in the UK.

There are many useful things that policy can do, especially if it addresses the disabling problem of the missing Mittelstand. But wanting things to be different will not make them so and, in

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82 House of Commons Briefing Paper 2015
83 BIS (2012) Growing the Automotive Supply Chain
technical textiles under present conditions, what we can expect is isolated successes not a large and growing sector. Hence, the importance of looking across the rest of textiles to recognise what has been achieved and analyse the problems.
Chapter 3 Capabilities and co-ordination in British carpets

3.1 Introduction

If textiles and apparel as a sector is generally a dismal story of decline, it is good to start the more detailed analysis with a success story about sub-sectoral development of capabilities in carpets and floor coverings achieved under difficult circumstances. It is also interesting to note that this is an unsung success story which has had little attention from either policy makers or academics. 84 Significantly, carpet manufacturing does not figure in The Alliance Project’s field of vision, perhaps because the larger companies in this sub-sector do not need grants or much help with skills; and because making carpets and rugs does not have the glamour of advanced manufacturing. However, we argue that carpets is a sector with considerable achievements in aligning capabilities at firm level and co-ordinating action by independent (larger) firms; and this story of capability can make an important contribution to our understanding of the broader industry and its challenges.

The boundaries of this sub-sector are blurred because the SIC classification is ‘carpets and rugs’, but the stock market category is ‘floor coverings’, which also includes competitor products, including wood, laminate and vinyl. The largest firm in this broader category is James Halstead which only makes hard flooring, while Victoria, the second largest, produces mainly carpets with some hard flooring. Our primary concern here is with carpets because producers of soft flooring have had to meet the distinctive challenge of international competition for a market that was shrinking due to changes in consumer tastes. From the 1980s, the established dominance of fitted carpets in domestic flooring has been challenged by shifts in British consumer tastes towards wood or laminate flooring. The inevitable effect can be seen in terms of declining output, numbers of firms and employment. However, a group of medium-sized carpet firms have survived, invested individually and acted collectively to strengthen marketing capabilities so that carpets is closer to sustainability than other sub-sectors. This achievement and its conditions are relevant to our investigation.

The ecology of current carpet manufacturing is immediately distinctive in a rather negative way: in carpets there is no clearly identifiable geographically cluster of interdependent firms, as in the case of the West Yorkshire woollens and worsted considered in Chapter 4; and carpets is not organised into vertically disintegrated supply chains, as is generally the case in apparel. Equally in carpets we do not have adversarial supply chain conditions, as in other sub-sectors where retailer power is exercised against manufacturers. Carpet making was traditionally concentrated in two locations: in the West Midlands around Kidderminster where the UK’s modern carpet industry originated in the late 18th century and in the North West/ West Yorkshire. At its peak, Kidderminster had 25 carpet firms employing around 15,000; by 2012 this was down to five firms and approximately 500 workers 85. In Halifax, the Dean Clough mills of Crossley employed 5,000 at its peak but finally closed in 1983. The surviving firms are now much more scattered across

the Midlands and the North and typically manufacture independently with some vertical integration, though many firms do not process wool or spin. While carpet manufacturers are dependent on retailers for much of their distribution, the relationship between these actors is generally more constructive than in apparel, even where carpet brands are not strong.

As we will explain in this chapter, the survival of carpet firms is a story of alignment of productive and marketing capabilities by medium sized firms in a small sub-sector where firms have clear identities and some have strong brands. The larger UK carpet manufactures have been able to co-operate horizontally through a trade association which includes retailers: working co-operatively, both groups can promote carpets as floor covering and secure a place for British carpets in the offer of all kinds of retailers from John Lewis, through independents to shed retailers. This success brings complications because it is possible to make decent returns in a well-managed carpet firm: the most financially successful medium sized firm, Westex, was making margins of 20-25% on turnover of £15-20 million in premium tufted carpets before it was taken over. And this has encouraged the entrance of impatient capital and financial engineering which is leading to the consolidation of the sector, so that financial success brings its own problems.

Because the conditions of alignment are specific to the sub-sector, carpets do not give us a general recipe for sustainability. Nevertheless, our analysis of carpets provides insights into how industrial policy can be developed to constructively support other sub-sectors in textiles and apparel and how such sub-sectors could learn to help themselves. In this chapter, we first explore some key features of the carpet manufacturing sub-sector to understand the context for developing firm capabilities. We then analyse the basis of survival in terms of the alignment of productive and marketing capabilities with supportive ownership. In the final section, we outline the implications of our analysis.

3.2 The UK carpet industry: a sub-sector with a core of larger firms

The story of carpet production is one of retreat as in other sub-sectors, but the retreat started later and was never a rout. The output of carpets and rugs in the UK was valued at £286 million gross value added (aGVA) in 2014, which is just over half the level at its peak of about £500 million in 1997. As Figure 3.1 shows, earlier data released by the ONS shows that between 1992 and 1997 the output (GVA at current basic price) had actually risen from £415 to £520 million. So, the output decline in carpets was both relatively late compared with other sub-sectors and less destructive in terms of headline output: the aGVA for carpets fell by 43% between 1997 and 2014, compared with 74% for apparel.
British carpet manufacturers have long faced the challenge of competition from imports, especially in cheaper carpets from Belgium. But by the 2000s they faced the further challenge of a shift in consumer tastes towards hard flooring products, part of the so-called ‘Ikea effect’ on consumer tastes. This contributed to a continued shrinking of the total home market for carpets: between 2006 and 2013, the total value of carpets sold in the UK fell from £1.27 billion to £986 million. This is crucial for most British carpet manufacturers whose export sales are

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87 The Telegraph, 21st February 2013. 
http://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/9885985/Pulling-the-rug-on-Axminster-carpets.html
limited. The surviving UK manufacturers include both tufted\textsuperscript{88} and woven carpet makers, with the latter more focused on the premium end of the market, and selling to domestic and commercial customers. Durability is important within the carpet sector where woven ‘Axminster’ style carpets are harder wearing and more expensive than newer tufted carpets, but quality woven carpets at premium prices have needed updating of patterns and colours to maintain consumer demand.\textsuperscript{89}

The reduction in the number of firms has been more marked than the overall decline in output. Figure 3.2 shows that firm numbers shrank from 375 in 1997 to 122 by 2014. However, these remaining firms are large by the standards of the rest of the textile industry. Average output per firm in aGVA is £2.34 million for carpets, compared with £0.27 million for the more numerous (3,415) apparel producers in the UK. Carpet firms are also bigger in terms of UK employment, with average employment of 49 in 2014. Figure 3.3 shows that total UK employment in the sector fell by around two-thirds towards 5,000 at the lowest point in 2012; this suggests that the most labour intensive businesses have left the industry and/or firms are using more efficient equipment so that, at an industry level, production has become less labour intensive. Part of this can be explained as a shift from woven carpets like Axminster and Wilton, towards tufted carpets which are much quicker to produce and thus less labour intensive.

**Figure 3.2:** Carpet and rug manufacturers: number of enterprises, 1997-2014

Source: ONS Annual Business Survey

\textsuperscript{88} Tufted carpets were introduced in the UK in 1952 and accounted for 73\% of all UK manufactured carpet by 1973.

\textsuperscript{89} The Shuttle, 17\textsuperscript{th} February 2005, http://www.kidderminstershuttle.co.uk/news/7457363.Victoria_Carpets__Victim_of_fashion_trends/
The typical carpet manufacturer is, as in the rest of the textiles sector, a micro-firm, with nearly 70% employing fewer than 10 people. But the peculiarity of the carpets sub-sector is that it sustains a group of productively competent medium sized firms which form a larger element of the total population and play a leading role in organising relations with retailers. Tables 3.1 and
3.2 underline the difference between carpets and apparel manufacturers: in 2015, some 12% (or 15 out of 120 carpet makers) each employed more than 250 in the UK. In contrast, in outerwear - a relatively successful sub-sector of apparel manufacturing – less than 0.5% (or 10 out of a much larger total of 2,030 firms) employ more than 100 in the UK.

**Table 3.2:** Employment size band comparison between carpets and outwear, 2015

<table>
<thead>
<tr>
<th>Employment size band:</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Manufacture of carpets and rugs</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>54.2%</td>
</tr>
<tr>
<td>Manufacture of other outerwear</td>
<td>2,030</td>
</tr>
<tr>
<td></td>
<td>69.5%</td>
</tr>
</tbody>
</table>

Source: ONS UK Business: Activity, Size and Location, 2013

The ten largest flooring and carpet manufacturers are listed in table 3.3 and this brings out the point that this is a sector which includes firms of some substance with international reach in production and marketing. With more than 800 employees world-wide and turnover of around £100 million, a handful of carpet companies look rather like a long established German Mittelstand firm. This point remains even if we exclude the largest player, James Halstead, (whose turnover of more than £200 million is all in hard flooring) and Milliken (which makes flooring products like carpet tiles along with many unrelated products like textile materials for car air bags). Victoria, the largest carpets-focused firm, has through recent acquisitions grown towards £200 million, already has more than 1,100 employees and manufactures in England and Australia. Greenwood and Coope eschews acquisition but has grown to over £100 million of turnover with around 250 employees making Cormar tufted carpet at two Lancashire sites: Brintons is in recovery from financial distress but still manages nearly £80 million of turnover and employs around 1,400 staff worldwide in 2016, of which more than 500 are now employed in the UK. Ulster carpets bring up the rear with £60 million of turnover, 70% of which comes from exports.

The corollary of scale (and solid financials in better managed firms) is diverse ownership which includes family or privately-owned firms, public limited companies which are stock market listed, private equity and hybrids of several ownership types. Halstead in hard flooring is a long established public limited company where the family control 40% of the equity and they supply the chair and chief executive. After boardroom disagreements involving the founder’s family, Victoria has reoriented itself by using debt to fund acquisitions of smaller firms which have allowed it to double in size over ten years. Cormar Carpets (formerly known as Greenwood and Coope) is entirely family owned but, since the founder retired, has for more than 20 years been professionally managed. Significantly, private equity has also entered the sub-sector: Brintons was bought by private equity house Carlyle for £40 million in 2011, after more than 200 years of family ownership. Ulster carpets remains family owned. The mix of ownership types suggests there is not one best way for an individual company (and any one type can have multiple

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90 Source: Brintons carpets website [https://www.brintons.co.uk/about/](https://www.brintons.co.uk/about/) (accessed May 2016).
outcomes). More important, the survival of a core of larger firms provides the conditions under which marketing can be co-ordinated and productive capabilities can be developed.

Table 3.3: Financial summary of the ten largest flooring companies

<table>
<thead>
<tr>
<th>Company name</th>
<th>Latest accounts date</th>
<th>Turnover th GBP</th>
<th>Turnover margin %</th>
<th>Turnover margin %</th>
<th>Turnover margin %</th>
<th>Turnover margin %</th>
<th>Turnover margin %</th>
<th>Turnover margin %</th>
<th>Turnover margin %</th>
<th>Turnover margin %</th>
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<tbody>
<tr>
<td>James Halstead PLC</td>
<td>30/06/2015</td>
<td>227,261</td>
<td>223,488</td>
<td>217,082</td>
<td>226,335</td>
<td>213,944</td>
<td>179,503</td>
<td>165,424</td>
<td>169,263</td>
<td>158,740</td>
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<tr>
<td>Victoria P.L.C.</td>
<td>28/03/2015</td>
<td>128,304</td>
<td>71,386</td>
<td>70,909</td>
<td>71,779</td>
<td>70,503</td>
<td>62,973</td>
<td>62,150</td>
<td>61,701</td>
<td>55,426</td>
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<td>Greenwood &amp; Coope</td>
<td>30/09/2014</td>
<td>104,278</td>
<td>90,405</td>
<td>86,202</td>
<td>79,772</td>
<td>79,267</td>
<td>63,086</td>
<td>60,624</td>
<td>67,721</td>
<td>61,487</td>
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<tr>
<td>Milliken Industrials</td>
<td>29/11/2015</td>
<td>102,077</td>
<td>101,101</td>
<td>97,087</td>
<td>95,728</td>
<td>124,375</td>
<td>102,843</td>
<td>86,550</td>
<td>94,731</td>
<td>84,710</td>
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<td>Brintons Carpets</td>
<td>26/09/2015</td>
<td>76,825</td>
<td>68,754</td>
<td>82,071</td>
<td>89,559</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
<td>Abingdon Flooring</td>
<td>31/03/2015</td>
<td>59,312</td>
<td>75,073</td>
<td>70,284</td>
<td>72,025</td>
<td>66,884</td>
<td>63,430</td>
<td>59,022</td>
<td>59,507</td>
<td>61,234</td>
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<tr>
<td>Furlong Flooring</td>
<td>30/06/2015</td>
<td>26,890</td>
<td>27,697</td>
<td>26,118</td>
<td>27,875</td>
<td>28,655</td>
<td>25,979</td>
<td>23,449</td>
<td>23,434</td>
<td>24,149</td>
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<tr>
<td>Cavalier Carpets</td>
<td>31/12/2014</td>
<td>25,672</td>
<td>24,484</td>
<td>27,667</td>
<td>30,738</td>
<td>27,972</td>
<td>33,572</td>
<td>39,822</td>
<td>46,129</td>
<td>47,866</td>
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<tr>
<td>Westex ( Carpets)</td>
<td>28/03/2015</td>
<td>20,754</td>
<td>18,670</td>
<td>17,484</td>
<td>17,038</td>
<td>16,305</td>
<td>14,282</td>
<td>16,034</td>
<td>17,412</td>
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<table>
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<tr>
<th>Company name</th>
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<th>Turnover last avail. yr</th>
<th>Turnover margin % last avail. yr</th>
<th>Turnover margin % year - 1</th>
<th>Turnover margin % year - 2</th>
<th>Turnover margin % year - 3</th>
<th>Turnover margin % year - 4</th>
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<th>Turnover margin % year - 9</th>
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</thead>
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<tr>
<td>James Halstead PLC</td>
<td>30/06/2015</td>
<td>19.44</td>
<td>18.68</td>
<td>18.98</td>
<td>18.87</td>
<td>17.98</td>
<td>19.18</td>
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<td>18.81</td>
<td>16.31</td>
<td>13.87</td>
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<tr>
<td>Victoria P.L.C.</td>
<td>28/03/2015</td>
<td>-3.20</td>
<td>-4.96</td>
<td>-2.01</td>
<td>2.73</td>
<td>2.3</td>
<td>2.35</td>
<td>5.69</td>
<td>4.98</td>
<td>3.85</td>
<td></td>
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<tr>
<td>Greenwood &amp; Coope</td>
<td>30/09/2014</td>
<td>6.60</td>
<td>3.09</td>
<td>2.34</td>
<td>0.98</td>
<td>4.32</td>
<td>4.77</td>
<td>6.80</td>
<td>5.11</td>
<td>6.07</td>
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<td>Ulster Carpet Mills</td>
<td>31/03/2015</td>
<td>11.78</td>
<td>10.64</td>
<td>9.00</td>
<td>5.89</td>
<td>0.86</td>
<td>1.78</td>
<td>12.99</td>
<td>3.31</td>
<td>3.30</td>
<td></td>
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<tr>
<td>Abingdon Flooring</td>
<td>31/03/2015</td>
<td>4.44</td>
<td>2.92</td>
<td>1.92</td>
<td>1.34</td>
<td>1.41</td>
<td>2.34</td>
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<td>2.02</td>
<td>4.37</td>
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<tr>
<td>Furlong Flooring</td>
<td>30/06/2015</td>
<td>3.78</td>
<td>4.91</td>
<td>2.51</td>
<td>0.68</td>
<td>3.94</td>
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<td>Cavalier Carpets</td>
<td>31/12/2014</td>
<td>3.23</td>
<td>4.04</td>
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<td>0.18</td>
<td>-2.42</td>
<td>0.96</td>
<td>0.72</td>
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</tr>
</tbody>
</table>

Source: FAME

3.3 Building and co-ordinating marketing and productive capabilities

The development of co-ordinated marketing and relationship management with carpet retailers builds on sub-sectoral activity specifics. These have allowed some successful engagement between manufacturers and retailers (and in some cases trade customers), and between retailers and customer. This is in striking contrast with ready-to-wear garments, where a piece of clothing can be packed and shifted across the globe without any connection between the manufacturer and the end consumer, with the retailer providing a clothes rail or point of sale. Carpets, however, are consumed through a retail process that involves measuring and fitting services which are crucial to customer satisfaction; moreover, customers may seek or value...
advice about durability or other product attributes. Trade interviewees explained that service could be used as a point of distinction to resist cheaper imports. For most domestic customers, carpets are an infrequent, costly purchase; buying a carpet usually requires a visit to a retailer where product can be explained and, if there is a good relation with retailers, the manufacturer gains an opportunity to sell a British-made product. The carpet department of every department store as well as local independent carpet retailers perform this function.

The corporate market cuts out the retailer and allows the manufacturer to build direct relations with corporate customers as a way of reducing competition, adding medium term stability and defending margins: one interviewee explained that commercial customers provided 35% of their market and it is growing more rapidly than private consumer demand. The British Contract Furnishing Association reports on the detailed contract furnishing market show strong growth across all sectors, including office, hotels, education and hospitals.91 Not only is it expanding but the contract market is bespoke because public or corporate spaces such as car dealerships, hotels or conference centres are large enough individually (or involve repeat orders) to justify a customized design made and can be directly supplied by the manufacturer at relatively large volumes. Thus the contract market is important as a source of revenue and as a spur to product development in relation to durability and design. Bryson and Ronayne describe the relation between manufacturers and corporate customers as a ‘process of co-production’.92 Survivor firms have been able to develop flexible and rapid production of customised lines which incorporate both visual cues and technical features relevant to the business of the customer, as with anti-microbial technology for care homes or healthcare customers.93 This kind of dyeing or coating expertise can then be redeployed in the domestic market to combat customer perceptions that carpet is harder to keep clean or unstylish compared to hard flooring.

For many firms in the carpets sub-sector the national (UK) market is the main outlet for British made carpets; this distinguishes carpets from other sub-sectors like woollen cloth or apparel. According to trade interviewees, there is still a significant, loyal middle class demand for British wool carpet which is perceived to be a high quality product. This kind of traditional consumer is far less fashion driven and is willing to pay a price premium for perceived quality. But the relatively high price per metre compared with imported carpet does set a limit on the size of the domestic market: traditional mid-market consumers tend to be middle-aged and from higher income groups; younger consumers are less likely to buy British carpet because of taste, price and a higher propensity to be renters not owner occupiers. Conscious of the need to renew the customer base, design was seen by our interviewees as important in attracting younger customers. One manufacturer cited Crucial Trading as a design-led brand that had been successful in attracting new customers for stylish and relatively expensive floor coverings in ‘natural’ fibres like sisal; interestingly, this British brand makes no mention of where its products are made and is probably deliberately not marketing itself as ‘British’.

While cheaper imports have eroded demand for carpets at the lower price points, the UK is also a significant exporter of carpets. Most imports are from Belgium which was an early adopter of

tufted carpet machinery, followed by India and China; typically, around one third of the output of the Belgian carpet industry was sold in the UK. As carpet is a large and heavy product, transport costs are significant for imported carpet. If we make the comparison with apparel, transport costs for carpet provide some protection against Asian production and this explains why the major competitor is still European not from the Far East. Imported carpet is typically not woven but tufted, which can be produced faster and cheaper than a loom-made product. Figure 3.4 shows that the total value of imported floor coverings has increased slightly since 2010 but is now at a level significantly less than at the peak in 2007. Similarly, the value of exports has failed to recover to peak levels, so the overall trade deficit has not shrunk. If we consider trade data by volume, however, the deficit is proportionately larger, suggesting that UK exported products are sold at a premium price compared to imports.

**Figure 3.4**: UK floor coverings: import, export and trade balance by value, 1991-2015 (US$ million)

Source: UN Comtrade

The largest export markets for British-made carpets are the USA, Ireland and the Netherlands, as shown in figure 3.5, with some overall growth in these key markets. For some of our interviewees, the export market was a relatively small part of their business and they cited climate and tradition as limits on further overseas sales growth. However, manufacturers understood that British-made carpets were viewed as a high quality product in Europe and the Middle East; and some also saw opportunities in emerging markets where carpets could be

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94 Bryson and Ronayne (2014, p.478) report that an average carpet loom can produce between 15 and 20 tufts per minute but a tufting machine can produce over 1,000 tufts. In 2002, tufted carpet cost £0.89 per metre to manufacture, compared with £1.64 for woven carpet.
marketed as a luxury product. Thus there are clearly export opportunities here and some, like Ulster carpets which already exports 70% of its output, are internationally focused.

**Figure 3.5**: UK carpets and rugs exports, US $, 1995-2015

![Graph showing exports from 1995 to 2015 for various countries including Ireland, Netherlands, USA, France, Germany, Belgium, Poland, Sweden, Spain, Australia.](image)

Source: UN Comtrade

In trying to capture the key marketing capabilities, one interviewee whose company has been expanding its carpet sales, highlighted the importance of developing a ‘commercial mentality’ that focused on the customer. Domestic producers can build margins or recover higher production costs through marketing that highlights ecological credentials, contemporary styling, quality and/or durability. The consensus amongst trade interviewees was that several of the larger firms have been very successful at branding and building consumer recognition of product attributes to sustain higher prices; but, at the same time, there was a large tail of smaller producers who were criticised as not very market-focused, relying too much on manufacturing and assuming that the product sells itself. Variable commitment to firm-level marketing is evident and small firms are, by virtue of their size, largely debarred from the kind of retail brand building which the larger firms engage in.

Hence the condition accentuates the importance of collective action to coordinate generic marketing of British carpet product and build a strong cooperative relation between UK carpet manufacturers and independent carpet retailers who remain a significant presence in this sector. Since 1999 through the Carpet Foundation, two British groups under pressure (manufacturers and retailers) have come together for mutual advantage. In this respect again, the carpets sector is different because the sub-sector is capable of a kind of coordination which has eluded firms elsewhere in textiles and in many other sectors. In such a diverse industry, there are bound to be differences of view about the Foundation’s activities, which tend to be questioned by manufacturers and retailers who operate at the top and bottom of the market. One manufacturer told us they did not see the Carpet Foundation as particularly helpful because they produced distinctive product which they could effectively market themselves; we noted that this firm is, however, a long-standing member of the Foundation.
The Carpet Foundation was created in 1999 through an initiative of 18 leading manufacturers, including Brintons, Victoria and Woodward Grosvenor, who agreed its activity should be funded by a levy on members of 1.3%. The immediate purpose was to promote British-made carpets and the media reported in 2003 that ‘a £1 million TV advertising campaign has been launched by the Kidderminster-based Carpet Foundation in a bid to boost flagging sales’ and ‘fight back against the massive growth in wooden and laminate flooring as well as imports’. After three years, the funding model was adjusted with the cost of membership subscription shifted mainly onto independent carpet retailers, who were themselves struggling against larger carpet chains and sellers of other floor coverings. The major carpet manufacturers however remain involved so that Brintons, Cormar, Ulster, Victoria and Westex are all currently members. The Carpet Foundation now has more than 400 members which make it a high-profile trade association that is able to present itself as the sectoral voice of manufacturers and retailers. Cormar Carpets, which joined only in 2013, explains the benefits of membership.

We firmly believe that the Carpet Foundation benefits the UK carpet industry in many ways. It enables us to have an industry voice on key flooring matters such as the environment, safety and quality testing, as well as trading standards. In addition, the Foundation does a great job in promoting carpets in the media.’ said David Cormack, Marketing Director at Cormar. ‘However, key to our involvement, is the fact that the Carpet Foundation has more recently become a vehicle to promote Independent Flooring Retailers and Buying Groups in the UK. And as we are a 100% British carpet manufacturer, with the majority of our business with Independent Carpet Shops, it obviously makes sense for Cormar Carpets to endeavour to support them and joining the Foundation will only strengthen that bond.

There is a striking contrast between manufacturer/retailer partnership relations in carpets and the adversarial supplier/ buyer relations in the apparel sub-sector and across much of the rest of British retail. The creation of one organisation that works to align the interest of carpet manufacturers and (independent) retailers has helped to empower the manufacturers when they stand up to other buyers; and in promoting British made carpets. It also strengthens the positon of domestic manufacturers in relations with the larger retail chains which are not members of the Carpet Foundation. Retailer members benefit because the public-facing carpet foundation website refers potential customers to their nearest independent retailer. No doubt there are still difficulties in individual manufacturer/ retailer relations; but this unique bilateral partnership in carpets has benefited both manufacturers and retailers by establishing independently fitted British carpet as a distinctive and desirable part of a (shrinking) market from which both sides can earn a decent margin. This is no small achievement.

This quite exceptional coordination works because the number of principals to be cordinated is relatively small and none are excessively powerful or weak. A handful of Mittelstand-type firms speak for the supply side where their interests do not diverge too radically from those of the smaller manufacturers. Equally, carpet purchasing in the UK is concentrated, with no more than

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95 Source: [http://www.kidderminstershuttle.co.uk/news/7604570._1m_crusade_for_carpets/](http://www.kidderminstershuttle.co.uk/news/7604570._1m_crusade_for_carpets/)

16-20 key buyers representing the large retailers and 5-6 buying groups each representing 10—150 independent retailers. This is not atomised competition because a small number of long established key players are well-networked in ways which make it easier to maintain long-term relationships between manufacturers and retailers. For instance, Victoria Carpets has a long established relationship going back over 30 years with John Lewis which now stocks its products in all 30 stores; Victoria also manages the warehousing and distribution of all John Lewis branded carpet directly to the stores. According to Victoria, ‘We share the same values and policies and have recently increased our presence in their newly reorganised carpet departments’. Partnership can work more surprisingly in other contexts because the shed retailers compete for share and are not over mighty. One high end manufacturer told us that they had developed a constructive relationship with a large national (and price-focused) chain retailer; this chain now stocked the British manufacturer’s (relatively expensive) lines in their stores as a way of attracting more mid and high income customers and in return treated their supplier fairly. This same manufacturer encouraged factory visits by independent retailers because educating retail sales staff was an important role for a manufacturer who cannot directly communicate with customers in store. If we benchmark against national stereotypes, all this is simply unBritish.

The coordinated marketing effort by manufacturers and retailers is underpinned by productive capabilities which compensate for the relatively high UK cost base that comes from using industry standard equipment and paying at domestic wage levels. In their recent academic study of British carpet manufacturing, Bryson and Ronayne conclude that the UK sector cannot compete just on price due to high manufacturing cost; manufacturers have therefore differentiated their products by competing on ‘delivery times, nearness to market and flexible production systems’. A high level of responsiveness has been achieved by developing ‘more flexible routines that enable the production of customised carpet as well as carpet that is made just-in-time and delivered just-in-time’. The status of British-made wool carpets may depend primarily on quality not fashion, but our interviewees were clear that this required continuous development of product and process as a key part of the relation with customers. Customers can be persuaded to pay a higher price for British-made if this is linked to product choice in terms of colour depth or range, or to quality which can now mean anti-allergen attributes as much as durability. Product innovation has been particularly important for the corporate market whose demands require integration of design and production skills which pushes the boundaries of what is executable. This has led to some firms to become more vertically integrated so that they have greater control over processes including dyeing and finishing, both of which can be the source of product distinctiveness.

One measure of productive capabilities is productivity. Carpet making has certainly become less labour intensive and more capital intensive since the 1990s. Carpet weavers typically manage more than 12 automatic looms at a time and high productivity has allowed relatively good pay for the remaining workforce. The contrast with other sub-sectors of textiles and apparel here is

97 http://www.victoriaplc.com/victoriaplc/ourbusiness/case_studies/
quite marked: for example, the carpet manufacturers that we spoke with said that they paid good wages (often with bonus schemes) and consequently did not have difficulty in recruiting and retaining staff. Employer claims about pay fit with official data on wages in carpets: table 3.4 shows that employees in the carpets sub-sector are the best paid within the textiles industry, reflecting productivity advantages over other sub-sectors. In 2014, aGVA per employee in carpets was £47,667, compared with £30,587 in textiles as a whole; since 1998, aGVA per head has grown around 80%, considerably more than in the sector as a whole. The league table (table 3.4) here is interesting because it shows the attractions of employment in carpets and the unattractiveness of textiles and apparel employment (even outside the informal sector). The average weekly pay in carpets is £634 against £455 in textile manufacture and £273 in outerwear manufacture; and the attractions of high wages in carpets are reinforced by the possibility of working for a substantial firm which offers continuity of employment and staff development.

**Table 3.4:** A comparison of weekly pay in carpets and rugs with other parts of the textiles and apparel industry, 2014

<table>
<thead>
<tr>
<th>Description</th>
<th>SIC Code</th>
<th>Number of jobs(^a) thousand</th>
<th>Average weekly pay (£)</th>
<th>Annual % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacture of textiles</td>
<td>13</td>
<td>41</td>
<td>455.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Preparation and spinning of textile fibres</td>
<td>1310</td>
<td>x</td>
<td>345.8</td>
<td>3.3</td>
</tr>
<tr>
<td>Weaving of textiles</td>
<td>1320</td>
<td>4</td>
<td>487.8</td>
<td>8.4</td>
</tr>
<tr>
<td>Finishing of textiles</td>
<td>1330</td>
<td>6</td>
<td>470.1</td>
<td>-6.4</td>
</tr>
<tr>
<td>Manufacture of other textiles</td>
<td>139</td>
<td>29</td>
<td>455.8</td>
<td>3.5</td>
</tr>
<tr>
<td>Manufacture of knitted and crocheted fabrics</td>
<td>1391</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Manufacture of made-up textile articles, except apparel</td>
<td>1392</td>
<td>17</td>
<td>395.5</td>
<td>7.6</td>
</tr>
<tr>
<td>Manufacture of carpets and rugs</td>
<td>1393</td>
<td>5</td>
<td>633.9</td>
<td>21.2</td>
</tr>
<tr>
<td>Manufacture of cordage, rope, twine and netting</td>
<td>1394</td>
<td>x</td>
<td>511.6</td>
<td>10.8</td>
</tr>
<tr>
<td>Manufacture of non-wovens and articles made from non-wovens, except apparel</td>
<td>1395</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Manufacture of other technical and industrial textiles</td>
<td>1396</td>
<td>x</td>
<td>432.5</td>
<td>3.3</td>
</tr>
<tr>
<td>Manufacture of other textiles n.e.c.</td>
<td>1399</td>
<td>x</td>
<td>608.0</td>
<td>5.1</td>
</tr>
<tr>
<td>Manufacture of wearing apparel</td>
<td>14</td>
<td>20</td>
<td>333.5</td>
<td>-3.9</td>
</tr>
<tr>
<td>Manufacture of wearing apparel, except fur apparel</td>
<td>141</td>
<td>16</td>
<td>325.8</td>
<td>-2.6</td>
</tr>
<tr>
<td>Manufacture of leather clothes</td>
<td>1411</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Manufacture of workwear</td>
<td>1412</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Manufacture of other outerwear</td>
<td>1413</td>
<td>6</td>
<td>272.5</td>
<td>-5.2</td>
</tr>
<tr>
<td>Manufacture of underwear</td>
<td>1414</td>
<td>x</td>
<td>288.0</td>
<td>0.1</td>
</tr>
<tr>
<td>Manufacture of other wearing apparel and accessories</td>
<td>1419</td>
<td>7</td>
<td>343.6</td>
<td>-7.0</td>
</tr>
<tr>
<td>Manufacture of articles of fur</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of articles of fur n.e.c.</td>
<td>1420</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of knitted and crocheted apparel</td>
<td>143</td>
<td>x</td>
<td>363.1</td>
<td>-9.5</td>
</tr>
<tr>
<td>Manufacture of knitted and crocheted hosiery</td>
<td>1431</td>
<td>x</td>
<td>344.1</td>
<td>-1.0</td>
</tr>
<tr>
<td>Manufacture of other knitted and crocheted apparel</td>
<td>1439</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Employees on adult rates whose pay for the survey pay-period was not affected by absence.

\(^\text{x}\) = unreliable data \(\ldots\) = not applicable \(-\) = nil or negligible

**Source:** Annual Survey of Hours and Earnings, ONS

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100 ONS Annual Business Inquiry.
3.4 Implications
The story of carpets is interesting partly because it has been largely ignored. The academics Bryson and Ronayne argue that the carpet sector and technical textiles are the most innovative parts of the T&A industry. But, while technical textiles is currently generating policy interest, carpet manufacturers have largely been side-lined because the mundane stuff under our feet lacks the glamour of overtly technical stuff like fabric for car airbags or performance sportswear. Carpets is also encouraging because the sub-sector shows that there is nothing inherent in British culture or habits of organising which prevents the orderly management of retreat, to find a position of sustainability. But, as we have argued throughout this chapter, the lesson is that this valuable outcome depended on specific conditions in the sub-sector which allowed an alignment of capabilities and created an environment which was supportive. If these conditions do not exist in other sub-sectors of T&A, it is nevertheless important to identify them in carpets, because one of the tasks for policy makers is to consider whether and how these conditions can be replicated in other sub-sectors as part of a refocusing of policy away from supporting individual firms and towards creating the conditions of resilient enterprise.

If carpets get closer to reinvention than any other sub-sector of UK textiles, the first and most obvious condition is the presence of a handful of Mittelstand firms, in the £60 to £200 million turnover bracket, capable of sustaining and aligning productive and market capabilities as they operate semi-independently and usually with a separation of ownership from professional management. There is nothing in the water in Kidderminster which guarantees this result: the sub-sector has a tail of smaller firms (with less than £10 million turnover), which were described to us as largely struggling, less effective at marketing and less able to build relations with retailers. The other subtler condition of sector-wide cooperation between manufacturers and retailers is a relatively small number of key actors, no more than 25 firm principals and major buyers, with no party being excessively weak or strong and all parties having an incentive to cooperate responsibly in the common interest through the trade association which brings parties together. It is no use preaching to chain retailers to behave responsibly, if they have a major market share and power over much smaller suppliers in atomistic competition, the retail buyer can and will abuse their position whenever volume or profits disappoint. Like capability, responsible cooperation has its structural preconditions which are more important than codes of practice or voluntary restraint.

And yet the result in carpets is not ‘capability achieved’, more ‘precarity postponed’. The home market for British carpets is more likely to shrink rather than grow, and more firms will need to emulate the success of Ulster carpets in export markets. And the success so far achieved by the sub-sector brings its own problems, because it is possible to make money out of producing carpets in a way that it is not in other sub-sectors, not least because of firm scale. And that brings in impatient capital in the form of private equity, as at Brinton’s, and encourages consolidation through acquisitive holding companies, as in the case of Victoria. Both these developments introduce new sources of potential vulnerability.

It is important not to demonise private equity because when family ownership has failed, as at Brintons, then private equity is often a valuable way of bringing in new management and a focus on running for cash is often long overdue. The problem is that private equity will want to sell
(often within a relatively short time horizon of five years or so) to a buyer who offers a good price. This could easily be a firm which wishes to run Brintons as an adjunct to their larger business by trading on the Brinton’s brand and running down manufacturing. Worse still, the first selling-on often starts a process of secondary buy outs and corporate asset swapping which, as we have documented in Welsh food processing, confuses or distracts from productive strategy and market positioning.\(^{101}\) Equally, it is important not to demonise the merger and acquisition that brings consolidation because selling out in a smaller firm will often be a way of bringing in new management. However, building companies through rapid acquisition can pose risks. For instance, since 2011 Victoria has more-or-less trebled its turnover by buying smaller firms in a range of activities; the activities are so diverse from underlay through vinyl flooring to premium tufted that Victoria must be effectively operating as a holding company. The question for any acquisitive conglomerate or holding company is what happens when the acquisition-fed growth stops, the share price sags and the debt must be serviced. While scale brings advantages, the nature of the growth can also produce specific kinds of precarity through exposure to ownership forms that may seek short term financial returns over long term relationships.

Chapter 4 Building capabilities in a low density cluster in West Yorkshire woollens and worsteds

4.1 Introduction

West Yorkshire is a traditional part of the woollen textile industry, specialising in spinning and weaving wool for cloth (especially for suiting), carpets and other products. At its peak it generated 60% of all UK woollen textiles employment.102 The area went through significant restructuring and modernisation in the 1970s and 1980s, including government-supported acquisition of small businesses by larger corporates,103 in common with what was then happening in other industries.104 In the case of woollens and worsteds, the structural change produced ‘a few large organisations to concentrate on long-run products, with small companies undertaking specialist short-run production’.105 West Yorkshire fared better than other traditional textiles regions as the Wool Textiles Economic Development Committee and the Industry Act 1972 facilitated some re-investment. By the late 1980s, the local industry had to some degree modernised and become less labour-intensive.106 However, adverse conditions intensified in the 1990s and the decline of big manufacturers was associated with retailers’ increasingly sourcing to access lower wage production107 so that the mid-market men’s suit was no longer a British product.

Despite its historic importance, the current level of woollen and worsted cloth production is very small. Indeed, the ONS discontinued woollens and worsteds as a separate SIC class (including preparation, spinning, weaving and finishing) in 2008, since when it has been amalgamated under general activities, such as spinning and weaving, which includes all materials including cotton, silk, flax and man-made fibres. 2007 is the last year for which separate data for woollens and worsteds is available: at this point there were 210 establishments with total turnover of £626m, aGVA of £185m and employing 6,000 workers nationally.108 While the number of enterprises halved between 1997 and 2007, turnover, aGVA and employment fell by around two-thirds, confirming that it was the larger firms disproportionately that left the sector during those 10 years. Nonetheless Yorkshire and the Humber remains the most important UK region for spinning and weaving wool.109

What matters in West Yorkshire is not only the number and size of firms but how they are connected. The woollen and worsted producers do not just co-locate in West Yorkshire but also form a cluster: a collection of firms engaged in related activities, and with varying degrees of

103 Hardhill (1990).
105 Hardill (1990), p.4.
108 As a point of contrast, in the same year a similar number of establishments produced carpets and rugs but with turnover of £974m, aGVA of £339m and 10,000 employees.
109 Using data collected from FAME and including spinning and weaving of all fibres, in 2015 Yorkshire and the Humber includes 81 spinners (out of 227) and 46 weavers (out of 184).
interdependence. Meanwhile, due to the small number of firms and their variable size, it is a low-density cluster with distinctive problems about precarity for smaller firms and independence options for larger firms. Through studying this cluster, we can develop an understanding about how individual firm level sustainability relates to ecology where collective survival depends upon the strength and distribution of productive, marketing and patient capital capabilities across firms. We will argue in this chapter that woollen and worsted is distinctively a low-density cluster where individual firms are on different trajectories and have different capabilities; in consequence, the relationship between individual firms and the wider group is complex and industrial policy needs to be discriminating. Readers of the last chapter will have taken away the message that the future of textiles partly depends on building a Mittelstand of larger and more capable firms; indeed, that is so but this chapter adds the point that this objective needs to be balanced against another of maintaining clusters of smaller firms which find strength through complementarity, which is easily disrupted in low-density clusters.

The term *cluster* has become very familiar in academic and policy discussions. A standard definition of a cluster is provided by the EU Cluster Observatory:  

> A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. Because of the shared proximity – both in terms of geography and of activities – cluster constituents enjoy the economic benefits of several types of positive location-specific externalities. These externalities include access to specialised human resources and suppliers, knowledge spillovers, pressure for higher performance in head-to-head competition and learning from the close interaction with specialised customers and suppliers.

The cluster is of course a relatively new version of a much older concept, *industrial district*, originally introduced by Alfred Marshall, who was interested in industrial concentration in particular localities where manufacturers had access to natural resources and urban markets. Marshall’s studies included the textile districts of Yorkshire and Lancashire where, as in other regions like the Staffordshire potteries, he highlighted the importance of large numbers of specialised firms that engaged in market-based transactions with each other. For Marshall, the district was an economically efficient way of organising production under specific conditions: where firms are typically small and owner-controlled, firms may have long term relations with each other and labour markets function well with large numbers of workers and jobs. The Marshallian concept of industrial district was subsequently extended to understand successful regional manufacturing specialization in industrialized economies, including the Italian textile districts. Without large vertically-integrated corporations, Italian districts relied on

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organisation and leadership from small, often family-owned, businesses, which had many inter-relationships.\textsuperscript{114}

At the same time as the industrial districts of Italy were attracting social science attention, the term \textit{cluster} was becoming popularised for a business school and policy audience by Michael Porter, whose interest was specifically in the competitive success of first businesses and later regions. Porter defined clusters as ‘geographic concentrations of interconnected companies and institutions in a particular field’, which are of interest because they contain ‘critical masses of unusual competitive success’.\textsuperscript{115} Porter’s concept of cluster is all encompassing.\textsuperscript{116} Using examples from Wall Street and Hollywood, to California wineries and Italian leather fashion, Porter’s account of cluster is less about the organic interdependence among small firms and more about how competition within and among clusters can create industrial champions.\textsuperscript{117} If Marshall presented industrial districts as one way to organize production, Porter more ambitiously promoted the cluster as a recipe for competitive success through growth.\textsuperscript{118}

Our analysis of the Yorkshire woollens and worsteds firms uses the term cluster in an orthodox way to denote a collection of firms in one location that combine relations of co-operation and competition. However, we adapt and qualify this notion for the purpose of studying capability and precarity after deindustrialisation. The Yorkshire cluster is a \textit{low-density} cluster defined by a trajectory of deindustrialisation which has reduced the number of firms and changed the nature and strength of relations between these firms. While there have been many studies of cluster and district growth and life cycles, here we have a distinctive set of issues about the after-life of survivors as a group: a small, low-density cluster is precarious because its collective marketing, productive and ownership capabilities can be undermined by the failure or exit of a few key firms; and, equally, the cluster may be subject to continued fracture and weakening due to actions of larger member firms who choose to develop their capabilities for independent action.

\subsection*{4.2 The ecology of woollen and worsted production: a low-density cluster}

\subsubsection*{4.2.1 Mapping the cluster}

Proximity on a map does not by itself indicate a cluster: we need to understand the ways in which firms are interconnected through combinations of co-operation and competition to produce a collection of products with a regional identity. For example, in the production of men’s suiting, weavers are dependent upon fine worsted yarns as the main material input, while they also require the services of specialist cloth finishers to produce high quality, high value products that can be sold on to the international market (partly through the services of cloth merchants).


\textsuperscript{115} Porter (1998), p.2


A simplified illustration of the set of processes is provided in figure 4.1. The cluster typically uses imported fine Merino wool for suiting: this is spun and dyed, then woven and finished. Most of the finished cloth is exported from the cluster through both commissioned and non-commissioned sales by merchants and other buyers, with smaller amounts used for final goods production (clothing and household goods) within the cluster. The cluster is by no means self-sufficient: there are connections to global supply chains at various points as wool and yarn are brought in; and to global demand as yarn and cloth are exported, not only from the cluster but from the UK.

Figure 4.1: A simplified process: creation of products and services within, into and out of the cluster

The cluster is more than a single supply chain. While much of the cloth is used for suiting, some manufacturers produce cloth for specialised purposes such as high performance clothing, while some focus on soft furnishing and interiors. For example, Hainsworth produces cloth for a range of specialist uses including ceremonial uniforms and billiard tables; and Camira produces commercial cloth for office furniture and transport seating. Textile firms in West Yorkshire show characteristics of both Marshall’s industrial district and Porter’s cluster. Some firms specialise at one point of the production process and have close co-operation upstream and/or downstream: for example, commission weavers or yarn spinners; some are more vertically integrated and have characteristics that make them more Mittelstand-like, in terms of their larger size and access to managerial resources.

Figure 4.3 shows the geographical location of firms and other organisations involved in different cluster activities, drawing on a range of sources. There is no definitive list of such organisations and classifications of role and function through official statistics, company records and such like are often inaccurate. Some important cloth merchants, such as Holland and Sherry, are based outside Yorkshire and much of the tailoring activity also lies outside the region. However, the map gives a good sense of the spread and density of the cluster: it includes 50 firms that we can
identify in a related series of activities including spinning, dyeing, weaving, finishing and merchanting, as well as some integrated producers. Firms can be found as far west as Saddleworth on the edges of Greater Manchester, and as far east as Leeds. The greatest density is found around the urban areas of Huddersfield and Bradford.

**Figure 4.2:** The distribution of the W&W cluster in West Yorkshire, 2015

<table>
<thead>
<tr>
<th>No.</th>
<th>Company name</th>
<th>R/O Full Postcode</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A.W.Hainsworth &amp; Sons Limited</td>
<td>LS28 6DW</td>
<td>Integrated</td>
</tr>
<tr>
<td>2</td>
<td>Abraham Moon &amp; Sons Limited</td>
<td>LS20 9PA</td>
<td>Integrated</td>
</tr>
<tr>
<td>3</td>
<td>Camira Yarns Limited</td>
<td>WF14 8HE</td>
<td>Integrated</td>
</tr>
<tr>
<td>4</td>
<td>Mallalieu’s of Delph Limited</td>
<td>OL3 5DG</td>
<td>Integrated</td>
</tr>
<tr>
<td>5</td>
<td>Moxon Huddersfield Limited</td>
<td>HD9 2NN</td>
<td>Integrated</td>
</tr>
<tr>
<td>6</td>
<td>Seal International Limited</td>
<td>BD4 7DF</td>
<td>Integrated</td>
</tr>
<tr>
<td>7</td>
<td>Joshua Ellis &amp; Co. Ltd.</td>
<td>WF17 6GH</td>
<td>Integrated</td>
</tr>
<tr>
<td>8</td>
<td>James Crowther Fabrics Limited</td>
<td>HD4 6XH</td>
<td>Spinner</td>
</tr>
<tr>
<td>9</td>
<td>Shepley Yarns Limited</td>
<td>OL3 5PJ</td>
<td>Spinner</td>
</tr>
<tr>
<td>10</td>
<td>Laxtons Specialist Yarns</td>
<td>LS20 9PD</td>
<td>Spinner</td>
</tr>
<tr>
<td>11</td>
<td>Lawton Yarns Limited</td>
<td>WF13 3JF</td>
<td>Spinner</td>
</tr>
<tr>
<td>12</td>
<td>R.Gledhill Limited</td>
<td>OL3 5EX</td>
<td>Spinner</td>
</tr>
<tr>
<td>13</td>
<td>Spectrum Yarns Limited</td>
<td>HD7 5BB</td>
<td>Spinner</td>
</tr>
<tr>
<td>14</td>
<td>Z.Hinchliffe &amp; Sons Limited</td>
<td>HD8 8QL</td>
<td>Spinner</td>
</tr>
<tr>
<td>15</td>
<td>Lightowlers Yarns Limited</td>
<td>HD9 5QQ</td>
<td>Spinner</td>
</tr>
<tr>
<td>16</td>
<td>Millbridge Spinning Co Ltd</td>
<td>WF15 6JL</td>
<td>Spinner</td>
</tr>
<tr>
<td>17</td>
<td>North Vale Doubling Co Limited</td>
<td>HD6 4DJ</td>
<td>Spinner</td>
</tr>
<tr>
<td>18</td>
<td>Fred Singleton (Huddersfield) Limited</td>
<td>HD3 4TG</td>
<td>Spinner</td>
</tr>
<tr>
<td>19</td>
<td>Alfred Brown(Worsted Mills) Limited</td>
<td>LS13 3HG</td>
<td>Weaver</td>
</tr>
</tbody>
</table>
The cluster also requires ancillary and related services. These include: machinery suppliers; organisations involved in training, research and development; as well as trade associations whose roles are focused on marketing or innovation. For example, the Textile Centre of Excellence is located in the heart of the cluster in Huddersfield, providing training, development and conference facilities for member companies; and working with UK Fashion and Textile Council (UKFT) in marketing activities to gain more social and political support for the industry. The textile societies of Huddersfield and Bradford act as both repositories for the history and development of the industry as well as providing social and educational opportunities for members of the cluster. The historic strength of the textiles industry is also reflected in the
colleges and universities of Yorkshire where there are still some technical courses in textiles, though fashion has become a much more important area of study. The demise of large companies which traditionally had both in-house training and cohorts of trainees who attended college courses, means that these education and training institutes remain important as providers of skills and learning to the cluster, though the very small numbers of workers involved in specialist activities makes it difficult to organise cohort-based training. Firms are also supported by organisations located outside the Yorkshire area: the Campaign for Wool and the Woolmark Company promote wool textiles production in the UK and worldwide. As figure 4.3 shows, the cluster is by no means self-enclosed and the external connections are important, including for procuring inputs (wool, yarn), devising new products, as well as developing and managing relations with customers. Merchants who bring together buyers and sellers are significant intermediaries for smaller manufacturers, who purchase wool and/ or sell cloth.

Figure 4.3 Internal and external cluster activities and organisations

4.2.2 The legacy of decline – a low-density cluster
The woollen and worsted cluster meets most of the criteria of a typical cluster or district - geographical proximity; interconnected companies providing specialist functions; associated institutions; commonalities and complementarities - all of which contribute to the distinctiveness of the product and the competitiveness of the producers. However, while the

breadth of the internal specialisms supports the cluster, the numbers of firms in each function are small, reducing the density of the cluster. Hence we describe this as a low-density cluster.

Formal measurements of the cluster using official statistics are difficult, but the EU Cluster Observatory\textsuperscript{120} does present limited data on textiles in West Yorkshire up to 2005. As table 4.1 indicates, between 1991 and 2005, textiles in West Yorkshire declined significantly in terms of employment: the 2005 level of 10,873 was around 40\% of that in 1991. The relative importance of West Yorkshire for textiles production is even more marked in relation to the ‘size’ indicator of relative importance, which shows that the region has become far less important as an employer within the European industry. Likewise, the ‘specialisation’ indicator confirms that within West Yorkshire, textiles has become a much less important employer, with the local economy much less dependent on both textiles and apparel (‘focus’).

Table 4.1 The textiles and apparel cluster in West Yorkshire, 1991 and 2005

<table>
<thead>
<tr>
<th>Region</th>
<th>Sectors</th>
<th>Year</th>
<th>Employees</th>
<th>Size</th>
<th>Specialisation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Yorkshire</td>
<td>Apparel</td>
<td>1991</td>
<td>15927</td>
<td>7.89</td>
<td>2.06</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2005</td>
<td>3400</td>
<td>0.29</td>
<td>0.37</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>Textiles</td>
<td>1991</td>
<td>26474</td>
<td>19.2</td>
<td>5.01</td>
<td>3.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2005</td>
<td>10873</td>
<td>1.3</td>
<td>1.66</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Source: EU Cluster Observatory
Notes:
The ‘size’ measure compares employment in the activity (cluster category) in this cluster as a share of total European employment in that activity. If employment reaches a sufficient share of total European employment it is more likely that ‘meaningful’ economic cluster effects will be present. A reduction in the value of ‘size’ shows that the cluster employs a smaller proportion of the total European workforce in that cluster category or activity.

The ‘specialisation’ measure compares the proportion of employment in a cluster category in a region over total employment in the same region, to the proportion of total European employment in that cluster category over total European employment. If a region is more specialised in a cluster activity than is the overall economy across all regions, this may be an indication that the region has attracted cluster activity to this location.

The ‘focus’ measure shows the importance of cluster activity employment in the total employment in the region. A declining figure shows that the cluster activity provides a lower proportion of employment in that region.

These indicators have their limitations. However, the data is revealing as it provides a picture of the residual West Yorkshire cluster that is strikingly different from that in the standard literature on industrial districts or clusters which assume dense networks and a large population of companies and employees.\textsuperscript{121} As output, employment and the number of firms have been reduced, the woollen and worsted cluster has been thinned out so that it retains many of the same services and specialisms but at a much lower density with (now) only a few firms

\textsuperscript{120} EU Cluster Observatory is maintained by the Center for Strategy and Competitiveness at Stockholm School of Economics. Definitions of key indicators: http://www.clusterobservatory.eu/index.html#view=aboutobservatory;url=/about-observatory/methodology/indicators/

performing key functions. Within West Yorkshire, textiles and apparel has lost size and scale as the data on employment and output show. EU Cluster Observatory data also shows that in 1991 textiles was the second largest sector in West Yorkshire by employment (8% of jobs), with apparel in eighth position, together accounting for almost 13% of regional employment. By 2005, textiles and apparel together provide only 4% of the employment, with textiles in 12th place in terms of sectoral contribution (3% of jobs). In line with lower employment, table 4.2 shows that textiles and apparel have fallen from 17% of manufacturing output in West Yorkshire in 1997 to between 9 and 10% more recently, or less than 2% of the total output of the region. The significance of this is that most firms have few competitors within the cluster so that those firms seeking to buy products or services have a limited choice and the survival and competence of one or two individual firm within the cluster matters more than it would in a classic industrial district.

Table 4.2: Significance of textile and apparel output in West Yorkshire, 1997-2012

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile industry* output as a percentage of local manufacturing output</td>
<td>17.0</td>
<td>16.5</td>
<td>14.2</td>
<td>14.6</td>
<td>13.1</td>
<td>10.4</td>
<td>9.8</td>
<td>9.4</td>
<td>9.3</td>
<td>10.1</td>
<td>10.7</td>
<td>9.4</td>
<td>9.2</td>
<td>8.6</td>
<td>9.9</td>
<td></td>
</tr>
<tr>
<td>Textile industry* output as a percentage of local total output</td>
<td>4.4</td>
<td>4.2</td>
<td>3.4</td>
<td>3.2</td>
<td>3.0</td>
<td>2.1</td>
<td>1.9</td>
<td>1.7</td>
<td>1.6</td>
<td>1.7</td>
<td>1.6</td>
<td>1.8</td>
<td>1.5</td>
<td>1.4</td>
<td>1.3</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Source: ONS Regional Gross Value Added NUTS2
* Includes textiles, wearing apparel and leather products

While it is hard to make direct comparisons with other clusters, it appears that woollen and worsted is less dense than other European textile clusters. Using Oberfranken in Germany and Toscana in Italy as comparators, we can identify significant differences: Oberfranken has much larger textiles firms (employing an average of 43 in 2011), while Toscana has many more, very small firms (average employment 5). However, both clusters are much more regionally significant as employers, in terms of the specialisation and focus measures outlined in table 4.1.122

The status of Yorkshire textiles is also reflected in the way that it was not one of the five priority sectors listed by Yorkshire Forward,123 the regional development agency abolished in 2012. Despite the quality of its products and its export success, the textiles industry apparently has limited political capital and has, to a large extent, survived despite national and local strategies for economic development focused elsewhere. Many of our interviewees stated that they felt largely ignored by local and national government, even though their firms are significant

122 See Appendix 3 for the comparative cluster data.
employers and maintain good jobs in their communities. The current position of the woollen and worsted cluster, as a small but still competitive production base which needs to be defended, does not sit neatly with conventional arguments of those like Michael Porter,\textsuperscript{124} whose recommendations for policy makers were based on the idea of regions and nations discovering a basis for competitiveness that would deliver success.

This raises an important question of whether and how it is possible for a low-density cluster to regenerate or reinvent. The academic literature has developed a notion of cluster life cycle, whereby clusters decline and disappear, or alternatively re-orient themselves in response to new market or technological conditions.\textsuperscript{125} Various explanations of the decline and re-orientation of industrial districts have emerged though reinvention is by no means certain.\textsuperscript{126} The woollen and worsted cluster survives as a low-density manufacturing centre producing high-end products but with little evidence of any systematic successful attempt to ‘upgrade’ or reinvent as something different through internal action and/ or external pressure.\textsuperscript{127} This is not to say that individual firms are not dynamic in terms of process and product development, but that its low density limits the cluster’s collective ambition and capability. The heterogeneity within the cluster in terms of scale and trajectory also create tensions that may be relevant to the development of the cluster as a whole. As outlined below, we can identify several groups of firms with distinctive trajectories.

Figure 4.2 maps 33 manufacturing firms, some of which have production facilities outside the cluster and in a handful of cases outside the UK. These are not the only textile firms in this area,\textsuperscript{128} but are those that mostly closely fit into the woollen and worsted related activities. We can allocate these firms into two categories which reflect not only relative size but also recent activity and development (see table 4.3). This categorisation does not precisely follow the standard SME definitions\textsuperscript{129} because our argument is not simply about size, but also about trajectory; moreover, there is insufficient data to allow a systematic classification on these definitions, as many of the smaller firms do not disclose turnover and employment.

Instead, we can distinguish between a group of (fairly stable) specialist survivor firms and a smaller number of (larger) adapter firms that demonstrate adaptive capabilities (or appear to be on the way to acquiring them). The adapters are small in number, but are distinctive because they are developing and diversifying in ways that either allow significant growth or provide a wider range of customers and markets. Two of the adapters – Camira and SIL Holdings - have

\textsuperscript{124} Porter (1998, 2000).
\textsuperscript{125} For example, (Belussi & Sedita, 2009; Martin & Sunley, 2011).
\textsuperscript{128} For example, the table excludes firms who mainly operate within other supply chains: for example, Lawton Yarns is one of the largest textile firms in Yorkshire, with turnover of around £41 million; however, they supply the carpet industry and hence are largely independent of firms in this cluster.
\textsuperscript{129} According to the European Commission, the main factors used to determine company categories are staff headcount and turnover or balance sheet total. Thus:

- Medium sized firms have 50-249 staff and between €10 and €50m turnover or €10-43m balance sheet total
- Small firms have 10-49 staff and between €2 and €10m turnover or balance sheet total
- Micro firms have less than 10 staff and less than €2m turnover or balance sheet total.
outside equity, additional production activities outside the cluster and specialised (non-family) management; they are considerably larger in terms of turnover than the medium adapters that are all still below the £25 million level.

Table 4.3: Woollen and worsted cluster manufacturers

<table>
<thead>
<tr>
<th>Adapters</th>
<th>Medium (aspirant) adapters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Larger adapters</strong></td>
<td><strong>Combine scale - £10-£25m turnover – with acquisition and/ or diversification; mainly family management but ambitious</strong></td>
</tr>
<tr>
<td>&gt;£25m turnover, activity outside the cluster, specialised management team, outside equity</td>
<td>Camira – diversified, international production; organic + inorganic growth (£48m turnover)</td>
</tr>
<tr>
<td></td>
<td>SILHoldings Ltd – holding company of worsted mill brands, plus spinning, dyeing etc. and merchandising; has management team that oversees 25 business with combined turnover of around £40m with 200+ employees. (includes: John Foster, William Halstead, Charles Clayton, Secka (all worsted weavers), Joshua Ellis (woollens) and Standeven (merchant)</td>
</tr>
<tr>
<td></td>
<td>Abraham Moon – around £22m turnover and 200 employees (branding/ product development but within own resources?)</td>
</tr>
<tr>
<td></td>
<td>AW Hainsworth – around £12m turnover and 147 employees (small acquisition helping to diversify into new niches based around core productive capabilities)</td>
</tr>
<tr>
<td></td>
<td>C&amp;J Antich – turnover not disclosed but projected at £18m with 70 employees (largest commission weaver, expanding (e.g. new premises) including via tailoring business)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specialist survivors</th>
<th>Micro specialist survivors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small specialist survivors</strong></td>
<td><strong>usually less than 15 employees and &lt;£1m turnover (guesstimate)</strong></td>
</tr>
<tr>
<td>Usually &lt;£10m turnover and fairly stable (or at least not expanding), though often substantial employers (i.e. 50-100)</td>
<td>Mallalieus of Delph</td>
</tr>
<tr>
<td></td>
<td>Moxon Huddersfield Ltd (integrated)</td>
</tr>
<tr>
<td></td>
<td>Spectrum Yarns (larger than £10m turnover but has contracted)</td>
</tr>
<tr>
<td></td>
<td>Z.Hinchcliffe &amp; Sons Ltd (spinner) (larger than £10m but not growing)</td>
</tr>
<tr>
<td></td>
<td>Alfred Brown (weaver)</td>
</tr>
<tr>
<td></td>
<td>Bower Roebuck &amp; Sons Ltd (weaver)</td>
</tr>
<tr>
<td></td>
<td>JH Clissold &amp; Sons Ltd (weaver) (part of Holland &amp; Sherry, merchants)</td>
</tr>
<tr>
<td></td>
<td>Pennine Weavers</td>
</tr>
<tr>
<td></td>
<td>Stanley Mills Weavers</td>
</tr>
<tr>
<td></td>
<td>Holmfirth Dyers Ltd</td>
</tr>
<tr>
<td></td>
<td>Thomas R Ramsden &amp; Co (dyer/ finisher)</td>
</tr>
<tr>
<td></td>
<td>WT Johnson &amp; Sons (finisher)</td>
</tr>
<tr>
<td></td>
<td>Bulmer &amp; Lumb (£11m in 2014 but possibly contracting) (dyer/ finisher)</td>
</tr>
<tr>
<td></td>
<td>Shepley Yarns</td>
</tr>
<tr>
<td></td>
<td>Laxtons Yarns</td>
</tr>
<tr>
<td></td>
<td>Lightbowlers Yarns</td>
</tr>
<tr>
<td></td>
<td>Millbridge Spinning Co. Ltd</td>
</tr>
<tr>
<td></td>
<td>North Vale Doubling Co (spinner)</td>
</tr>
<tr>
<td></td>
<td>Fred Singleton (spinner)</td>
</tr>
<tr>
<td></td>
<td>Schofield &amp; Smith (weaver)</td>
</tr>
<tr>
<td></td>
<td>Townend Weavers</td>
</tr>
<tr>
<td></td>
<td>Harrison Gardner (dyer/ finisher)</td>
</tr>
<tr>
<td></td>
<td>Huddersfield Dyeing Company</td>
</tr>
</tbody>
</table>
The specialist survivors are a much larger group in number, divided between small and micro specialists, based loosely on the European Commission definitions using (actual or estimated) turnover. The small specialist survivor firms are much smaller than the traditional (often vertically integrated) mills producing men’s suiting for UK retailers before the 1990s. Now they have significant exporting capabilities and are also proficient at product development and sustaining relations with other cluster actors. Arguably, the small specialists are crucial to the cluster i.e. they include the bulk of the commission weaving activity plus specialist spinning, dyeing and finishing in relative volume. The micro specialists have their niches but are perhaps individually less critical to cluster survival in terms of volume and/or function.

All in all, this does not look like a standard cluster or industrial district with a large number of smallish specialists: rather, here we have large differences not only in scale plus also in focus, with a mixture of narrow specialists, integrated and diversified firms. Trajectories are also varied and, to some extent, uncertain. Some of the small specialists could become adapters (or move in this direction): for example, several have external (non-family) equity (e.g. Bulmer & Lumb) but a shift from specialist to adapter status would also require market development or acquisition given that there is apparently little growth within most of the niches.

Amongst the specialists, we do see the kinds of inter-dependencies that we would expect in a cluster so that they stand or fall together; however, the larger firms have, through combinations of vertical integration and diversification, developed Mittelstand-like characteristics and a capacity for independent action. These Mittelstand type firms are of a size which gives them access to managerial and/or financial resources and provides them a wider range of productive and marketing options. The two groups – specialist survivors and adapters - co-exist within the cluster and to some extent interact for mutual benefit, but their differences also create some tensions relevant to the resilience of the cluster as a whole, because the larger firms have capabilities that mean they could effectively withdraw from the cluster. The next part of the chapter explains how sustainability arises from a combination of capabilities, before outlining some of the challenges that are evident for the cluster and its firms.

4.3 Understanding sustainability in a low-density cluster
Several interviewees highlighted their ‘roller-coaster’ experience over the last couple of decades as their local sector adjusted to a series of external shocks. Nonetheless, the cluster has maintained its identity as an area recognised for the production of fine English worsted cloth, much of it exported. In addition, the cluster is an important producer of cloth for household products and commercial usage, as well as accessories and garments. All of this depends on a range of productive and marketing capabilities, some of which have been developed independently by firms and some of which reflect the co-ordination of efforts within the cluster, as explored below.

4.3.1 Productive capabilities underpin high end, high value and heritage products
The survival of the cluster, albeit in low-density form, is explained by the ability of individual firms to produce high-value, high-quality products and find export markets. In relation to the production of suiting, the cluster maintains a collection of skills and expertise that allow wool to be brought in and fine worsted cloth to be produced within and exported from the cluster.
cluster’s reputation for fine cloth in global markets, as well as specialist products for commercial customers, helps to partly insulate it from hostile forces that have adversely affected the wider UK textile and apparel sector.

Italy has been a longstanding competitor in fine woollen cloth, while China and other newly industrialized countries have made things more difficult by occupying the mid-market. One response by cluster firms to such threats is continuous innovation to sustain a distinctive market position.\(^{130}\) The development of new products or product attributes is important because the high value of the cluster’s output is underpinned by both quality and uniqueness. We were told that intermediary and retail buyers (and, by implication, end customers) are prepared to pay for quality but selling into high-end markets also requires novelty in specific designs or collections that create a halo. According to interviewees,\(^ {131}\) grey, black and dark navy are the most popular colours for men’s suiting but it is still important to offer a wide range of colours and patterns so that the range encompasses contemporary as well as traditional options. In addition, product developments in weaving and finishing to produce lighter weight cloth suitable for hot climates has been an important element in expanding the export market.\(^ {132}\)

The survival of the cluster is also based on the willingness of firms to produce small as well as large volumes of cloth, and. Producing small volumes implies higher costs as the yarn needs to be changed and machines reset; this is a necessary adaptation to the market and some mills have developed technical skills to reduce the costs of changing machine settings between one cloth design and another.\(^ {133}\) Many of those we spoke to emphasised that, if they cannot compete on costs especially with newer Chinese producers, they must offer some other kind of distinction, including something ‘nobody else can do or is not particularly interested in doing’.\(^ {134}\) Continuous development of new lines was also viewed as important because intellectual property rights are not effectively protected.\(^ {135}\) Survivors cited unwillingness or inability to change as a reason for the decline of other firms in the cluster. This attribution is interesting because it suggests that the decline of the cluster was not simply the outcome of shifts in the behaviour of markets and the development of global supply chains; many interviewees argued that failure of individual firms to develop was partly the result of endogenous factors and a limited capability (or willingness) to do something different enough to keep a place at the top end of woollen cloth making.

Individual firms take the initiative in technical development through machinery purchase and adaptation (including working directly with machinery manufacturers), workforce training and in-house R&D. But, it is important to note that there is also a co-ordination of innovation within the cluster that brings benefit both to the individual prime mover and across the cluster in relation to specific technical processes (like dyeing or finishing). For example, one interviewee\(^ {136}\) had successfully coordinated funding for new technology in finishing with lower labour

\(^{130}\) Interview, manufacturer.
\(^{131}\) Interviews, merchant, tailor.
\(^{132}\) Interview, manufacturer.
\(^{133}\) Interviews, manufacturers.
\(^{134}\) Interview, manufacturer.
\(^{135}\) Interview, manufacturer.
\(^{136}\) Interview, trade association.
requirement and enhanced quality, which would benefit the cluster more broadly. Another argued that they were a central player in pushing innovation through the supply chain: doing so required co-operation between firms who all had to see the benefit of incurring development costs.

Although the cluster is characterised by a degree of co-ordinated product and process development, especially in relation to the production of suiting, it is also clear that individual firms have employed a range of other approaches to strengthen productive capabilities, including horizontal diversification and vertical integration. Horizontal diversification offers the opportunity for scale (which might allow building of management capabilities and more career options for managers), access to different markets which may be less cyclical or which may have more scope for growth, as well as opportunities to share manufacturing facilities, technologies and hence enhance productive efficiency. For example, Abrahams Moon, the 177 years old family business that had traditionally focused on garment cloth, has recently added interior fabrics, throws, blankets and scarves into their product portfolio. Similarly, Hainsworth, the 234 years old family business that supplied cloth to the military since Napoleonic times, is attempting fashion fabric in a luxury consumer line.

In contrast, vertical integration involves adding upstream or downstream processes so that the individual firm controls more of the productive activities. For example, one of the larger firms in the cluster, Camira, has acquired a supplier (a spinner) as well as establishing its own dye works. Integration reduces reliance on other firms in the cluster and can be a response to the need for more control over quality, more speed and flexibility, access to greater capacity or simply a desire to be less dependent on others. Regardless of the motivation, vertical integration can reduce both the density of the cluster (where integration takes place through acquisition) and the extent of interdependence (where firms establish their own facilities). The need for either suggests a tension in this kind of cluster which is not so much an industrial district with small firms competing to offer their products and services, but more a low-density mix of small and larger firms whose interests do not always converge.

### 4.3.2 Marketing capabilities help to maintain necessary price premia

Some firms in the cluster have developed marketing capabilities that convert product characteristics into market revenues. Customers include tailors and other apparel makers, commercial customers and, in a more limited way, final consumers of clothing, accessories and household goods. Selling through export markets or direct to customers helps to limit the damaging effects of price-based competition in the limited high end domestic market; thus, marketing efforts are focused globally on signalling quality and distinctiveness. In this section we outline the basis for and development of marketing capabilities.

Although much of the UK industry has been undermined by low wage global competition, the woollen and worsted cluster has also been the beneficiary of access to world markets where high prices allow domestic labour costs to be recovered. While most of the domestic market for suiting has been captured by imported cheaper product, in the last decade high income consumers, especially in markets in the Middle East and Asia, have driven the growth of fine
worsted demand.\textsuperscript{137} According to our interviewees, most surviving firms are exporting and most of the growth that they have experienced since 2010 is a direct result of buoyant international markets.

Aggregate data supports this view and brings out the point that woollen and worsted has always been a cyclical market: figure 4.4 shows the volume of woven woollen fabric exports hit its lowest point around 2010, though the value of exports has held up more successfully. From the early 2000s, export growth has been driven mainly by demand from developing countries in Asia. For example, figure 4.4 shows the trend in exports from the UK of woven fabrics (containing 85% or more wool or fine animal hair): while Japan has traditionally been the largest Asian export market for British woven woollen fabrics, the Chinese market has grown rapidly to match it in scale by 2015. Hong Kong remains the next most important Asian market.

\textbf{Figure 4.4: UK total exports of woven woollen fabrics, 1970 -2015}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure4.4.png}
\caption{UK total exports of woven woollen fabrics, 1970 -2015}
\end{figure}

Source: UN Comtrade

\textsuperscript{137} Interview, trade association.
**Figure 4.5a:** UK exports of woven fabrics by value, 2000-2015

![UK Export to selected Asian countries Fabric 85%+ wool Trade value in Million US$](image)

Source: UN Comtrade

**Figure 4.5b:** UK exports of woven fabrics by weight, 2000-2015

![UK Export to selected Asian countries Fabric 85%+ wool Net Weight in Ton](image)

Source: UN Comtrade

Note: Figure 4.3 uses an older version of product code which provides data over a longer time period but does not disaggregate by destination. Figure 4.4 uses a newer product code under which 85%+ wool fabric and 100% wool fabric are separated with 85%+ representing the majority.
The actors in the cluster can do little to directly influence global market conditions, even if they act collectively, because these shifts in demand are driven by (rising) numbers of high income consumers in markets like China. However, the British firms have shown their ability to take advantage of strengthening demand, especially since 2010, and to compete on equal terms with other exporters of fine cloth such as Italy. Even relatively small companies told us that they put resources into visiting China and other export markets, particularly where they were selling directly to buyers in those markets, rather than to international luxury brands.\(^{138}\) It was also noted that in secular terms ‘as long as Asian consumers get more middle class, it’s a growth market’\(^{139}\) for British-made worsteds, which are considered high-end rather than mid-market.

The cluster’s focus on export and high value products provides a clear contrast to the apparel manufacturers considered in Chapter 5. One consequence is that, despite their relatively small size, individual firms in woollen and worsted are not exposed to the same degree of asymmetrical power that is so problematic for clothing manufacturers selling into retail chains. The ability to bypass the large UK retailers is an important advantage (even a condition of survival) within the cluster, though this implies a limit on volumes as the cluster accepts withdrawal from much of the UK mid-market. Interviewees mentioned the loss of contracts with UK retailers in the 1990s as a traumatic event still remembered locally; several provided anecdotes about how recent attempts by one retail chain to explore new supply arrangements were met with hostility on the part of producers, who had no interest in being reliant on such powerful and arbitrary customers. Some manufacturers do have retail customers (as part of a mix) and these relations can still be problematic (we heard of recent cases where large contracts with major buyers for accessories had been lost). Larger firms with younger and professional management also expressed more open attitudes towards working with the UK retailers. In general, power relations are not disabling because the Yorkshire product is appreciated – and can be marketed - as a premium product to trade customers around the world.

Market data supports this: according to our interviewees, cloth from the Yorkshire cluster typically commands a price of £50-60 per metre, which represents a premium of more than £20 compared with Chinese competitors.\(^{140}\) This cluster premium appears to be greater than that on woollen cloth in general. As figure 4.6 shows, the average prices of UK or Italian made woollen cloth is significantly above that from China, with ‘Made in Britain’ appearing to command a small average premium over ‘Made in Italy’ in some years, especially pre-2008. Though Chinese made cloth has generally been falling in price, Italy and British product has become more expensive on average since 2000.

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\(^{138}\) Interviews, manufacturers.

\(^{139}\) Interview, merchant.

\(^{140}\) Interviews, merchant, manufacturer.
Having started with advantages in terms of product position in diverse markets, marketing capabilities have been strengthened in different ways. First, the cloth merchants are key actors who buy fine suiting cloth direct from some mills on a commission basis, but also effectively promote the products of the cluster as a whole. Second, individual firms can build brands or products lines that raise the market profile of a particular manufacturer with positive, neutral or sometimes negative effects on the cluster as a whole. We consider each of these outcomes in turn.

The cloth merchants, such as Dormeuil, Scabal, Huddersfield Fine Worsted and Huddersfield Cloth, are particularly important intermediaries: merchants market the product and interpret its quality to buyers, as well as helping to coordinate capabilities at each stage in production (inside and outside the cluster). Merchants argue that high end tailoring (as in Saville Row) appreciates British-made cloth and is willing to pay the premium. Some interviewees argued that British mills are not good at marketing and communications, no doubt this is because some are content to sell to cloth merchants, rather than manage their own customers directly. However, again there is a tension here: in an industrial district with many producers and intermediaries, manufacturers would not need sophisticated marketing skills; but, in a low density cluster, surviving mills might think that it would be prudent insurance to develop marketing capability.

Collaborative development figures in narratives to promote the cluster, as was the case with a project to produce a new ‘Jade’ cloth incorporating jade particles as an ‘ultimate luxury’ line for the merchant Dormeuil which co-ordinated spinning, weaving and finishing. It is not clear how

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Figure 4.6: Export of woollen woven fabrics: China, Italy and UK comparison by volume and price

Source: UN Comtrade

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141 Interview, merchant.
142 Interview, manufacturer.
important the Jade product was in terms of sales but it was the opportunity for a promotional campaign that involved Prince Charles, as a customer of Saville Row and a long-established supporter of the British woollen industry. Such campaigns sustain the belief that the Yorkshire cluster retains a combination of specialisms and skills that cannot be found in Italy or China and highlights the importance of combining marketing and productive capabilities.

Trade associations also have a role in promoting the identity of the worsted cluster and wool products more generally. For suiting cloth, provenance is partly established through use of ‘Made in Huddersfield’ as a traditional marker of quality on the selvedge of the cloth. One indicator of the value of provenance is the reported growth of counterfeit ‘Made in Huddersfield’ product and consequent attempts by the Huddersfield Textile Centre of Excellence to find new ways of authenticating Yorkshire provenance. Meanwhile, the Woolmark Company and Campaign for Wool have been promoting wool as a sustainable raw material for clothing. These two London-based organizations organize high profile events which help to bring the woollen textile producers closer to the creative and fashion end of the value chain. While individual firms through web sites and other channels emphasise the heritage of their product, many of our interviewees were unconvinced about the value of marketing the cluster through a regional ‘Made in Yorkshire’ branding. This was particularly the case in relation to export markets where ‘Britain’, not ‘Yorkshire’, was seen as the most effective labelling.

In relation to individual firm actions to build marketing capabilities, these vary considerably across the cluster. Mills, especially those operated by commission weavers, are mostly invisible outside of the cluster and, inasmuch as there is branding of their cloth, it is mainly using the name of the merchant. Although the weavers have websites, many have limited direct marketing, usually working with a small group of buyers who effectively promote the cloth on their behalf. However, some firms have sought to develop stronger independent marketing capabilities through direct selling of their cloth and through building portfolios of diverse products for sale to customers, whether retailers, business customers or end customers. For example, Spectrum Yarns has added a knitwear brand, Glenbrae, to sell directly to customers (and, more recently, closed its fine end spinning); while the commission weaver C&J Antich has established a tailoring business in Huddersfield, Antich Fine English Tailors. Other companies have used their own cloth to add new ranges of products, most commonly household goods, as is the case with AW Hainsworth, Mallalieus of Delph and Abraham Moon. Abraham Moon has been particularly successful in both developing specific brands, Bronte by Moon for throws and blankets and Moon for interior furnishing products, and in developing a consumer brand for its cloth. Coupled with new modern designs, Moon has been successful in selling its own cloth to a range of retailers who have used it in both clothing and household goods. Abraham Moon cloth now has sufficient profile that retailers, designers and others mention it in their own promotional material. For example, Marks and Spencer was reported to

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be the largest UK customer for Moon’s cloth in 2011, though many of its mid-market clothing lines using Yorkshire cloth were produced outside of the UK. Other clothing brands and retailers like Ben Sherman, House of Fraser and Boden mention heritage Abraham Moon cloth and, although the clothing manufacturing is offshore, this promotion is significant because it reconnects British mid-market demand to domestically produced woollen cloth. While there may be some spill-over effects for the cluster more broadly, the successful branding of Moon largely builds firm-specific marketing capabilities.

4.3.3 Supportive capital allows productive and marketing capabilities to be renewed
So far we have argued that adapter and survivor firms in the cluster have generally been able to defend a market position at the high end through efforts to develop and differentiate their products in ways that can sustain high prices. In relation to our framework outlined in Chapter 1, we can now add in ownership (supportive capital) which has generally played an important role in the cluster in underpinning the long term development of these businesses.

One of the legacies of the exit of the large mills in the 1990s, is a cluster of mainly privately-held companies. Some of these are still in family hands: indeed, some firms have family heritage over multiple generations. For example, Abraham Moon describes itself as ‘established 1837’; Mallalieus of Delph note that they have a lineage of ‘five generations’ since 1840; Alfred Brown mentions five generations over 100 years; while AW Hainsworth counts seven generations ‘since 1783’. Of course, there is nothing inherently virtuous about family ownership; many of those cluster firms that went out of business before the 2000s were also family owned and managed. However, committed ownership through a family can be a positive input when it provides the frame for maintaining and building productive and marketing capabilities.

Compared with publicly-held companies or private equity holdings, committed owners may be more confident in taking a long term perspective not only in planning investment into a firm from which they take out modest sums, but also in riding-out cyclical fluctuations because such owners have no exit strategy and can ignore annual fluctuations in earnings and company value. Cluster interviewees told us that they had good years in 2005 and 2006, bad years in 2008 and 2009, with sales picking up in a couple of good years from 2010; most also anticipated that the business would remain cyclical and this coloured their realist views about the future development of their firm and their general reluctance to incur external debt which would bring the risk of foreclosure in the next down turn. From publicly available data for those companies

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147 http://www.moons.co.uk/
148 http://www.mallalieus.com/history/
149 http://alfredbrown.co.uk/about/
150 http://www.awhainsworth.co.uk/about/
that disclose profits,\textsuperscript{151} it is clear that company profits can be significantly diminished in several years over a typical cycle. Profit margins typically fall by more than half from the top to the bottom of the cycle and some firms make operating losses for several years in a row in any major demand trough.

As many of our manufacturing interviewees told us, they attached great personal value to their role, which has helped to keep them in the industry despite business cyclicality and financial precarity.\textsuperscript{152} Most owners expressed a responsibility to sustain the business. In some cases, this was linked to family ownership and the maintenance of heritage; here we found examples where owners felt a responsibility not to take capital out of the business but rather to strengthen it so the enterprise could be passed on to family members. In others, the owner’s commitment was to the local community; for many firms the workforce is very local and owners indicated a desire to continue to provide stable, regular employment of a kind which is often now hard to find in the private sector. Woollen and worsted firms are relatively labour intensive and a typical £5 million turnover firm has between 70 and 120 staff, making them significant local employers in their communities. A few of the larger firms have developed multi-site production strategies which span the borders of the cluster; this allows firms like Camira to take advantage of the Yorkshire legacy and combine that with significant facilities and access to a wider pool of labour in lower cost sites in Eastern Europe.

For the typical small firm with turnover of around £5 million, owner-management offers considerable stability, combining technical competence with a prudent conservatism which can create limits and challenges. For example, small cluster firms are effectively disconnected from external finance through their general avoidance of debt (because interest payments and loan foreclosure make it more difficult to weather the worse years) and they typically have no access to outside equity. Most firms accepted that they needed to plan to renew machinery and some had upgraded equipment to improve productivity and/or to allow product development. But a lack of finance for non-routine investment can be a restraint or block on the growth of small firms. For example, taking advantage of opportunities to develop new facilities or to make acquisitions that might allow expansion of operations will be difficult. This locks the firm into its existing scale and markets. In other cases, ownership has been rearranged within the cluster through some consolidation of traditional brands within surviving companies. We did find examples of private equity and other forms of private (non-family, non-stock market) ownership’ these firms have greater access to capital for expansion. However, these are exceptions; the typical cluster firm with £5 million turnover is too small to be of interest to present day private equity. And an individual firm’s survival and development is driven by its own capabilities and dependence on the rest of the cluster, as we explore in the final section of this chapter.

\textsuperscript{151} All companies must make some financial disclosures but given their size, many of the companies in the cluster disclose assets, not turnover or profits. Appendix 3 provides financial data for some of the firms that do disclose profitability.

\textsuperscript{152} Interviews, manufacturers.
4.4 Implications: sustaining the cluster

Any exploration of capability and sustainability needs to consider both the individual firms and of cluster that supports them. Growth of some firms does not secure the future of the cluster where individual firm response to low density is to become more self-reliant, through up-scaling and vertical integration. Thus, the challenge is to encourage forms of individual firm development which strengthen single firm productive, marketing and managerial capabilities, but not at the expense of mutual support within the cluster. This would most likely require support for the infrastructure of the cluster in ways that present a challenge to conventional industrial policy focused on topping up skills and investment in early stage innovation. In this section, we explore challenges to the cluster and outline the implications for policy.

The strengths of the firms in this cluster are based on distinctive, high value products sold to higher income international customers; thus, they largely escape the retailer-led supply chains that are a problem for many domestic apparel makers. Though supply chain relations both within the cluster and across cluster boundaries seem to be largely constructive, the market for traditional suiting cloth is limited in size, requires ongoing product development to justify high prices that are the consequence of domestic labour costs and, in recent years, has been dependent on the growth of the global rich, especially in Asia. When we visited manufacturers in the region in 2015 we were told that, since 2010, conditions had generally improved with a small increase in demand and some expectation that ‘marginal growth’ could continue over the next few years.\textsuperscript{153} While demand for the cluster’s products are currently strong in export markets and in Saville Row,\textsuperscript{154} this was closer to stabilisation on the upswing of the cycle rather than any revitalisation of the cluster as implied in cluster life-cycle concepts.\textsuperscript{155} For example, one interviewee provided an example of how investment and employment growth in one firm with which he was familiar may be at the expense of job loss in another company rather than net growth at the cluster level.\textsuperscript{156} Of course, firms can diversify to find more significant growth, and some have done so, but the cluster of firms with distinctive specialisms can be an inhibitor of this kind of firm development, even though it is an effective way to manage product development. A small number of larger adapter firms in the £20-80 million turnover bracket, like Abraham Moon and Camira, have access to a range of professional managers because they can pay the salaries of managers who think in terms of major projects and new development; however, the local market for textiles managers is very limited and management recruits often come from outside the cluster.

While the cluster includes a range of firm types and sizes, there is a much larger group of smaller firms that are privately owned and usually owner-managed. Their turnover is typically around the £5 million level, which reflects productive capability but also brings significant management limits because the firm is too small to support the salaries of professional managers and a rentier owner. Such £5 million firms can sustain only a very limited management division of labour: typically, one owner manager has multiple roles which include production management, product

\textsuperscript{153} Interviews, various manufacturers.
\textsuperscript{154} Interviews, trade association & manufacturers.
\textsuperscript{156} Interview, manufacturer.
development and marketing. Their scale means that they have limited capacity to take on new projects and they are unlikely to have succession plans that involve bringing on managers within the firm. In some cases, there is a family member who may be willing and able to take over in due course, but several interviewees expressed concern about how transitions could be managed, as they must be in each new generation. Day-to-day management and succession can be especially difficult in family-owned firms where ownership has become dispersed and family members may have different objectives.

The responsibility to keep things going means many smaller firms favour a form of risk averse stability over the next cycle over a more uncertain push for growth. And so, the number of mills which can and will make the transition to £20 million and professional management is probably small. Similarly, the low density cluster produces a workforce labour market characterised by immobility between firms, in contrast with the classic industrial district which is partly defined by its active labour markets. In part, this reflects the relative stability of many surviving cluster firms and a commendable emphasis by firms on retaining staff as part of a long term, two-way relation of responsibility. One consequence, after years of sector downsizing, is that many surviving firms have an ageing workforce, much of which needs replacing in the next ten years. However, many interviewees reported difficulties in recruiting young workers to enter the sector; perceptions of the textiles industry still seem to be shadowed by massive downsizing in the 1990s and the general lack of appeal of factory work in the cluster, where wages are low and firms are typically small, especially compared with the carpets sub-sector. There are also current difficulties in recruiting specialist skills: inasmuch as they exist, labour markets are very local as wages are not sufficiently high to attract workers to travel more than a relatively short distance. Consequently, some firms had labour shortages in key roles like cloth mending.

A skilled workforce also has training needs that cannot be easily met at the individual firm level. The cluster still benefits from the legacy of large firms which trained earlier generations of workers (and managers) and supported local FE and HE provision. However, the modern cluster lacks large firms that could train their own workers (and provide a service to other firms); nor can it produce a sufficiently large cohort from the whole cluster to allow external specialist training to be easily developed. FE colleges offer useful but typically low level training, while HE was seen as having largely moved to training in fashion and design, not production and marketing. This left smaller firms trying to plug the gaps through various initiatives and in-house training, with some support from the Centre for Excellence in Huddersfield.

The absence of a professional management cadre and difficulties about recruitment and training of the workforce are defining characteristics of a low density cluster where the representative firm is a small survivor. Under these conditions, the long term survival of the cluster must be precarious because individual firms are not structured to recruit and train human resources (and rectifying that problem requires much more than adding bits of training to top up worker skills). More immediately, the cluster points of stress and vulnerability are a more direct consequence of low-density because, in key areas like specialist dyeing or finishing, the cluster (or more exactly the small survivor firms) are dependent on one or two other firms whose failure or exit could weaken or remove links in the productive chain. Larger adapter firms can and have responded to this fragility by becoming more self-sustaining through vertical integration, but
securing their own sustainability may do little to support the cluster as a whole, and may even undermine collective security without developing long term winners. This raises a question about the appropriate mechanisms for co-ordination and cluster management, including an inventory of points of vulnerability and some kind of rapid response if key process links are threatened by firm exit. A substantial thinned-out cluster with a mix of firm sizes make this an urgent issue for industrial policy in textiles and other down-sized sectors.
Chapter 5 UK apparel: precarity by default

5.1 Introduction

This chapter focuses on the largest sub-sector in UK textiles & apparel: this comprises a diverse collection of firms from global brands like Burberry and Barbour, to small scale CMT micro firms supplying high street and on-line retailers. The UK now produces only a tiny proportion of the clothes sold domestically (and a small share of the global market) but that does not necessarily mean that there is significant scope for reshoring. Sustainability in apparel must then be understood in the context of a globalized market and supply chains that link producers and consumers across different regions. The development and continued shifting of global value chains in apparel has been intensively studied by academics and there are many dynamics at work: for example, retailers’ sourcing decisions are not driven simply by cost but by a mixture of factors, depending on the product. Thus simple cost disadvantage may be qualified by speed, ability to fulfil large orders, supplier reliability and so on. However, in high income countries the broad outcome has been a movement of production to lower wage countries under free trade conditions which offer lower priced clothing for consumers. There has been recent interest (especially in the US) around reshoring, partly because wages have risen in China. But, the logic of producing clothes for high income countries in middle and low wage economies has seemed overwhelming. Therefore, any stabilisation or recovery in the manufacture of apparel in the UK has to be set in context: how can British suppliers find a market advantage within an environment where supply chains are international and consumers have become habituated to low prices; and how might this be possible for a stock of small and micro firms with limited capabilities, competing in an atomised way in a denuded infrastructure of training, development and support.

As outlined in chapter 1, the aggregates show that UK apparel manufacturing in a post-decline period is characterised by a series of structural weaknesses. In particular, investment is both low in relation to manufacturing in general and also much more cyclical. There has been no sustained increase in output since 2004, so that the sub-sector as a whole is trapped in a post-decline phase with limited investment, constrained productivity and low wages. Apparel is also dominated by micro-firms, with 83% of the firms in 2015 employing fewer than 10 and only around 2% of firms (around 80) with 50 or more employees; if we are looking for Mittelstand-type firms, these are hard to find indeed, with approximately five firms employing more than 250 in the UK. Thus, while the sub-sector is relatively large, the stock of firms is such that it sets limits on the ability of firms to develop managerial capabilities that could help build resilience.

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157 See for instance, Gereffi et al.; Abernathy et al; Palpacuer; Coe.
159 See figure 1.1 for data on investment.
160 See figure 1.2 for data on wages. See also Appendix 5 for comparisons between textiles and apparel.
161 See tables 1.2 and 1.3. ONS rounds the number of firms to the nearest 5, implying that there are between 3 and 7 firms employing more than 250.
However, the difficulties which stand in the way of adaptability need to be understood in the wider ecological context of supply chain conditions: the difficulty of ‘coming back’ relates not simply to the limited number of firms with capability but to the very specific set of market conditions they operate under in the domestic market. This is crucial because, without market opportunity, productive and ownership capabilities are wasted. The problem is that in the domestic market, most firms are dependent on retailer-led supply chains where asymmetrical power is routinely used against them. These ecological conditions create a precarious situation for many (small) firms and reward or encourage all kinds of dysfunctional behaviours. Behind the retailers are price-sensitive domestic customers, often conscious of fashion and indifferent to the origins of garments. While there is a top end producing high value garments in low volume, often for export, much of the sector is struggling to find conditions for sustainable cost recovery in a subsector where, as we shall see, there is no large mid-market of the kind which exists in carpets. Worse still, apparel manufacturers are engaged in atomised competition. Though apparel production is geographically concentrated, manufacturers are not part of functioning clusters, nor is there an effective trade association or other formal or informal kinds of producer co-operation to provide extra-firm resources or to mitigate adverse supply chain conditions.

The next section of this chapter outlines how the market conditions in the UK ensure that precarity is the default position for many firms. Section 5.3 then explains how, to varying degrees, firms struggle to develop capabilities. In Section 5.4 the analysis shifts to explore the key challenges and how they might be addressed.

5.2 Conditions of precarity

Chapter 1 introduced our analytical framework which outlines the significance of three sets of capabilities - marketing, productive and patient capital - which can be combined in different ways. In this report so far we have examined two sub-sectors where firms have been able to develop marketing capabilities and/or leverage them through various forms of co-operation and interdependence. These capabilities produce and reflect product characteristics that can be translated into price premia which cover UK labour costs. In the carpets sub-sector, the combination of a strong (mainly UK) consumer demand and commercial customers has allowed co-operative relations between manufacturers and retailers to develop, while co-ordination between these two groups has also been effectively used to support product category demand. In the woollens and worsted cluster, a high end (mainly export) market supports specialist producers with a degree of interdependence, who collectively benefit from marketing efforts mainly co-ordinated by merchants from outside the geographical cluster. These outcomes can be delivered under different kinds of ownership, though we have also seen that larger firms are more likely to be able to draw on a range of internal management resources that allow firm development: the carpets sub-sector for example has a critical mass of medium-sized firms which have been able to achieve sustainability (or at least postpone precarity) even though they have experienced significant reduction in the size of their domestic market. If we have been able

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162 According to the Annual Business Survey, in 2013, about 50% of apparel manufacturing output was concentrated in the East Midlands and London, with much smaller amounts in several other regions including North West 9%, West Midlands 7% and Yorkshire & the Humber 5%. See Appendix 6.
to identify forms of adaptability in these two cases, what do we see in the case of the UK apparel sub-sector?

The story in UK apparel is of a more challenged sub-sector where, though there are some exemplars of adaptability, these are exceptional amongst a much larger group of firms that are engaged in an unending struggle towards business sustainability. Here, we see a sub-sector which is challenged by the composition of demand and by adverse power relations in the supply chains so that it is difficult to build internal marketing capabilities, even where firms may have patient finance and some productive competence. Consequently, apparel shows how marketing opportunities and capabilities are effectively a gateway condition. We can explain the background to this by surveying recent developments in apparel retailing and how they have re-shaped supply chains.

5.2.1 The UK apparel market – rising demand and falling prices

Figure 5.1 illustrates how retail sales in clothing have been growing steadily in the UK, confirming that this is a growth market in terms of consumption; at the same time, the output of UK apparel manufacturing has been declining constantly. The two trends are striking and show how increasing domestic demand has had no net benefit in terms of domestic production or employment.

Figure 5.1 to some degree hides the extent of the changes to the domestic market for clothing because output (aGVA) lumps together volume and price effects. The rise of so-called ‘fast fashion’ coupled with the rapid development of on-line selling has encouraged consumers to purchase larger volumes of clothing at lower average prices, partly based on desire for ‘newness’; in the mass market the current look becomes increasingly important and quality or durability are demoted. Figure 5.2 shows the overall trend in the price of clothing, with a steep fall between 1996 and 2009 by which time the index had halved; after 2010, prices stabilise at a slightly higher level reflecting higher wage costs in China.\textsuperscript{163} This has been a general European phenomenon: imports from non-EU countries to the EU grew faster in volume than in value due to the reduction in average price.\textsuperscript{164} Growing consumer demand for clothing has thus responded to and encouraged deflation and an availability of cheap imports offering choice as well as value.

\textsuperscript{163} PWC (2016) The UK Premium Clothing, Footwear and Accessories Market.

**Figure 5.1:** The comparison of clothing retail and manufacture of apparel: output (aGVA) and employment

Comparison of aGVA: apparel manufacture & clothing retail, £million

- **aGVA Manufacture of apparel**
- **aGVA retail sales of clothing**

Comparison of total employment: apparel manufacture & clothing retail (’000)

- **Total employment of Apparel manufacture**
- **Total employment of Clothing retail**


Note: This comparison is based on ONS Annual Business survey’s estimate of aGVA (see appendix 1 for definitions) in ‘Manufacture of wearing apparel’ and ‘Retail sale of clothing in specialised stores’.
These trends have been associated with large changes in retailing. As discussed in Chapter 2, clothes retailing in the UK has long been dominated by large chains, with independent retailers accounting for only 13% of the market by the early 2000s. The chain retailers are collectively powerful because of their combined market share, however, the position of individual chains is insecure in a changing market. For example, retailers have sought to compete by moving from a fairly rigid seasonality to more frequent changes in merchandise which requires greater flexibility in their supply chains. The challenges faced by retailers have been compounded by the growth of new channels, particularly on-line and most recently mobile, where novelty and value are both part of the offer. Retailers have managed growing volumes to date but their profitability is volatile, and they will come under more pressure as alternative channels further reduce the market share of established high street retail chains. Most obviously, internet sales have already transformed patterns of clothes buying: figure 5.3 shows that sales by value have tripled since 2010, with some consumer groups like 12-18 year olds increasingly important in driving marketing and stocking decisions.

While the erosion of pricing is a problem for both retailers and manufacturers, these trends do create some opportunities for UK garment-makers: in principle, if manufacturers can meet the demand for speed-to-market, short-run, and production efficiency, their physical proximity to the market can help secure a place in the supply chain. This opportunity is larger in some

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166 Retail Weekly (2014); Mintel 2015.


169 Bruce & Daly (2006).
product categories: for example, in the fashion-driven category of women’s dresses, the volume of UK manufacturing has increased since 2011 with the rapid growth of on-line sales, though unit prices have fallen by a quarter, as shown in figure 5.4. A combination of fast fashion and on-line retailing may create some new domestic opportunities, but for a larger number of firms, the more threatening development is the collapse of the mid-market in clothing, as explored below.

**Figure 5.3:** Internet sales of textiles, clothing and footwear, weekly sales in £million, 2010-2015

![Graph showing Internet sales of textiles, clothing and footwear](image)

Source: ONS Internet Retail Sales
Note: weekly sales data is seasonally adjusted.

**Figure 5.4:** The volume and unit price of women’s and girls’ dresses made in the UK

![Graph showing volume and unit price](image)

Source: ONS PRODCOM - UK Manufacturers’ Sales by Product
Note: Prodcom measures the UK manufacturers’ production and it is product-based meaning the volume is effectively measuring UK manufacturing. Data excludes knitted and crocheted garments.
COMING BACK? Capability & Precarity in UK Textiles & Apparel

5.2.2 The vanishing middle market and the indifferent consumer

The ending of high street retailer support for a mass domestic industry was a key turning point in the 1990s. Up to that point there had been a volume market for British-made clothing which sustained large manufacturers, as well as a group of smaller suppliers. After the change in retailers’ sourcing, some of these larger players moved their focus away from UK production to overseas manufacturing and, increasingly, coordination of supply chains, while some of the smaller firms also moved production offshore to maintain a role in the supply chain.

It is difficult to prove whether consumer indifference to place of manufacture is an obstacle to reshoring, or whether the lack of choice between British-made and imported products effectively removes any effective discretion for the consumer who might otherwise favour domestic production. Research suggests that in the 1970s UK consumers had a strong general preference for UK brands or products (second only to those from West Germany), on grounds of perceived superior reliability, value for money and workmanship. Subsequent research on UK consumer behaviour suggests that consumer perception and preference varies according to product category. One study in the mid-2000s found that across eight major product categories, 13.3% of UK consumers rated ‘made in the UK’ more highly than other origin; while in fashionwear specifically this was a much higher 46.9%. A more recent study yet suggests that country of origin still has a significant positive effect on product judgment by younger consumers. However, any such preferences do not seem to be translated into purchases at any scale, a finding in keeping with related studies on sustainable fashion, which have revealed inconsistencies between stated preferences and actual behaviour among ethically-concerned fashion consumers for a range of reasons, including limited access to ethical clothing, lack of information, limited choice and price.

If consumer preferences and behaviours are complicated, effective domestic demand for British made clothing is limited in the volume market because most retailers no longer have significant scale or consistent stocking of British made products and consumers have little choice on the shop floor. The shrinking of the mid-market has been an important driver of this outcome: between 2010 and 2014, when the UK clothing market grew approximately 10% overall, the value clothing market increased by 25%. As our analysis of the carpets sector shows, British customers in the mid-market may favour British-made products where these are available at a

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170 The retailers that we spoke with made this argument, as discussed later in this chapter.
176 Verdict Retail Source: http://www.verdictretail.com/uk-value-clothing-market-benefits-from-3-8-million-more-value-seeking-shoppers/
similar price, or where they offer higher quality. However, there is no longer a sizeable middle market in apparel. Instead, UK retailing has become more competitive and less obviously segmented: there is a distinctive high end with both traditional and more fashion-led brands; a strong discount and supermarket segment where price dominates; as well as a large and diverse space between these two where there is no longer any clear relation between price and quality which could sustain the mid-market. As one of our interviewees summarised: ‘you used to get good product for a good price, crap product for crap price, and very good product for high price. They [Primark] took the two ends and boof... high volume, good quality and low price. That kind of set the tone for the rest of the industry’.  

As with supermarket food retailing, UK clothes shoppers have discovered that chains with low prices have attractive offers. Verdict Retail estimate that 3.8 million more affluent UK shoppers have started visiting value clothing retailers between 2009 and 2014, a phenomenon termed ‘socioeconomic penetration’. This erodes the mid-market category (‘good product for a good price’) from which domestic producers might expect to benefit. Thus, if opening up of global trade in apparel was the first problem for UK manufacturers, following on behind has been an aggressive form of price-led competition between retailers, who have focused on price, novelty and fashion, but not on provenance nor (in most cases) on quality as sources of advantage. Several retail chains have been struggling: BHS and Austin Reed collapsed in 2016, while many who survive, including Debenhams and Marks and Spencer face difficult markets. The largest of the chains, Marks and Spencer used to dominate the mid-market and is now reduced to promising a turn-around in clothing sales which seems elusive, making store closures likely. More than twenty years ago, Marks and Spencer advertised that 90% of their products were British-made; now customers have embraced fast fashion, and in the mid-market and low end, have become used to buying clothes for reasons that have no connection with place of production.

The implication for manufacturers is that they must either rely on high income demand in export markets, or find ways to fit into the reshaped fashion supply chain in the UK by offering speed and flexibility at competitive prices.

Exporting high end products offers some opportunities for highly regarded brands and specialist products in areas like sports and leisurewear. Figure 5.5 shows that while imports (by value) rose sharply from the mid-1990s and peaked at $29.4 billion in 2011, exports have almost doubled since the mid-1990s, peaking at around $9 billion in 2014. The UK is the 11th largest exporter of clothing, though at $9bn this is at a much lower scale than fourth place Germany ($20bn) or third place Italy ($25bn), let alone China ($186bn). Some evidence suggests that there may be a stronger attachment to Made in Britain in some export markets. Research by CEBR finds the

177 Interview, manufacturer.
178 Source: http://www.verdictretail.com/uk-value-clothing-market-benefits-from-3-8-million-more-value-seeking-shoppers/
179 According to one source, 71% of consumer decisions to purchase clothing are driven by price. Retail Week Reports 2014 ‘Fashion Retail’ p. 10. Available at: http://www.landsecuritiesretail.com/media/18900/fashion-insight-report-final.pdf
180 Toms and Zhang (2016). For an overview of Marks & Spencer’s shift in procurement see Box 1 in Appendix.
181 See appendix 7 for a listing of the top 25 clothing exporters in 2014.
strongest support for British goods in emerging markets, where the average willingness to pay a premium is 5.8%, compared with 1.5% in advanced economies.\footnote{CEBR (2014). Reported premiums were as high as 7.2% in Qatar and 6.4% in China, compared with 0.5% in Germany and 0.4% in France. See also Zdravkovic (2013) on demand for UK-made products by US consumers.}

**Figure 5.5**: UK clothing imports, exports and trade balance, (US $ million), 1990-2015

![Chart showing UK clothing imports, exports, and trade balance (US $ million) from 1990 to 2015.](chart.png)

Source: UN Comtrade

In a few product categories the UK is a net exporter: for example, in men’s and boys’ woollen coats a net trade surplus has returned in 2015, as imports have fallen and exports risen more so (figure 5.6). Increased exporting is more marked in women’s and girls’ dresses where large volume changes in demand are shown in figure 5.4 due to on-line selling: figure 5.7 shows that exports have increased nearly eightfold by value, compared with a fourfold increase in the volume of UK production (figure 5.4). Though not measured directly, much of this export is by UK retailers via online channels (and is likely to include imported products), rather than domestically made products by UK manufacturers.
Thus, while there are opportunities for some producers the picture is complex and the overall conditions are very difficult, with a large, growing market driven by fashion and value and a shrunken middle market. Retailer-led supply chains provide an ecological challenge: for mainly small scale UK producers who cannot deliver either low cost or large volumes, their offer to retailers is flexibility. Here, the basis for survival is a combination of productive and supportive capital capabilities, but a weak market position implies precarity. However, where it is possible to avoid the retail supply chains by selling to the (small) global luxury market or finding alternative distribution channels, firms can build marketing capabilities which help them
towards resilience. The next section uses case material on companies to explore these different outcomes.

5.3 Conditions of survival: achieving gateway marketing capabilities

How can firms build sustainability despite challenging UK market conditions? We answer this question by analysing cases of (anonymised) real companies which show how different combinations of capabilities can produce very different outcomes along the continuum from sustainable cost recovery to extreme precarity where the owner’s reluctance to exit is postponing the inevitable. First, we find adaptable firms where marketing capabilities provide a gateway to cost recovery. Secondly, at the other extreme, we find firms unable to develop marketing capabilities, which are struggling with precarity. When owners without alternatives do not then leave the business, they prolong atomised and sometimes destructive competition. In the third case, we find firms stuck in between that have some advantages through productive skills and patient capital, but which face ongoing problems about market opportunity and their own firm’s marketing capability.

5.3.1 Resilience through aligning capabilities

What should a Mittelstand-sized UK apparel firm do, given the growth of fast fashion and intense competition at the bottom end and a shrinking mid-market? If the firm has productive and market capability, the sensible strategy would be to aim for the growing global high end market which, in principle, allows higher UK production costs to be covered by higher prices. Burberry provides a rare, maybe unique, example of this kind of firm operating on the scale of an established German Mittelstand player. Burberry has continued to invest in UK production facilities while seeking international sales, most recently with its plans for a new plant in Leeds, which brings together work from two existing sites at Castleford and Keighley. The new plant will employ the existing 760 staff, with an expected further recruitment of around 200 people operating on two shifts making trench coats. Burberry has stumbled in the first half of 2016 because of Asian slow down (though the lower value of the pound helped to stabilise sales later in the year), but previously experienced steady growth and profit margins of around 20%, partly through vertical integration with direct access to customers secured through ownership of its own retail operations. However, it should not be assumed that this high end success is easily obtained or is replicatable going forward. There are barriers to entry because high end and luxury brands can only be developed through sustained expenditure on advertising and promotion, including support for exclusive retailers; consumers at the high end are fickle and luxury markets have always been cyclical. The super cycle in commodities and Asian

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183 These examples are based on companies whose identity has been disguised. Where companies are named, the data has been obtained from secondary sources such as company accounts, websites or the media.

184 http://www.yorkshireeveningpost.co.uk/news/burberry-to-create-1-000-jobs-at-new-trenchcoat-plant-in-leeds-1-7551037
industrialisation masked all that but, as Swiss watch makers and Burberry have found, the Chinese market can go down as well as up.\footnote{http://www.halifaxcourier.co.uk/news/calderdale/designer-burberry-set-to-slash-jobs-1-7929615}

It is therefore entirely understandable that, apart from Burberry, there are only a handful of apparel firms that operate at the top end with any scale. We discuss two of them here, which we denote Adaptable 1 and Adaptable 2.\footnote{See Appendix 10 for profiles of the firms discussed in section 5.3.} These firms have slightly different approaches: both have heritage-based brands but one targets the luxury market, the other the sub-luxury high end; both have considerable discretion over their distribution and, even where they depend upon access to retailers (for example high end department stores), they have a negotiating position because consumers value their brands. Both combine 10-15% UK production with a much larger amount of non-UK sourcing, albeit with partnership-style relations with overseas suppliers. Thus it is the British brand rather than British production that is important to consumers (in both the home and expanding export markets).

While marketing capabilities underpin firm adaptability and are the gateway, the home: overseas manufacturing balance in both firms is affected by productive capabilities in a way that is likely to set limits on significant increases in domestic production. For one of these firms, UK production is maintained on the basis of a highly efficient factory producing a limited range of relatively simple garment lines in steady demand. The firm argues that high UK labour costs are a handicap on higher labour content, complex garments which are produced by overseas suppliers; a skills gap reinforces the cost argument because the company’s ageing UK workforce is skilled but may not be willing or able to perform at the highly intensive levels required to compensate for higher costs. Thus, sustainable cost recovery is possible for some garments with relatively low labour content, but UK production is unlikely to expand and indeed could easily be run down if there were changes in management priorities or in ownership. Firm sustainability is achieved but through a business model which offers a distinct but limited role for domestic production.

While a high end route to sustainability can work for a larger firm with an established brand, it can be challenging for a small company lacking management and financial resources. We can illustrate this by considering the case of an owner-managed micro firm which was committed to quality through use of British cloth, classic designs and a heritage-related brand but faced considerable difficulties in finding a sizeable and secure market. One UK retailer had included their products on its online site but at a price that was out-of-line with similar looking (and much cheaper) products sourced abroad that they also offered for sale. Despite having a high quality product, lack of financial resource and management time to develop export sales meant that the firm was stuck, selling at very small volumes to UK customers and without the gateway capabilities to develop resilience.
5.3.2 Precarious struggle with inadequate capabilities

Our examples of sustainability above are quite different to two examples of precarity (Precarious 1 and 2), which we can introduce here. Both of these manufacturers are located solely in the UK and struggle to cope when one or two of the key conditions are missing. Though they are willing to adapt, their survival is precarious and their size limits their capacity to overcome major challenges. Their owner-managers have been involved in the industry for substantial periods; like many others, they have family backgrounds in the industry. When interviewed, they demonstrated considerable technical knowledge but were challenged by the need to combine productive, design and marketing expertise; and, like many managers in micro firms, they spend a good deal of time trying to win orders and keeping the factory ticking over so that they have little or no time for development activities. Though they have ambition, Precarious 1 and 2 lack the resources to move in that direction.

Precarious 1 has productive capabilities and is able to produce for high street retailers to meet their demands for speed, reliable quality and flexibility at a price. Yes, despite these competences and their willingness to work in a co-operative way, Precarious 1 found that other supply chain actors showed little reciprocity or interest in developing partnerships that incorporate risk-sharing. In many ways this reflects the norms of behaviour in UK retailer-led supply chains: during our interviews we were given examples of retailers who took advantage of their supply chain position to shift risk onto manufacturers. The tactics include significantly reducing orders (or even cancelling them) after production has started, leaving manufacturers with boxes of labelled products that have little alternative value; even where orders are honoured, payment terms are onerous and delayed payment can lead to cash flow problems.

Manufacturers are expected to be flexible and accommodating for instance, about size of order or turnaround time; but in many cases felt that the obligations were one sided. For example, buyers will place generally small orders with domestic producers because it helps them to manage the flow of retail product and avoid stock out; but it is hard to turn this into a firm level advantage unless retailers are prepared to pay more per item to reflect the change over and set up costs of each new, small order including samples, quality assurance and office time (or compensate suppliers in another way by, for example, guaranteeing some overall level of orders over the year). One interviewee told us of a major national retailer that wanted to place an order for 200 (small) items; the costs of machine set-up alone meant that this would not have been profitable at the offered price. This problem is common and disabling: the Alliance Report refers to a tendency towards small orders as low as 200-300, and estimates that production efficiency is almost halved on orders of less than 500.187

Thus in many cases, the retailer-led supply chain is not a device for mobilising and sustaining capabilities but for playing manufacturers off against each other. Some suppliers wished to have a more active dialogue with buyers about how products could be made (and indeed many firms have considerable design and production expertise) but such opportunities were not always available. Manufacturers felt that they were often played off against each other, with an implicit threat that someone else could always supply the order at a lower price. In some cases, 187 Alliance Report p.57.
intermediaries (also described as fashion houses) are important supply chain actors who make a claim on what is already a very thin margin on mid or low end clothes. These intermediaries add opacity and can make it more difficult for retailers and manufacturers to build constructive relations. However, they also play an important role given that existing UK manufacturing capacity is highly fragmented, located in factories that are very small in relation to chain retailers who must handle very large numbers of orders and deal in substantial volumes; this difference in scale between the supply side and retail demand creates the need for actors (either independent or embedded within retailers or manufacturers) who can combine and coordinate capacities at various sites to cope with a demanding market.\textsuperscript{188}

Interviewees told us that this ecology of risk passing and adversarial relations along the apparel supply chain has a ‘dark side’ which has been documented in Leicester and is present elsewhere as in Greater Manchester. The result is in some ways a reproduction in our own time of the Victorian distinction between ‘honourable’ and ‘dishonourable’ employers within the one trade. Several manufacturers told us that, according to their experience, retail buyers were not interested in whether suppliers were in compliance with employment law, health and safety regulation and Inland Revenue requirements. Regulations about minimum wages and such like were not being enforced so that there was no sector-wide floor under competition and dishonourable employers were getting retail orders and effectively depressing the price paid to all manufacturers.\textsuperscript{189} For the dishonourable employer, it is not simply a question about good or bad practice but that they may feel they have limited options. At the low end – in the highly price competitive part of the market - there is too much immobile capital which is having a detrimental effect on the whole sector. Many owner-managers remain in the business due to lack of alternatives for their labour and capital, as well as considerable personal commitment to their business and workforce. But, their willingness to produce at prices that do not reflect the full cost of production undermines sustainable cost recovery for the industry as a whole, depresses wages and working conditions and passes social costs onto the state.

Many small apparel manufacturers have the problem that they produce undifferentiated products which do not require much distinctive capability in production. But, even where production quality and design is good, as is the case for Precarious 2, firms can struggle to turn this into a market advantage that allows higher prices and/ or volumes. Precarious 2 is larger than the average apparel firm, but still lacks the managerial resources necessary either to update designs to add distinctiveness or to build marketing. The owner-manager already sells direct using on-line channels, recognising that this potentially offers more security and higher margins than available through retailer-led supply chains. But, while his customers seem satisfied with the quality of the products, the volumes are low, thus contributing to a cycle of survival but without scale, significant re-investment or productive efficiency. British-made clothes of decent quality can recover their costs at mid-market price points with direct sale (and no big mark ups): for example, as Precarious 2 demonstrates, a British-made T-shirt can be sold at a mid-market price of around £20. However, succeeding in the mid-market requires a position developed


\textsuperscript{189} Hammer et al (2015) attempt to assess the scale of such practices in Leicester.
through a brand that offers distinctive design or marketing to support product quality. Simply adding a ‘Made in Britain’ label is not sufficient to attract customers, even though Precarious 2 offers a much better value proposition online than others selling similar-looking ‘Made in Britain’ branded products at prices two or three times higher after retail mark up. Thus, disconnecting from retailer-led supply chains does not on its own guarantee sustainability, even where firm products deliver both quality and value in relative terms. As long as margins are low and the market is insecure with small volumes and uncertainty about continuity, upgrading is hard to achieve.

5.3.3 Seeking sustainability by developing missing capabilities
The previous section highlighted how many apparel firms find it difficult to develop gateway marketing capabilities. Some manufacturers are attempting to develop sustainability through different kinds of upgrading. The companies discussed in this section (Developers 1 and 2) show that it is possible to move towards sustainability through developing capabilities but that this comes with much effort and some continued uncertainty. Both firms have to some extent focused on developing relationships with retailers and supply chain intermediaries based on product quality. These firms have also recognised that quality is not enough and that distinction needs to be signalled by branding or unique product attributes, while cost recovery can be improved by direct selling of part of the output, which also reduces dependence on retailers. Developer 1, is boosting sales of a premium product by building a brand; Developer 2, is selling competitively priced sportswear products with the option of design customisation on small orders to attract buyers.

Developer 1 is a long-established CMT company that aims to move out of survival mode and has upgraded by developing a heritage-inspired brand in a fairly low cost way. It is meeting with some sales success by building its new ‘factory’-branded lines while continuing to produce own-brand products for major retail chains. This reflects the commitment of one member of a two-person management team who understands brand building and has been successful in getting profile at low cost, including through national media. This has opened up a number of distribution channels including a factory shop as well as direct online selling. An emphasis on all British materials and hand finished quality is necessary given the high prices charged for products, but interestingly the factory is traditional in terms of its layout and organisation - which could be described as pre-Japanese in its approach to flow - and there has been relatively little investment in production. Developer 2 has used a different approach to upgrading where the focus has been much more on process efficiency which allows customisation of design on low volume orders. The factory is unusually all-new and is organised using cellular production systems, with one member of the small management team focused on process efficiency. The owner-manager is willing to invest and has developed a specialism based on technical capability to supply small and customised orders, with a rapid turnaround. The firm has developed a niche within the sportswear market, where its position is protected by a limited number of competitors.

Finding a product niche has worked for some businesses as a capability-based form of upgrading. For others, a degree of security has been achieved by resourceful use of marketing channels.
One owner-manager we spoke to explained that they had adopted social media, not only to build a direct customer base for their products but also to develop better relations with some retail buyers. This firm had a twin track production strategy using higher quality materials for UK-made products sold directly, while also supplying the fast fashion market from a factory in India. Here, a relatively small firm was developing sustainability primarily through marketing capabilities, and using offshoring to manage production costs. This firm had young family owners with business experience outside the family firm. Thus there is no standard recipe for sustainability but the successful firms all one way or another manage to charge a premium price or limit competition through distinctiveness so that UK production is possible, even at the mid or mid-low price point.

5.4. The challenges to (and possibilities for) sustainability
The examples discussed in the previous section show that there is no single route to business adaptability and sustainability: firms combine productive and market capabilities in different ways, drawing on supportive capital. These firm level conditions need to be understood in the context of the ecology of the apparel industry, that is the nature of supply chain relationships and the infrastructure that supports an industry. For many firms, these ecological conditions provide significant constraints and limited support, making it more difficult to align market and productive advantages. The outcome in too many firms is a kind of impasse around inescapable precarity without any discharge through exit: firms can have a precarious existence with limited resources which do not allow capability building for any kind of upgrading but owner managers do not close the firm. In larger firms which can build capabilities, patient capital is a crucial advantage for the individual firm; in impasse firms, immobile capital stands in the way of textbook micro economic adjustment and is a burden for the whole sector. In this section we outline the major challenges facing firms and indicate some possibilities for building sustainability within the apparel sub-sector and reducing sector-damaging impasse.

5.4.1 Challenge 1: the supply chain is a block on ‘Made in Britain’
The ecology of retailer-led supply chains creates multiple inter-related problems for many manufacturers. As we saw from the examples in section 5.3, UK manufacturers’ key advantage is flexibility but this is used for the convenience and advantage of retailers: size differences along the supply chain, commoditised production and competition between manufacturers leaves many with little basis for negotiation and the outcome of low margins and a very uncertain flow of orders. If many of the challenges to resilience stem from the nature of supply chains, this would seem to be a good place to start in trying to build gateway marketing capabilities. In the last few years, retailers have promised a different and more constructive approach to their UK suppliers and several have experimented with the active promotion of British-made product in their high street and on-line stores. The changes are very limited, as discussed below, and the supply chain remains a block on ‘Made in Britain’.

From around 2011, several retailers made high profile statements or even pledges about increased UK sourcing. For example, John Lewis announced that, by 2015, their British-made

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190 Financial Times ‘Made in Britain. Fashion Retailers Return to UK Manufacturing’ 24 August 2014
products (including clothing and household goods) should reach 15% of their total sales, though no data is currently available on progress towards this measure. Marks and Spencer launched its ‘Best of British’ range in 2013 as a three-year partnership with the British Fashion Council; Best of British has been introduced as one of many competing M&S sub-brands (not as a general principle of sourcing a target percentage). In a more general way, N Brown led the successful bid to the Regional Growth Fund for support for British manufacturing, with the support of other retailers including ASOS. Significantly, not all retailers have made such public commitments: for example, Next (the most successful UK mid-market retailer) has stated that the UK should not be focusing on manufacturing for this part of the market.

While the Regional Growth Fund has delivered significant investment funds to individual firms, the investments are decoupled from explicit partnerships or sustained retailer commitments to buy the product that suppliers make with new equipment. It is evident from talking both to retailers and manufacturers that publicly-expressed fine sentiments about stocking more British products have not changed the adversarial relations between retailers and manufacturers, where the immediate convenience of the buyer drives decision making without commitment or trust. One retailer we spoke with had previously stated a commitment to guarantee orders to a group of UK suppliers but subsequently retreated from this after a more difficult trading period. In consequence of such behaviours, several of the developer firms refuse or ration work for UK high street chains. Larger orders still typically go abroad, with the result that UK manufacturers are having to spend significant time obtaining and managing small orders; in the eyes of some manufacturers, retailer commitment to UK sourcing often represented an opportunity for more of the same ‘top up’ buying, not a change in retail buyer behaviour. During an industry conference, representatives from popular retailers gave examples of how they sourced from Leicester when the Chinese failed to deliver quickly enough; there was little apparent concern with whether garment-makers in Leicester could survive on these ad hoc orders.

Retailers respond that UK sourcing is growing and could be increased further (though to significantly less than 10% under any scenario). Two retailers gave us similar figures, indicating that their purchase of UK-made products could increase from 2-3% to 5-6% in coming years, though this was not a firm commitment. Retailers admit they choose domestic sourcing where flexibility and short lead-times are important, recognising that they may have to compromise on either detail or quality: domestic sourcing tends to focus on simple and quick work, especially in jersey and knitwear, compensating for higher UK labour costs. Retailers appear reluctant to make commitments to purchase more complex garments requiring higher skills, or to partner with one or more suppliers in building the process competence for high skill and high value added product which is, in the long run, the only way of covering British wages. Retailers’ rhetorical commitment to ‘Made in Britain’ effectively prevents discussion of what kind of textile

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191 https://next.ft.com/content/37bd70e6-5d99-11e3-b3e8-00144feabdc0
193 Source: http://www.draperonline.com/home/wolfson-uk-should-leave-manufacturing-to-china/5035048.fullarticle
industry we need and whether and how retailer power can be used to lever the necessary upgrade.

After those points have been made, it is important not to cast the retailers as villain because they are interpreting the behaviour and preferences of their (domestic) customers. According to the retailers and sourcing agents that we spoke to, only a minority of their customers valued *Made in Britain* and most had little interest in where their clothes came from. Thus, John Lewis and Marks & Spencer have both had a small number of Made in Britain or British cloth garments on display in their menswear departments; but these labels compete with a variety of other more powerful garment identifiers: at John Lewis against Hugo Boss and Ralph Lauren; at Marks and Spencer against Collezione or Autograph. One retailer did note that ethical supply was valued by customers but this was specifically related to overseas factories, not local production; indeed, most retailers have very public commitments to an ethical supply chain in relation to their ‘global’ suppliers. The apparent consumer indifference to provenance in supply chains licences retailers to commit few resources to such an end.

Significantly, even where clothes (like knitted goods) are British made at the mid-low end, they are not always clearly promoted as such, suggesting either that it is not relevant to customers and/or that such provenance is very contingent: a product or range might be made in the UK this week but there is no guarantee about the future and thus it is hard to promote a consistent message. This perhaps contributes to a view that ‘British made’ has little value or relevance; as long as clothing is sold as if it is a perishable commodity, then price and convenience will be more important to customers. Interestingly, on-line retailers ASOS and Boohoo are considered to have higher UK sourcing ratios than traditional high street operators – and indeed, several manufacturers we spoke with were much more positive about the quality of their relationship with these newer entrants than with the older players. Yet, neither the company annual reports to shareholders nor consumer-facing websites of these on-line retailers make any mention of this; the operational focus is on logistics as these firms increasingly become global businesses. While some retailers argue that customers ‘don’t care’, equally it is clear that customers don’t know and there is little attempt by retailers to educate them.

Where ‘Made in Britain’ commands a premium price in mid-market ranges, provenance is more visible. This may appear to offer a better prospect for manufacturers and can encourage them to invest, though it can lead to over-reliance on a small number of customers so that withdrawal of business can have disruptive effects. For example, the significant reduction in the size of its Marks & Spencer order was cited in the collapse of Cheshire Bespoke tailors; while the closure of Cookson and Clegg in May 2016 was blamed on the loss of business from a major chain buyer. Such examples show how difficult it can be for suppliers to survive leave alone build marketing capabilities, especially when they are reliant on unequal relations with powerful

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194 Though, Marks & Spencer appears to be shifting back away from UK sourcing. For example, the autumn 2016 collection of mens’ suits and outer coats for Marks & Spencer includes no British made garments and Harris Tweed as the only British cloth mentioned.
downstream supply chain actors who effectively do the marketing on the basis of ordering to see what sells. Such retailers are able to invest large sums in their logistics and distribution systems, but seem reluctant to share risk in factory loading and firm development that could help individual firms and support the productive infrastructure. Crucially, no major retailer is prepared to guarantee capacity utilisation over a particular period or pay a premium for flexibility.

5.4.2 Challenge 2: limited capabilities inside the firms and few resources outside

The nature of the ecology limits the development of management capabilities: in small firms where owner-managers must perform multiple roles it is often difficult to develop special skills such as digital marketing, industrial engineering or financial management. Family ownership often combines expertise from more than one generation but management may lack the time or investment support needed to upgrade their skills. For example, several of the smaller manufacturers that we spoke to were interested in exporting but were unsure about how they could develop an export plan; they also felt effectively excluded from trade fairs and industry support for exporting for reasons of cost and/or time commitment. Opportunities to develop professional management skills are more limited in an ecology of mainly small firms with flat hierarchies and limited movement between firms. An industry of survivors has the capabilities to live with decline but different skills are required for diversifying products and customers, growing steadily or starting new ventures. Attracting new entrepreneurs into the industry is also necessary to encourage the development of new kinds of business models, but the market challenges make this difficult.

A sub-sector of mainly small and micro-firms would not necessarily be a problem if the external infrastructure of production was less denuded. This is manifest in relation to training around garment-related skills such as cutting and sewing, but also machinery supply and maintenance. Virtually every manufacturer that we spoke to mentioned either the problem with finding skilled workers or the difficulty in accessing training for new recruits and existing staff. Although several suppliers ran units referred to as ‘training schools’ these were running intermittently and had limited conversion and retention rates. This not only makes it difficult to maintain staffing levels or to expand, it also limits internal capacity to develop and hinders the development of local labour markets. Other reports have highlighted the problems of renewing an aging workforce, as well as providing a mix of skills that any developing industry requires. Some of the shortage of training relates to the ecology: a lack of large manufacturers with a culture of in-house training and staff development, as well as the thinning out of the industry which undermines external provision in further and higher education. However, there is also a cultural problem of recruitment from many British communities: several interviewees explained that repetitive factory work like machining is considered unattractive to potential recruits who have a preference for retailing and other sectors offering similar levels of pay. Others noted that even when they had managed to recruit new staff, the culture of factory work – especially the long shifts and work flow monitoring necessary to ensure reasonable efficiency – was a barrier to

197 See, for example, the Alliance Report pp.59-62.
At least one supplier we visited was consequently heavily dependent on a diverse non-British born workforce.

The technical capacity of UK manufacturers has also declined in-line with, and as a result of, the transfer of manufacturing overseas. The rapid decline of the industry in the 1990s and the exit of large scale garment manufacturers coincided with the arrival of new Japanese-influenced ideas about how to organise flow production for continuous labour utilisation and higher productivity; many of the small survivors are using older, traditional layouts. Outside the firms there was once a vibrant culture of training distributed throughout the UK - with each region having its own major college provider, but that has disappeared and surviving manufacturers trying to re-establish technical training under the modern-apprenticeship scheme are struggling to source appropriate certified education courses to support their in-house activity. This is compounded by the loss of the higher-level education that used to furnish the industry with engineers, general managers and technical staff. The focus of higher education is now very much on fashion design, marketing, merchandising and retail. Some manufacturers we spoke with who were seeking specific technical skills had recruited from outside the UK, especially from Eastern Europe.

A parallel development can be seen in relation to machinery suppliers. Where once there were several competing machine suppliers and engineering companies there is typically now one dominant supplier, and a handful of light engineering companies, in regions such as Greater Manchester, West Yorkshire and the East Midlands. In our interviews we found that larger, more established manufacturers had a team of on-site engineers and were engaged in training in this area, otherwise there was reliance upon a diminishing supply of contract engineers and machinery suppliers. Our impression was that those companies which had a mature working relationship with a local or regional machinery supplier also demonstrated higher levels of productive expertise on machine utilisation. However, many smaller firms were dependent on external expertise which is overextended and therefore less responsive and flexible. One machinery supplier based in the East Midlands told us that they were having to work very hard to support the products of a large range of equipment suppliers in sewing, pressing, cutting, knitting and so on: in all they supported 65,000 product lines.

Our research team included one member with knowledge of garment shop layout and practice. His factory visits for this report highlighted the huge diversity of factory organisation and capability and suggested the average level of productive capability is low because irregular order flow and poor organization of production often limits the workshops’ ability to utilise worker skills productively. He saw evidence of highly efficient factories utilising over-head rail systems and developing team-working cellular approaches, as well as those more akin to a ‘productive workshop’ relying on manual transportation in non-linear systems. He also observed mobile, easily re-configurable lines in contrast with more static traditional batch-flow lines with manual transportation. Work content per garment was within the approximate range of 10-110 standard minutes and factory efficiencies were estimated at between 50% and 75% in the main, with the exception of one highly efficient unit reportedly running at near 85%. We estimated observed operator performance ranging between 50% and 80%; but there were large variations in work in progress and in factory loading (including several cases of short working weeks or periods of
Some firms had invested significantly and had the potential to operate in a technically efficient way, if they could secure sufficient workflow. However, many were trapped in some version of a vicious cycle with poor workflow, low margins and limited ability to – or indeed appetite for – modernisation of their factories and/or product development. In this context the introduction of a higher minimum wage for workers aged 25 or older in 2016 could potentially de-stabilise very precarious firms, unless retailers agree to share the higher costs.

5.4.3 Experiments in strengthening the infrastructure
If we should not expect too much change from retailers and small size limits development of internal marketing and productive capabilities, what else might be possible? In other industries where producers have limited market power due to commodity-like characteristics, or where there are small numbers of buyers in relation to large numbers of (small) suppliers, producers have organised themselves into selling groups, or co-operatives, or collaborated on marketing. This requires a degree of co-operation and organisation that might appear rather idealistic yet, if retailers are unwilling to offer any significant partnership and risk sharing then, one alternative is to find different ways of organising production and/or distribution. This might either shift the balance of power between manufacturers and retailers, and make it easier for small scale operators to collectively supply large orders; or, it might provide external resources that facilitate direct selling into a market which puts a stronger value on British-made. This could be a way of promoting the product and building consumer awareness and appreciation in a way that has effectively been done around local food; not to replace the mainstream but to create a visible and financially viable alternative.

An interesting (and rare) initiative in apparel is Community Clothing established in early 2016 as a manufacturers’ brand by Patrick Grant, a well-known designer and media figure, to supply quality mid-market clothes direct to customers. The original idea was to use spare manufacturing capacity to produce a range of simple classic products sold online initially. The first batches would be made by Cookson and Clegg, the Blackburn factory bought by Grant in 2015, but the plan was that production would be spread across other manufacturers struggling with uneven order flows. In doing so, the aim was to help to provide more secure employment and keep skilled workers in the industry. According to Grant, the mission was to make ‘exceptional quality British-made clothes... affordable to all’. Prices were pitched very much in the mid-market: jeans at £49; Harrington jacket at £79; and a raincoat at £119. This new business model is a direct response to industry-wide problems about managing workflow and building a direct relationship with customers based on the appeal of buying British, while also supporting local skills training and apprenticeships. However, the project faced early difficulties when Cookson and Clegg, which was producing the first garments, entered voluntary insolvency.

Community Clothing is of interest because it directly addresses the problems of the supply chain. Other experiments try to work around the supply chain by providing supporting resources.

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199 http://communityclothing.co.uk/about-us/
200 Drapers 16 February 2016.
201 Ibid.
especially in relation to training and business support. Most notably, Fashion Enter, a social enterprise founded in London by a former M&S buyer in 2006 with support from a local authority, combines a number of roles – CMT, training and a fashion incubator - to support the sector. A commercial factory was opened in 2010 with support from ASOS, which produces up to 7,500 garments per week and has relationships with a number of major retailers.202 Its Fashion Technology Centre is already the largest provider of technical fashion modern apprenticeships in the UK and expects to train around 4,500 cutters, stitches and designers between 2015 and 2020.203 In addition a ‘stitching academy’ acts as a training school for their own staff. In return for a modest membership fee, designers and fashion start-ups can have access to production facilities, including for samples of up to 50 units, as well as mentoring and other forms of business support. By 2015, Fashion Enter’s turnover had reached £2.3 million with 107 staff, suggesting that an explicit attempt to build capabilities, particularly relations with retailers is generating benefits for the wider sector. While both Community Clothing and Fashion Enter face challenges as they largely have to adapt to the ecology rather than transform it, they suggest that it is possible to develop imaginative responses to entrenched problems in the UK apparel sub-sector. The broader policy implications of our analysis are explored in the final chapter of this report.

Chapter 6 Revaluing the mundane: industrial policy for textiles and apparel

Industrial policy in the UK has recently been rediscovered after a long period under Thatcher and Blair when industrial policy was caricatured as a futile process of picking winners. And the idea of industrial policy still encounters intellectual resistance. The policy entrepreneurs of agglomeration theory see density as the driver of city region growth and favour policies focused on skills and infrastructure which extend and deepen the urban labour market. But the Coalition and May Governments have both experimented with sector-based industrial policies. The Coalition government had an industrial policy of adding finance and skills which included the textiles and apparel sector insofar as it got a little money; the May government’s new industrial strategy of 2017 focused on ‘world leading sectors of the future’ which of course excludes textiles and other mundane activities.

In this final chapter, we consider whether and how industrial policy could play a role in sustaining UK textiles and apparel. And the first most important issue is what kind of industrial policy? Our argument is that little can be expected from existing government policy which is sector focused, set in a framework of competitiveness and operates with a generic input/output model of the firm. Against this we argue for a different and more radical ecological approach to industrial policy that focuses on the sub-sector because, in textiles as elsewhere, the conditions of sustainability and precarity vary by sub-sector. In carpets, woollens & worsted and apparel we have described the different ecologies that shape sub-sectoral opportunities and problems; and the logic is then that different interventions would be required in each sub-sector to build the firm level alignment of capabilities and the inter firm relations that would allow firms to find a sustainable position.

6.1 Two concepts of industrial policy

Mainstream industrial policy is primarily focused on sectors (not sub-sectors) and works with a generic toolkit. It operates with a singular concept of the firm which conjures away differences in firm capabilities and sectoral position. The firm (all firms) become machines for combining inputs into outputs so that the primary task of policy is then to improve the quantity or quality of inputs, classically by adding finance and workforce skills; or policy should address supply side ancillary processes like R&D or intellectual property, with the aim of levering the value and volume of output. This kind of industrial policy - sectorally focused but applying generic fixes - was tried in textiles by the Coalition government and then transposed to different high tech sectors in the May government’s industrial strategy.

The analysis of capabilities and ecology developed in earlier chapters of this report suggests a quite different ecological approach. That starts by recognising some common conditions such as the dominance of micro and small firms across many sub-sectors of textiles and apparel. This

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204 See, for example, the Financial Times editorial ‘Industrial policy in the UK without the industry’ (January 23rd 2017).
limits ability to build internal capabilities and creates distinctive problems about management succession and development. Such problems are reinforced by weak infrastructure in relation to forms of organisation and co-operation between actors. This limits the ability to collectively produce and benefit from external resources and can create problems around sustaining skills or managing supply chain relationships. Industrial policy for textiles and apparel thus needs to build internal and external resources that support sustainable firms and groups of firms.

But an ecological approach needs also to recognise and engage the variability of conditions by sub-sector. Carpets, woollens & worsted and apparel are diverse sub-sectors with important differences in characteristic firm size, ownership and individual firm capability as well as differences in firm interdependence and how market access is mediated by powerful intermediaries. In apparel, as we will argue, retailer power is routinely used to pass costs to suppliers under conditions which are hard to change because they are embedded in the organisation of fashion production for income constrained, fickle consumers; whereas in carpets, retailers and suppliers have quite different and more cooperative relations that develop marketing capabilities which reduce risk, defend margins and sustain collective organisation to muster political and other support. Put simply, the problem is that a generic industrial strategy or a sector specific policy will often not engage with such variable sub-sectoral conditions.

A radical approach to industrial policy in textiles would put much less emphasis on topping up the skills and finance inputs to production. Instead, sub-sector by sub-sector, it would analyse the variable conditions of sustainability and precarity and then prescribe relevant policies which would be diverse and specific. What if, as we argue later in this chapter, it is not possible in apparel to change the cost passing behaviours of retail buyers; or to persuade consumers to pay a premium for Made-in-Britain garments? Under these conditions, the result is ineffectual codes of supply chain good practice and more jobs paying below the legal minimum on the ‘dark side’ in apparel. In this case, the first, most relevant industrial policy would be strict enforcement of legal standards on wages and working conditions to put a floor under competition which would also limit the social bill for wage subvention. At the same time, policy should build marketing capabilities within and between firms to grow exports and direct home sales with low mark-ups so that British-made could be an ethical mid-market consumer choice.

6.2 Industrial policy rediscovered

The revival of interest in sectoral industrial policy after 2008 reflects post-financial crisis realisation that the economy needed to be rebalanced towards manufacturing sectors and against London and the South-East region. Subsequent developments owe much to the championship of industrial policy by two strong ministers – Peter Mandelson and Vince Cable – at the BIS ministry. Under the May government, this department gained new responsibilities for energy and climate, research and science and the enlarged BEIS ministry gained formal responsibility for ‘the development of industrial strategy’.²⁰⁶ This new strategy was finally

²⁰⁶ https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about
unveiled in January 2017 in a green paper consultation document *Building Our Industrial Strategy*\(^\text{207}\) where strategy was a rather grand term for work in progress whose scope was clearly defined but whose scale and results were likely to be modest in a country increasingly socially and geographically divided.

When industrial policy came back, the idea of a ‘new, active role’ for government was only conceivable within an orthodox post-1979 economic policy frame, where faster economic growth was the objective and market competition was the default policy option for delivering most economic and social goods government (as was similarly the case under previous ministers, Mandelson and Cable). This framing defined the government’s idea of what strategy should be about.

In particular, the May government strategy singled out five ‘world-leading sectors of the future’, which are technology and human capital intensive so that they offer high productivity and records of output growth:\(^\text{208}\) the five priority sectors are life sciences, low carbon emission vehicles, industrial digitalisation, the creative sector and the nuclear industry. The underlying assumption is that high tech characteristics make some firms and sectors more valuable than others. The green paper proposal was that all these sectors should do sector deals of the kind pioneered in automotive and aerospace. The deals would mainly be about support for early stage innovation because that is what a market based system does not support: the deals would then mix fundamental and applied research and development, supported by state funding and private investment.

This kind of industrial policy focused on new technologies rather narrows the scope of policies in ways which reflect the influence of Mariana Mazzucato. In books and articles, Mazzucato has cited the precedent of earlier success of the USA in capturing the benefits of innovation.\(^\text{209}\) Here the cold war American state supported the development of new technologies subsequently taken up by US corporates, who levered their large domestic market into a profitable global presence which benefited US output and employment in the period before Asian low wage manufacture. The technical investments of the cold war super power resulted in value capture for American economy and society.

The UK experience was somewhat different, with the benefits of national innovation captured elsewhere. The British cold war state in the 1950s through military and civil programmes had world technical leadership in everything from computers to civil jets and from nuclear power to four wheel drive in autos; but the commercial products were made in small numbers mainly for the domestic market, while others (especially the Americans and the Germans) commercialised technologies, built world market share and the giant firms. The exceptional successes were in activities like pharmaceuticals and universities where the state as purchaser sponsored a domestic market which served as a platform for international value capture.


\(^\text{208}\) Green Paper p.97

\(^\text{209}\) See, for example, Mazzucato, M. (2013) *The Entrepreneurial State: Debunking Public vs Private Sector Myths*, Anthem Press.
The implication is that it is difficult to generalise from the special USA case: value capture in the USA succeeded under conditions which never have applied in the UK and would be difficult to replicate by small scale institutional redesign of national innovation systems in particular sectors of manufacturing. Present supply side conditions are even less favourable than in the 1960s because the British factory sector is mainly foreign owned and often operated as branch plants: foreign owned manufacturing firms on average employ 200 and British firms just 14. The current government can now create an ‘Industrial Strategy Challenge Fund’ to invest in new technologies like robotics and clean energy but is very unlikely to capture any large output and employment gains because the value will leak out through the global networks of firms like Renault Nissan and Siemens.

The results are all the more likely to be modest in the UK because the May government is putting so little money behind its preferred strategy of innovation and tech. The size of the ‘challenge fund’ is undisclosed but the under resourcing is clearest in skills training which is rightly identified as a problem. The previous coalition government had made damaging austerity cuts of around 20% in the further education and adult skills budget and chased apprentice number targets in a way that devalued the qualification: by 2012, 1 in 10 UK apprentices worked at Morrisons supermarket chain, where 40% of staff were classed as apprentices. Now, in symbolic recompense, just £170 million of funding is to be allocated for ‘creating prestigious new Institutes of Technology to deliver higher-level technical education in all regions’.

The new industrial strategy, as set out in the 2017 Green Paper, is therefore ill adapted to British conditions and inadequately funded so that it is unlikely to deliver the desired boost to productivity and output. Significantly, it excludes mundane but substantial industrial sectors like food processing which were included in the list of key sectors by BIS; and makes no mention of further state funding for survivor sectors like textiles. The Green Paper is notable mainly because it rebalances industrial policy towards disruptive new technologies and transformative innovation, and against ‘strategies of incumbency’:

‘For an advanced economy, the path to competitiveness is not to copy what others are doing. It is to do things that others cannot do, or to do things in different and better ways’.

‘a fatal flaw of 1970s style industrial strategies was the dominant focus on existing industries and the companies within them – and then mostly the biggest firms. Too often they became strategies of incumbency’.

The problem here is that the aspiration is about what could be in high tech which, in sector terms is unlikely to deliver large output and employment benefits for the UK; and this focus practically

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214 Green Paper, p.25.
excludes help for what is mundane, even though large sectors already have value nationally and locally in the UK. Food manufacturing and textiles illustrate this value:

- Food manufacturing is nationally important because, with employment of 378,000 it is the largest sector of British manufacturing, and when the UK has a trade deficit running at 6% of GDP, food manufacturing offers scope for import substitution which is just as valuable as export increases in other sectors.
- As for textiles, a £5 million turnover firm is a key source of support and stability in any locality where good permanent jobs are hard to find. One creative start up or a medium sized agency makes little impact in Hoxton; but a small textiles firm in West Yorkshire can be a key community support by employing 100 locals in skilled, regular jobs in areas where good jobs are hard to find.

The aggressive devaluation of the mundane says something about the field of vision of mostly London-based politicians, civil servants and senior managers. The Green Paper argues for state sponsorship of activities and sectors which employ small numbers of the well-graduated and are disproportionally likely to be located in the South East, the M4 and M11 corridors and parts of the Midlands. And it is completely unclear how the concentration on innovation and high tech will deliver another declared objective of industrial strategy which is ‘driving growth across the whole country’ through policies which recognise the ‘the importance of place’.

6.3 Textiles sector policy for jobs
Against this background, when the mundane is never highly valued, a sector like textiles and apparel must adapt by changing how it represents itself and what it promises if it is to figure on the industrial policy agenda and unlock state funding. Thus, under the May government going forward, we would expect to see some sub-sectors of textiles claiming to be high tech and innovative in an attempt to unlock state funding. Under the previous government, when Vince Cable was Secretary of State at BIS, textiles obtained £30 million of government funding to support investment under what could be described as a ‘sectoral deal’, with a back story about how reshoring would bring large scale job creation: the Coalition Government aimed to facilitate a comeback in textiles with a Textiles Growth Fund.

The granting of government financial support through the fund was politically important because investment grants recognised the continued existence of the textiles sector and conceded that the activities of the sector had economic and social value. However, it is less clear that financial support for small survivors in sub-sectors like woollens and worsted was economically transformative because in many cases it just brought forward investment in firms which, in relatively good years like 2014 and 2015, had cash flows that were generally adequate to sustain the modest, defensive investment that suited their capabilities and ambitions.

Given the under valuation of the mundane, the establishment of any kind of Textiles fund was in some ways remarkable. And the Textiles Growth Fund existed because it was prefigured by a

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216 Employment data relates to 2011.
217 Green Paper, p.108.
‘reshoring’ narrative that had allure primarily because it promised jobs. As we have noted, the Alliance Project envisaged the creation of 20,000 jobs; the subsequent PWC report presented ‘order of magnitude estimates’ of 31-62,000 extra jobs depending on the extent of import substitution over ten years. The PWC reshoring scenario was of a sustained increase in domestic textiles and apparel output by some 10-20% with £1-2 billion more output which would by implication sustain permanently higher employment. The structural change promise was of course ambiguous because the volume of employment and output in textiles will rise and fall in line with cyclicality and drivers like the value of the pound.

How were the extra jobs to be obtained? The Alliance Project and PWC report both operated in a supply and demand framework, where textile and apparel firms have generic input and output requirements and the task of policy is to remove what Alliance termed ‘barriers to growth’. The Alliance Report noted that skills shortages were ‘the main barrier to growth facing the sector’ and supposed output expansion depended on the two preconditions of skills training on the supply side and constructive use of retailer power on the demand side. Both reports noted the size disparity between the typical micro-sized supplier firm and large retailers but beyond that, provide no analysis of sub-sectors, sector ecology or firm capability beyond noting that small firms have limited management resources.

The results in employment and output terms were paradoxical. Whatever happened could not be attributed to BIS policy: the investment boost was tiny and skills supply and retailer behaviours were much the same. No doubt partly because of cyclical uplift, output and employment in the largest sub-sector of apparel was increasing with UK recovery from the financial crisis; but employment was increasing faster than output because apparel was creating the wrong kind of low productivity and low wage jobs. This was part of a larger British problem about how in recent years manufacturing has been adding low wage jobs, but it was an outcome which had not been anticipated in the reshoring story which rested on the tacit assumption in the reshoring literature that textiles jobs that came back would be medium or high wage/ high productivity.

The extent of the problem in apparel is laid out in the research of Nik Hammer and colleagues at the University of Leicester, who show that in the East Midlands apparel sub-sector output growth has not been met by upgrading to improve productivity but rather by a move towards the low pay, informal sector. Some of the growth in demand for domestically produced clothing has been met through unofficial sub-contracting to firms that fail to comply with minimum wage and other requirements and may use undocumented workers. Official data on output and wages in the apparel sector in the East Midlands from 2008-14 shows negative productivity growth with turnover increasing but employment costs increasing at half the rate of turnover growth.

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218 PWC Economic Outlook, March 2014 p.32.
220 Alliance Report, p.59.
221 Alliance Report, p.59.
Hammer et al.’s fieldwork shows this was the result of labour exploitation with actual rates of pay as low as £3 per hour in the informal sector when the minimum wage was £6.50.

Reshoring was a narrative of hope but the outcome in apparel included more of the wrong kind of jobs. If we want to explain this pathological development, we need to return to capability analysis and rethinking industrial policy so that it engages with sub-sectoral conditions.

6.4 Conditions of sustainability for sub-sectors
Rethinking industrial policy requires a shift from seeing the firm as a machine that combines inputs to produce output and operates in a sector defined by output category like textiles or automotive. Our ecological concept is of the firm as a set of capabilities which, when aligned, allow sustainability through adaptation; but the alignment of capabilities is difficult and too often ends in precarity with firms not achieving sustainability. This ecological concept emphasises heterogeneity of environmental conditions so that challenges and opportunities are specific to sub-sectors; the approach also accepts the possibility that some problems may be insoluble under present conditions. The intellectual challenge is to understand the variability of sub-sectoral conditions of precarity and sustainability and outline policies which tilt the conditions towards sustainability or curb the effects of adverse conditions.

If we turn back to our analysis, it is evident that there are strikingly large differences between the sub-sectors of textiles and apparel. In many ways carpets as a ‘successful’ sub-sector of textiles makes a fascinating case not least because this success is not recognised by government. But the carpets sub-sector is not a template or role model for apparel or woollens and worsted because the conditions of sustainability are difficult to replicate outside carpets. Most other sub-sectors do not start with the advantage of steady mid-market and corporate demand, cooperative retailers and a stock of Mittelstand firms large enough to afford professional management. No set of policies could easily and quickly re-create these conditions in other sub-sectors; but focusing on what is distinctive in carpets can highlight what is missing in other sectors and direct policy towards improving one or two conditions which can inflect trajectory.

The carpets sub-sector is also interesting because, from an ecological point of view, it shows that sustainability is not an event but a process of a dialectical kind where the achievement of some sustainability opens up new challenges as much as consolidation. Carpet manufacturing offers good margins for well-managed, medium-sized firms who can afford to make investment and pay decent wages in a way which is still relatively unusual in other sub-sectors which do not sustain Mittelstand firms. But the profits and cash flow of the sub-sector have now attracted private equity and sustain an acquisitive public limited company. The priorities of financialised managers are not in themselves a problem but can become so if the result is churning of ownership and a succession of owners with different objectives. Hence the more general importance of returning to the issues and policies raised in our discussion of the missing Welsh
Mittelstand and, specifically, policies which would allow founding families and owner managers to take out money without relinquishing management control.

What to do by way of industrial policy should vary by sub-sector because diverse ecologies present distinct problems which can stand in the way of sustainable firms with aligned capabilities. In the woollens and worsted sub-sector, the problem is not the incapable firm but the fragile, low-density network on which individual firms rely for access to market after sequential processing. Here the cluster needs intelligent mentoring for sustainability by policy makers. At key stages like finishing or commission weaving the whole cluster relies on a small number of firms and the task of policy should be to anticipate inevitable events whose timing is partly predictable. It would be sensible for policy makers to consider the age of owner-managers, discuss whether succession plans are in place and, if not, engage in some dialogue with other cluster members (and larger breakaway firms) about who could take management control of a viable specialist business. Beyond this first defensive task, there are broader policy issues about managing clusters to ensure firm development and cluster survival.

With any form of financial support for a low-density cluster, policy makers should not disperse support to create many grateful recipients, but concentrate it on building Mittelstand firms with capability. The aim here is not picking winners but investing in adapter firms to build their capability to prospect and expand into new lines of business. In this, our research suggests that the capability that is so often lacking is not production but marketing; and the capability that needs to be maintained is patient finance. The policy maker should then have two default questions for would-be Mittelstand firms which have reached the £5 million turnover range: how will marketing be applied to create the growth opportunities that encourage innovation and diversification which brings value capture; and, is the continuing patience of finance guaranteed? At the same time the objective of building Mittelstand firms with stand-alone capability needs to be balanced against that of securing the future of a cluster of smaller interdependent firms which can be weakened when larger firms withdraw or make acquisitions. The larger textile breakaway firms like Camira are already making acquisitions which extend their (and the sector’s) capability but cluster consequences are not being planned or discussed.

Thus, industrial policy should be not one or two generic fixes across a sector but a variety of policies, based on analysis of specifics that address sub-sectoral issues. Some of these, such as maintaining patient finance, are likely to be relevant to many small and medium sized firms right across the sector, where marketing and productive capabilities are effective but there is a need either for more capital for expansion or a controlled change in ownership to allow existing owners to exit and new ones to enter. Other measures are more specific to local sub-sector ecologies. In carpets or woollens and worsted, measures could involve building on the specifics of what survives or has been achieved and engaging the next challenges, with the aim of sustaining capabilities. The largest sub-sector of apparel presents a different kind of challenge because, as argued above, what we have recently seen in the East Midlands is a kind of pathological expansion of an informal sector. Before proposing a policy response, it is first

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necessary to be clear how we got into this mess which was not expected when the Alliance project published its first report.

The reshoring narrative of the Alliance and PWC reports was plausible partly because it suggested that increased domestic production would be linked to a renewed retailer commitment to Made-in-Britain. This was envisaged as part of a virtuous circle of more investment, more training and skills and more support from buyers. In the 1990s, the changed sourcing behaviours of large retailers, especially Marks and Spencer, undermined volume manufacturing but by 2014 the hope was that mid-market chains could lead a re-shored apparel sub-sector. For example, in 2014 the PWC report envisaged ‘a virtuous circle of increased activity and investment to be created within clusters of local textile producers linked to the large clothes retailers’ who could, and should, play a constructive role. At the same time, the Alliance report cited encouraging mid-market developments when ‘Made-in-Britain’ ranges had been launched by Debenhams, Marks and Spencer and John Lewis.

The promise of 2014 was that retailer power would be used constructively. But, by 2017, it is clear that very little has changed in the chain retailing of mid-priced clothing which is the segment that British apparel manufacturers must penetrate if they are to capture volume and value. Events have vindicated the scepticism of Next which did not join the other mid-market chains in launching ‘Made-in-Britain’ ranges. The small-scale experiments in testing the mid-market for British made clothing appear to have failed: by January 2017, Debenhams has no identifiably British clothing on its web site; Marks and Spencer’s ‘Best of British’ range consisted of a lambs wool scarf for men and a jumpsuit and top for women; the John Lewis ‘Made in England’ web page rightly emphasises the UK provenance of its carpets and home furnishings but says nothing about apparel.

If the mid-market chain retail experiment has failed, it has been instructive because it showed that retailers believe there is no mid-market volume demand for Made in Britain at the premium prices which chains must charge after taking their mark-ups on complex garments. When Marks and Spencer offered a man’s overcoat (made with British cloth and then cut, made and trimmed by a domestic manufacturer) the price was around £500 retail. Most consumers will not pay that price and those that do are often attracted by other considerations like high style or luxury brands. Or, they will buy from boutiques or web sites meeting specialist low volume demand where Made-in-Britain prices are in the luxury bracket: the Manufactum web site for example in early 2017 advertises two mens’ top coats by Private White and Gloverall, each for £900. The success of firms like Abraham Moon rests partly on the discovery that British cloth with offshore CMT allows chain pricing closer to £250, but even then, the market is limited because the retail mark-up keeps prices high.

If the commitment of retailers to ‘Made-in-Britain’ is limited, ‘adding skills’ also turns out to be much more complicated because this is not just an exercise in ‘topping up’ the bank of skills and dealing with the negative ‘image’ which deters young people from entering the sector. Even if training can be arranged for small volumes of workers, there are intractable extra problems

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225 PWC, p.30.
226 Alliance Report, p.49.
227 Alliance Report, p.61.
about the recruitment and retention of British workers. Semi-skilled or skilled work on repetitive short cycles in manufacturing is a cultural habit which the British seem to be on the way to losing. The transmission mechanisms operated within families and neighbourhoods inducted young workers into manufacturing roles. But most of that is lost when manufacturing now employs less than 10% of the workforce and there are fewer than 2,000 factory establishments employing more than 300. We were repeatedly told that, at or near minimum wages, young British workers prefer to work in more social and less structured service jobs, as in supermarkets.

In addressing this problem, the level of productivity in apparel severely limits the sub-sector’s economic ability to counter cultural resistance to factory work by paying attractive wages as the carpets sub-sector can do. Equally in much of apparel, factory work flow and employment is irregular, so the sub-sector cannot offer steady employment at moderate wages for craft skills, as in the woollen and worsted sub-sector. Some employers then bridge the gap between labour demand and supply by relying on informal and/ or migrant labour. This complication is not addressed in either the Alliance or PWC reports which ignore the role of informal or migrant labour in the current workforce; and discuss extra employment in apparel without admitting that (on past experience) we would expect many of the new jobs to be taken by migrants. If Brexit restricts the inflow of workers from Eastern Europe, the future of low volume Made-in-Britain apparel firms with strong brands will be threatened by labour shortage restricting the supply of saleable premium product.

But the immediate problem is the growth of the informal sector in apparel which must be connected to the growth of fast fashion at the expense of the mid-market. In fast fashion the emphasis is on novelty, low price and frequent change rather than product quality and durability which traditionally sustained the mid-market. As always, it is possible to compete in different ways. From Spain, Inditex has organised an integrated and fast design, make and distribute system (including direct ownership of some factories) to replenish Zara stores around the world twice week. But, In Britain the internet fast fashion retailers like Boohoo and Missguided, prefer a buyer-led transactional approach of small and irregular orders to replenish the warehouse with £20 outfits.

The consequences are most obvious in knitwear and simple CMT, where many British suppliers compete with each other on price as buffer sources of simple garments; the result is low margins, small batches and poor order flow, which feds precarity, enforces low investment, caps productivity and encourages low wage-based competition. In consequence, a recent Channel 4 documentary confirmed Hammer’s findings that the East Midlands apparel sector sustains a segment of sub-contractors paying £3 to £3.50 an hour on orders for British fast fashion houses. The low prices and irregular orders of the houses effectively require this kind of sub-contract; and when discovered the fast fashion houses can of course make an example of a few contractors who have breached the terms of their contract before everything continues much as before. Leicester is increasingly Prato without the Chinese but with an assortment of recent

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migrants and illegals providing the workforce, even though most retailers subscribe to the ethical trading initiative.

Underlying all this is an awkward ecological precondition which makes the problems of mid-market and fast fashion intractable. The buying behaviour of mid-market chains or fast fashion retailers is often discussed (like that of supermarkets) as though these are cultural phenomena which could be modified by publicity and industry codes of good practice. The problem is intractable because the behaviour is embedded in the characteristics of fashion products and chain retailing. Here we have a variant on the problem of ‘nobody knows anything’: retailers cannot predict what is going to sell in volume which can lead to under or over-stocking (and then discounting to clear). In the mid-market this means the retailer often requires a hefty mark up to cover waste and discounting, while fast fashion may avoid some of the problems of discounting but manages volumes by passing risks and costs to suppliers through irregular orders and peremptory price reductions. In a made-to-measure soft furnishing niche like curtains or made-to-order furniture like sofas (as in the carpets sub sector) these conditions do not apply and supplier/retailer relations can be cooperative or indeed vertically integrated: in made-to-measure soft furnishings, the vertically integrated firms include a shed retailer, Dunelm Mill, as well as the mid-market John Lewis chain.230

The obvious result of high mark-ups and risk passing in mid-market apparel is very few jobs in small adaptive firms; the result of low prices and cost pressure in fast fashion is a growing number of jobs of the wrong sort in an informal sector. The structural consequence is a debilitating absence of medium-sized SMEs who would have the capability to dig their way out of this double bind of small scale and low wages which is intensified by atomistic competition. Most of the larger apparel firms have left the domestic industry and what is left is small and micro firms with limited capabilities inside and few resources outside; the hollowed-out infrastructure of technical support, training and collective marketing does little to help struggling (and very small) firms. Atomistic competition from dark side firms paying illegal wages inevitably undermines firms with ‘do the right thing’ strategies of minimum wage compliance with steady work in productive factory layouts.

If the sub-sector ecology is so challenging in apparel, what can industrial policy do when the development of marketing capabilities is difficult for many firms and there is no current prospect of a Mittelstand. This requires: first, curbing the informal employment of low wage labour which undermines the sustainability of compliant firms; and, second, working round distribution by finding direct routes to mid-market with prices that reflect the cost of domestic manufacture not intermediary mark up, or adding realism about part-British products that meet a price point.

a) The first aim of policy should not be to increase the total number of jobs but to reduce and, over time, eliminate poor quality jobs in apparel which pay less than the legal minimum. Enforcement of minimum wages would yield social and political benefits, as well as strengthening the financial viability of remaining firms. Poverty wages increase the requirement for state subvention of households during and after a working life and increase the overall tax burden of welfare towards unsustainability. At industry level,
effective policing of minimum wages will force out immobile capital whose resistance to exit is at present driving a race to the bottom in Leicester apparel and elsewhere. When minimum wages and factory regulations have been enforced it then makes sense to press for codes of practice and obtain retailer pledges and declarations of ethical behaviour.

b) The second aim of policy should be to work around the development of alternative forms of distribution. One strategy is disintermediation so that the supplier reliably captures a large part of a modest mark up through a channel which establishes some connection between the producer, the product attributes and the consumer. The potential of disintermediation is indicated by the way in which the manufacturers’ cooperative Community Clothing in Blackburn states that it can profitably make and directly sell a quality pair of jeans for £65 and a simple Harrington jacket for £129, when similar Made-in-Britain products cost at least double in a retail setting. And if a £500 top coat does not sell at Marks and Spencer, there may well be chain store opportunities for more moderately priced garments of British cloth made up overseas (or UK CMT applied to imported cloth); cloth branding of the kind successfully achieved by Moon could then sustain two or three firms of Moon’s size. The existing high street and online retail offer does not now provide a consistent choice of British-made, mid-market quality products and we do not know whether, if the price premium is modest, consumers will value national production in apparel as they value local production in food. Experiments would be worthwhile: the uncertain question is whether, including through producer co-operation, new manufacturer-owned brands and sales platforms could be developed that can connect with ethical (and in some cases) local production in a way that is now well-established in food, as well as in home furnishings and other areas. Such experiments are worthwhile although they would be unlikely to generate large scale employment. But in a locality like Blackburn a successful co-operative experiment would improve capacity utilisation and margins, and thus provide the basis for development of productive capabilities that can help sustain manufacturing.

The benefits of doing this kind of industrial policy may be only barely discernible in the aggregates. But, given the collapse of industrial employment and the poor quality of the replacement jobs in many areas previously dependent on textiles and apparel, a £5 million turnover firm steadily employing 100 skilled workers at close to £10 per hour is making a major contribution to local welfare. An alternative industrial policy recognises the importance of defending what exists and is valuable in the sub-sectors of textiles and apparel; at the same time, shifting the conditions of precarity can build firm capabilities that will sustain new businesses.

6.5 Conclusion

Working within an input/output frame, standard industrial policy cannot differentiate the problems of textiles and apparel by sub-sectors, recognise the insoluble problems and prescribe remedies for the soluble ones with realism about the value and limits of what can be achieved. This report comes at these policy issues in a different way through the frame of an ecological analysis of sub-sectors.
If policy makers want early wins, it would be sensible to start with sub-sectors that can build on sustainability, like carpets which has a stock of capable Mittelstand firms and a record of cooperation between manufacturers and retailers. From this point of view, policy could also target other sub-sectors, like home furnishings and office textiles, which have a stock of firms and supply chain relations that are not completely dysfunctional. Sub-sectors like apparel with intractable problems should not be neglected. If enforcement of wage and conditions sounds negative, this kind of sector can become an object for policy experiment in sponsoring organizational change within and between firms. Such experiments may not immediately or reliably produce growth in output and employment but are learning opportunities for policy makers and firms.

More generally, policy in all sub-sectors needs to respect the multiplicity of firm types and understand the complexity of their interrelations. Across most sub-sectors, it is important to build and strengthen the capability of Mittelstand firms because they represent firm level escape from precarity. But the Mittelstand should not be promoted at the expense of the cluster because, as in woollen and worsted, the £5 million firm has social value and the number of micro firms is expanding below the policy radar. But smaller firms with limited capability can only be sustained if policy makers learn to manage low density clusters; this requires attention to issues of transition and owner/manager succession in smaller firms, the broader development of management skills in owners and attention to continuity of ownership which prevents the family selling out early with subsequent churning of ownership and starvation of patient capital.
Appendix 1 Notes on key definitions and data sources

UK Standard Industrial Classification (UKSIC) 2007
UK SIC is based on the European NACE, statistical classification of economic activities, Rev. 2.

Grouped as an industry, textiles include 20digit codes of 13 Manufacture of textiles, 14 Manufacture of wearing apparel and 15 Manufacture of leather and related products. Our report concerns mainly the manufacture of textiles and apparel; hence it is called the T&A industry throughout the report.

Data before 2007 was based on 2003 coding system and there are minor differences see below comparison table.

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<tr>
<td>17.18 Textile weaving</td>
<td>13.18 Textile weaving</td>
</tr>
<tr>
<td>17.19 Cotton-type weaving</td>
<td>13.19 Cotton-type weaving</td>
</tr>
<tr>
<td>17.20 Woolen-type weaving</td>
<td>13.20 Woolen-type weaving</td>
</tr>
<tr>
<td>17.24 Silk-type weaving</td>
<td>13.24 Silk-type weaving</td>
</tr>
<tr>
<td>17.25 Other-type weaving</td>
<td>13.25 Other-type weaving</td>
</tr>
<tr>
<td>17.3 Finishing of textiles</td>
<td>13.3 Finishing of textiles</td>
</tr>
<tr>
<td>17.4 Manufacture of made-up textile articles, except apparel</td>
<td>13.4 Manufacture of made-up textile articles, except apparel</td>
</tr>
<tr>
<td>17.5 Manufacture of other textiles</td>
<td>13.5 Manufacture of other textiles</td>
</tr>
<tr>
<td>17.51 Manufacture of carpets and rugs</td>
<td>13.51 Manufacture of carpets and rugs</td>
</tr>
<tr>
<td>17.52 Manufacture of cordage, rope, twine and netting</td>
<td>13.52 Manufacture of cordage, rope, twine and netting</td>
</tr>
<tr>
<td>17.53 Manufacture of non-wovens and articles made from non-wovens, except apparel</td>
<td>13.53 Manufacture of non-wovens and articles made from non-wovens, except apparel</td>
</tr>
<tr>
<td>17.54 Manufacture of other textiles not elsewhere classified</td>
<td>13.54 Manufacture of other textiles not elsewhere classified</td>
</tr>
<tr>
<td>17.6 Manufacture of knitted and crocheted fabrics</td>
<td>13.55 Manufacture of knitted and crocheted fabrics</td>
</tr>
<tr>
<td>17.7 Manufacture of knitted and crocheted articles</td>
<td>13.56 Manufacture of knitted and crocheted articles</td>
</tr>
<tr>
<td>17.71 Manufacture of knitted and crocheted hosiery</td>
<td>13.57 Manufacture of knitted and crocheted hosiery</td>
</tr>
<tr>
<td>17.72 Manufacture of knitted and crocheted pullovers, cardigans and similar articles</td>
<td>13.58 Manufacture of knitted and crocheted pullovers, cardigans and similar articles</td>
</tr>
<tr>
<td>18 Manufacture of wearing apparel, dressing and dyeing of fur</td>
<td>14 Manufacture of wearing apparel, dressing and dyeing of fur</td>
</tr>
<tr>
<td>18.1 Manufacture of leather clothes</td>
<td>14.1 Manufacture of leather clothes</td>
</tr>
<tr>
<td>18.2 Manufacture of other wearing apparel and accessories</td>
<td>14.11 Manufacture of other wearing apparel and accessories</td>
</tr>
<tr>
<td>18.22 Manufacture of outerwear</td>
<td>14.12 Manufacture of outerwear</td>
</tr>
<tr>
<td>18.23 Manufacture of underwear</td>
<td>14.13 Manufacture of underwear</td>
</tr>
<tr>
<td>18.24 Manufacture of other wearing apparel and accessories not elsewhere classified</td>
<td>14.14 Manufacture of other wearing apparel and accessories not elsewhere classified</td>
</tr>
<tr>
<td>18.3 Dressing and dyeing of fur, manufacture of articles of fur</td>
<td>14.2 Manufacture of articles of fur</td>
</tr>
<tr>
<td>19.1 Manufacture of leather and leather products</td>
<td>14.3 Manufacture of leather and leather products</td>
</tr>
<tr>
<td>19.2 Manufacture of luggage, handbags and the like, saddles and harnesses</td>
<td>14.31 Manufacture of luggage, handbags and the like, saddles and harnesses</td>
</tr>
<tr>
<td>19.3 Manufacture of footwear</td>
<td>14.32 Manufacture of footwear</td>
</tr>
</tbody>
</table>

Source: ONS
Index of Production

The UK Index of Production (IoP) provides a timely indicator of growth in the output of production industries at constant prices. Output estimates are calculated by taking value estimates and adjusting them to remove the impact of price changes, or by using direct volume estimates.

Seasonally adjusted (or not seasonally adjusted)

Output and earnings data are provided as ‘seasonally adjusted’ or ‘not seasonally adjusted’. When making comparisons it is recommended that users focus on seasonally adjusted estimates as these have the seasonal effects and systematic calendar related components removed.

Gross Value added (GVA), basic price and factor cost

Gross Value added (GVA) is used as a key indicator of output in this project. GVA is calculated as the total of all goods and services that are produced during the reference period, less goods and services used up or transformed in the production process (intermediate consumption).

The UK Annual Business Survey (ABS) produced by the ONS uses approximates Gross Value Added (aGVA) and it is described as following:

Generally, aGVA is measured by the income generated by the business, industry or sector less their intermediate consumption of goods and services used up in order to produce their output, labour costs (for example, wages and salaries) and an operating surplus (or loss).

1. Differences between aGVA calculated by ABS and GVA used in the National Accounts (NA). NA carry out coverage adjustments, conceptual and value adjustments such as subtracting taxes and adding subsidies, quality adjustments and coherence adjustments. The NA estimate of GVA uses inputs from a number of surveys, and covers the whole UK economy. Some industry sectors are not included in ABS.

2. No real (inflation-adjusted) estimates of regional GVA are published in the NA, however, nominal (non-inflation-adjusted) regional GVA and approximate regional GVA at basic prices are published by the Regional Accounts and ABS respectively.

3. aGVA = output at basic prices – intermediate consumption
   
   = total turnover
   + movement in total stocks
   + work of a capital nature carried out by own staff
   + value of insurance claims received
   + other subsidies received
   + amounts paid in business rates
   + amounts paid in vehicle excise duty
   - total purchases
   - amounts received through the Work Programme (formerly the Welfare to Work Scheme)
   - total net taxes (note: for service industries, this is total taxes, not total net taxes)
The System of National Accounts provides definitions of GVA at basic price and GVA at factor cost. The basic price measures the amount retained by the producer and is, therefore, the price most relevant for the producer’s decision-taking. The basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, on the product as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer.

<table>
<thead>
<tr>
<th>Value added at basic prices</th>
<th>Value added at factor cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Value-added at factor cost is the gross income from operating activities after adjusting for operating subsidies and indirect taxes. It can be calculated from turnover, plus capitalised production, plus other operating income, plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Alternatively, it can be calculated from gross operating surplus by adding personnel costs, income and expenditure classified as financial or extraordinary in company accounts is excluded from value-added. Value-added at factor cost is calculated ‘gross’ as value adjustments (such as depreciation) are not subtracted. Value-added at factor cost is used in the calculation of gross operating surplus (12.17.0) and other aggregates and balances.</td>
</tr>
<tr>
<td><strong>Link to company accounts</strong></td>
<td></td>
</tr>
<tr>
<td>Value-added at basic prices can be calculated from the following accounting headings:</td>
<td></td>
</tr>
<tr>
<td>— Net turnover,</td>
<td></td>
</tr>
<tr>
<td>— Variation in stocks of finished goods and work in progress,</td>
<td></td>
</tr>
<tr>
<td>— Work performed by the undertaking for its own purposes and capitalised, - Raw materials and consumables,</td>
<td></td>
</tr>
<tr>
<td>— Other external charges,</td>
<td></td>
</tr>
<tr>
<td>— part of other operating charges — excluding duties and taxes linked to production,</td>
<td></td>
</tr>
<tr>
<td>— part of other operating income — excluding operating subsidies linked to production,</td>
<td></td>
</tr>
<tr>
<td><strong>Link to other variables</strong></td>
<td></td>
</tr>
<tr>
<td>Value-added at basic prices is based on:</td>
<td></td>
</tr>
<tr>
<td>— Turnover (12.11.0),</td>
<td></td>
</tr>
<tr>
<td>— Total purchases of goods and services (13.11.0),</td>
<td></td>
</tr>
<tr>
<td>— Capitalised production,</td>
<td></td>
</tr>
<tr>
<td>— Other operating income (excluding subsidies linked to production),</td>
<td></td>
</tr>
<tr>
<td>— Other taxes on products which are linked to turnover but not deductible,</td>
<td></td>
</tr>
</tbody>
</table>

Deflation of the trade value

On UN Comtrade database, total transaction value is used as the key measure of export and import. UN commodity trade data is the aggregates of the actual transactions in US dollar value. Such value is inevitably influenced by price variation, inflation and fluctuation of exchange rate. Trade data in UN Comtrade are nominal figures - meaning they are not adjusted for inflation or the distortion of exchange rate. We use the **real effective exchange rate (REER)** and US **consumer price index (CPI)** to make the nominal trade value to a more real indicator. The trade value is first divided by REER between the US and the home country to remove the effect of distorted exchange rate and then divided by US CPI to remove the effect of inflation.
What is the real exchange rate?

The RER between two currencies is the product of the nominal exchange rate (the dollar cost of a euro, for example) and the ratio of prices between the two countries. The core equation is $RER = e \frac{P^*}{P}$, where, in our example, e is the nominal dollar-euro exchange rate, $P^*$ is the average price of a good in the euro area, and P is the average price of the good in the United States. In the case US$: euro =1.36, for a Big Mac if the German price is 2.5 euros and the U.S. price is $3.40, then $(1.36) \times (2.5) \div 3.40$ yields an RER of 1. But if the German price were 3 euros and the U.S. price $3.40$, then the RER would be $1.36 \times 3 \div 3.40 = 1.2$. The RER is an average of the bilateral RERs between the country and each of its trading partners, weighted by the respective trade shares of each partner.

Total Employment Cost

This includes all overtime payments, bonuses, commissions, payments in kind, benefits in kind, holiday pay, employer’s national insurance contributions, payments into pension funds by employers and redundancy payments less any amounts reimbursed for this purpose from government sources. No deduction is made for income tax or employee’s national insurance contributions etc. Payment to working proprietors, travelling expenses, lodgings allowances, etc. are excluded.

Total Employment

This is the average of total employment during the year, taken from the Business Register and Employment Survey (BRES).

Total net capital expenditure

This is calculated by adding the value of new building work, acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.
## Appendix 2 Interview list

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number</th>
<th>Interviewee position</th>
<th>Date interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Worsted Manufacturers</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Managing Director</td>
<td>May-15</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Technical Director</td>
<td>May-15</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Managing Director</td>
<td>May-15</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Managing Director</td>
<td>May-15</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Managing Director</td>
<td>Jun-15</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Manufacturing Director</td>
<td>Jun-15</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Managing Director</td>
<td>Jun-15</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Managing Director</td>
<td>Jun-15</td>
</tr>
<tr>
<td><strong>Apparel manufacturers</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Managing Director</td>
<td>Oct-15</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Managing Director</td>
<td>Oct-15</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Director of Supply Chain</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Managing Director</td>
<td>Jan-16</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Managing Director</td>
<td>Dec-15</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Managing Director</td>
<td>Dec-15</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Vice President</td>
<td>Jan-16</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Managing Director</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Managing Director</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Managing Director</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Senior Account Manager</td>
<td>Feb-16</td>
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<tr>
<td></td>
<td>12</td>
<td>Managing Director</td>
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<tr>
<td></td>
<td>13</td>
<td>Director</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Managing Director</td>
<td>Mar-16</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Vice President</td>
<td>Apr-16</td>
</tr>
<tr>
<td><strong>Technical textiles</strong></td>
<td>1</td>
<td>Managing Director</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>General Manager</td>
<td>Jan-16</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>General Manager</td>
<td>Jan-16</td>
</tr>
<tr>
<td><strong>Carpets manufacturers</strong></td>
<td>1</td>
<td>Sales Director</td>
<td>May-16</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Chairman</td>
<td>May-16</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Shareholder</td>
<td>May-16</td>
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<tr>
<td><strong>Machinery provider</strong></td>
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<td>Managing Director</td>
<td>Jun-15</td>
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<tr>
<td></td>
<td>2</td>
<td>Director</td>
<td>May-16</td>
</tr>
<tr>
<td><strong>Retailers</strong></td>
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<td>Technical Sourcing Director</td>
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</tr>
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<td></td>
<td>2</td>
<td>Director</td>
<td>Nov-15</td>
</tr>
<tr>
<td><strong>Merchants &amp; sourcing</strong></td>
<td>1</td>
<td>Sales Director</td>
<td>Oct-15</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Chairman</td>
<td>May-16</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Consultant</td>
<td>Nov-15</td>
</tr>
<tr>
<td><strong>Trade associations</strong></td>
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<td>President</td>
<td>May-15</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Managing Director</td>
<td>May-15</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Managing Director</td>
<td>Oct-15</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Director of IBD</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Global Strategic Advisor</td>
<td>Feb-16</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Spokesperson</td>
<td>May-16</td>
</tr>
<tr>
<td>Consultant &amp; advocate</td>
<td>1 Founder</td>
<td>Feb-16</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Managing Director</td>
<td>Feb-16</td>
<td></td>
</tr>
<tr>
<td>Government agent</td>
<td>1 Economic Strategy Manager Business Investment</td>
<td>Feb-16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Manager</td>
<td>Feb-16</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3 Cluster comparison between West Yorkshire, UK; Oberfranken; Germany and Toscana, Italy

Textile and apparel clusters in the UK, Italy and Germany, 2005

<table>
<thead>
<tr>
<th>Region</th>
<th>Year</th>
<th>Sectors</th>
<th>Employees</th>
<th>Size</th>
<th>Specialisation</th>
<th>Focus</th>
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</thead>
<tbody>
<tr>
<td>W Yorks</td>
<td>2005</td>
<td>Textiles</td>
<td>10873</td>
<td>1.3</td>
<td>1.66</td>
<td>1.1</td>
</tr>
<tr>
<td>Toscana</td>
<td>2005</td>
<td>Textiles</td>
<td>28547</td>
<td>3.42</td>
<td>3.61</td>
<td>2.39</td>
</tr>
<tr>
<td>Oberfranken</td>
<td>2005</td>
<td>Textiles</td>
<td>6736</td>
<td>0.81</td>
<td>3.09</td>
<td>2.05</td>
</tr>
<tr>
<td>W Yorks</td>
<td>2005</td>
<td>Apparel</td>
<td>3400</td>
<td>0.29</td>
<td>0.37</td>
<td>0.35</td>
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<tr>
<td>Toscana</td>
<td>2005</td>
<td>Apparel</td>
<td>34883</td>
<td>2.96</td>
<td>3.11</td>
<td>2.92</td>
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<tr>
<td>Oberfranken</td>
<td>2005</td>
<td>Apparel</td>
<td>4045</td>
<td>0.34</td>
<td>1.31</td>
<td>1.23</td>
</tr>
</tbody>
</table>

Source: EU Cluster Observatory
Notes: for definitions, see Table 3.1

Characteristics of the Oberfranken and Toscana textile and apparel clusters

<table>
<thead>
<tr>
<th>Region</th>
<th>Year</th>
<th>Sectors</th>
<th>Employees</th>
<th>Enterprises</th>
<th>Employees per enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oberfranken</td>
<td>2011</td>
<td>Apparel</td>
<td>2701</td>
<td>111</td>
<td>24.3</td>
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<tr>
<td>Oberfranken</td>
<td>2011</td>
<td>Textiles</td>
<td>5803</td>
<td>134</td>
<td>43.4</td>
</tr>
<tr>
<td>Toscana</td>
<td>2011</td>
<td>Apparel</td>
<td>31988</td>
<td>6467</td>
<td>4.9</td>
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<tr>
<td>Toscana</td>
<td>2011</td>
<td>Textiles</td>
<td>22591</td>
<td>4178</td>
<td>5.4</td>
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</tbody>
</table>

Source: EU Cluster Observatory

The textiles industry in Germany, Italy and UK: firm numbers and average turnover

<table>
<thead>
<tr>
<th></th>
<th>Germany</th>
<th>Italy</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of firms</td>
<td>Turnover Millions €</td>
<td>Average Turnover €</td>
</tr>
<tr>
<td>Preparation &amp; spinning of textile fibres</td>
<td>1999</td>
<td>141</td>
<td>1,877.1</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>124</td>
<td>759.8</td>
</tr>
<tr>
<td>Weaving of textiles</td>
<td>1999</td>
<td>377</td>
<td>3,537.2</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>228</td>
<td>1,863.4</td>
</tr>
<tr>
<td>Finishing of textiles</td>
<td>1999</td>
<td>681</td>
<td>1,667.2</td>
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<tr>
<td></td>
<td>2012</td>
<td>1,180</td>
<td>1,168.7</td>
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</table>

Source: Eurostat
Appendix 4 Financial performance of selected woollens and worsted cluster firms with turnover (£) and pre-tax profit margin (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Camira Fabrics Limited</td>
<td>45,696</td>
<td>40,026</td>
<td>37,465</td>
<td>36,990</td>
<td>34,033</td>
<td>30,867</td>
<td>39,378</td>
<td>41,306</td>
<td>37,357</td>
<td>34,456</td>
<td>37,757</td>
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<tr>
<td>Abraham Moon Holdings</td>
<td>21,247</td>
<td>19,202</td>
<td>17,026</td>
<td>14,692</td>
<td>12,405</td>
<td>9,823</td>
<td>n.a.</td>
<td>n.a.</td>
<td>15,632</td>
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<td>Spectrum Yarns Limited</td>
<td>17,972</td>
<td>16,430</td>
<td>16,237</td>
<td>15,381</td>
<td>13,657</td>
<td>12,129</td>
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<td>15,301</td>
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<td>Dormeuil Manufacturing</td>
<td>16,105</td>
<td>16,062</td>
<td>15,111</td>
<td>13,720</td>
<td>8,265</td>
<td>6,805</td>
<td>10,472</td>
<td>10,912</td>
<td>8,206</td>
<td>5,849</td>
<td>11,151</td>
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</tr>
<tr>
<td>Z.Hinchliffe &amp; Sons Limited</td>
<td>12,929</td>
<td>14,831</td>
<td>14,674</td>
<td>14,634</td>
<td>17,586</td>
<td>15,949</td>
<td>15,155</td>
<td>18,477</td>
<td>16,149</td>
<td>19,165</td>
<td>16,156</td>
<td></td>
</tr>
<tr>
<td>A.W. Hainsworth Holdings</td>
<td>11,975</td>
<td>11,562</td>
<td>11,947</td>
<td>9,597</td>
<td>13,578</td>
<td>13,421</td>
<td>13,484</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
<td></td>
<td>12,223</td>
</tr>
<tr>
<td>Alfred Brown (Worsted Mills)</td>
<td>9,644</td>
<td>9,211</td>
<td>11,471</td>
<td>8,480</td>
<td>7,024</td>
<td>5,406</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8,539</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Abraham Moon Holdings</td>
<td>10.08</td>
<td>7.94</td>
<td>10.67</td>
<td>17.64</td>
<td>8.34</td>
<td>-3.58</td>
<td>n.a.</td>
<td>0.28</td>
<td></td>
<td></td>
<td></td>
<td>8.52</td>
</tr>
<tr>
<td>Spectrum Yarns Limited</td>
<td>-0.29</td>
<td>-1.10</td>
<td>0.25</td>
<td>2.30</td>
<td>3.04</td>
<td>-2.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.28</td>
</tr>
<tr>
<td>Dormeuil Manufacturing</td>
<td>3.30</td>
<td>3.06</td>
<td>2.30</td>
<td>0.24</td>
<td>0.63</td>
<td>-3.92</td>
<td>1.64</td>
<td>3.22</td>
<td>1.48</td>
<td>2.76</td>
<td>1.47</td>
<td></td>
</tr>
<tr>
<td>Z.Hinchliffe &amp; Sons Limited</td>
<td>-5.35</td>
<td>-5.13</td>
<td>-7.54</td>
<td>-1.62</td>
<td>5.56</td>
<td>-2.45</td>
<td>-5.29</td>
<td>4.16</td>
<td>-1.98</td>
<td>-4.70</td>
<td>-2.39</td>
<td></td>
</tr>
<tr>
<td>A.W. Hainsworth Holdings</td>
<td>0.99</td>
<td>1.59</td>
<td>2.02</td>
<td>4.47</td>
<td>2.71</td>
<td>2.21</td>
<td>3.46</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
<td>2.49</td>
<td></td>
</tr>
<tr>
<td>Alfred Brown (Worsted Mills)</td>
<td>6.40</td>
<td>7.65</td>
<td>7.61</td>
<td>6.37</td>
<td>8.96</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.27</td>
<td></td>
</tr>
</tbody>
</table>

Source: FAME.

Note: The sample of companies is selected from the FAME database on the basis of their availability; there are many other companies that do not disclose their profit/loss information.
### Appendix 5 Comparison between textiles and apparel on number of firms, turnover, aGVA and total employment, 1995-2014.

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>Number of enterprises</th>
<th>Total turnover £ million</th>
<th>aGVA at basic prices £ million</th>
<th>Total employment Thousand</th>
<th>Description</th>
<th>Number of enterprises</th>
<th>Total turnover £ million</th>
<th>aGVA at basic prices £ million</th>
<th>Total employment Thousand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>8,672</td>
<td>7,275</td>
<td>2.851</td>
<td>..</td>
<td>Manufacture of textiles</td>
<td>6,321</td>
<td>10,404</td>
<td>3.959</td>
<td>..</td>
</tr>
<tr>
<td>1996</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>8,377</td>
<td>7,133</td>
<td>3.005</td>
<td>..</td>
<td>Manufacture of textiles</td>
<td>6,347</td>
<td>11,002</td>
<td>4.177</td>
<td>..</td>
</tr>
<tr>
<td>1997</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>8,212</td>
<td>7,788</td>
<td>3.463</td>
<td>..</td>
<td>Manufacture of textiles</td>
<td>6,330</td>
<td>11,086</td>
<td>4.201</td>
<td>..</td>
</tr>
<tr>
<td>1998</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>7,630</td>
<td>6,945</td>
<td>2.723</td>
<td>160</td>
<td>Manufacture of textiles</td>
<td>6,205</td>
<td>10,420</td>
<td>3.976</td>
<td>182</td>
</tr>
<tr>
<td>1999</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>6,977</td>
<td>6,437</td>
<td>2.320</td>
<td>146</td>
<td>Manufacture of textiles</td>
<td>5,994</td>
<td>9,700</td>
<td>3,610</td>
<td>171</td>
</tr>
<tr>
<td>2000</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>6,330</td>
<td>5,574</td>
<td>2.171</td>
<td>129</td>
<td>Manufacture of textiles</td>
<td>5,740</td>
<td>8,784</td>
<td>3,336</td>
<td>148</td>
</tr>
<tr>
<td>2001</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>5,820</td>
<td>4,977</td>
<td>1.882</td>
<td>90</td>
<td>Manufacture of textiles</td>
<td>5,490</td>
<td>8,252</td>
<td>3,169</td>
<td>132</td>
</tr>
<tr>
<td>2002</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>5,383</td>
<td>4,718</td>
<td>1.594</td>
<td>73</td>
<td>Manufacture of textiles</td>
<td>5,286</td>
<td>7,486</td>
<td>2,886</td>
<td>123</td>
</tr>
<tr>
<td>2003</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>4,820</td>
<td>4,415</td>
<td>1.451</td>
<td>64</td>
<td>Manufacture of textiles</td>
<td>5,019</td>
<td>6,982</td>
<td>2,696</td>
<td>102</td>
</tr>
<tr>
<td>2004</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>4,456</td>
<td>3,876</td>
<td>1.373</td>
<td>48</td>
<td>Manufacture of textiles</td>
<td>4,872</td>
<td>6,964</td>
<td>2,451</td>
<td>98</td>
</tr>
<tr>
<td>2005</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>4,212</td>
<td>3,654</td>
<td>1.274</td>
<td>42</td>
<td>Manufacture of textiles</td>
<td>4,852</td>
<td>6,604</td>
<td>2,328</td>
<td>88</td>
</tr>
<tr>
<td>2006</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,889</td>
<td>3,094</td>
<td>1.079</td>
<td>38</td>
<td>Manufacture of textiles</td>
<td>4,746</td>
<td>6,222</td>
<td>2,198</td>
<td>78</td>
</tr>
<tr>
<td>2007</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,690</td>
<td>3,075</td>
<td>1.126</td>
<td>32</td>
<td>Manufacture of textiles</td>
<td>4,662</td>
<td>6,368</td>
<td>2,273</td>
<td>73</td>
</tr>
<tr>
<td>2008</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,825</td>
<td>2,925</td>
<td>930</td>
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<td>Manufacture of textiles</td>
<td>4,255</td>
<td>5,628</td>
<td>2,096</td>
<td>64</td>
</tr>
<tr>
<td>2009</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,572</td>
<td>2,561</td>
<td>651</td>
<td>32</td>
<td>Manufacture of textiles</td>
<td>4,068</td>
<td>5,047</td>
<td>1,887</td>
<td>59</td>
</tr>
<tr>
<td>2010</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,389</td>
<td>2,816</td>
<td>885</td>
<td>40</td>
<td>Manufacture of textiles</td>
<td>3,935</td>
<td>5,304</td>
<td>1,934</td>
<td>*</td>
</tr>
<tr>
<td>2011</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,378</td>
<td>2,834</td>
<td>831</td>
<td>30</td>
<td>Manufacture of textiles</td>
<td>3,871</td>
<td>5,473</td>
<td>1,847</td>
<td>54</td>
</tr>
<tr>
<td>2012</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,384</td>
<td>2,653</td>
<td>744</td>
<td>29</td>
<td>Manufacture of textiles</td>
<td>3,778</td>
<td>5,313</td>
<td>2,262</td>
<td>54</td>
</tr>
<tr>
<td>2013</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,392</td>
<td>2,775</td>
<td>919</td>
<td>34</td>
<td>Manufacture of textiles</td>
<td>3,844</td>
<td>5,427</td>
<td>2,219</td>
<td>56</td>
</tr>
<tr>
<td>2014</td>
<td>Manufacture of wearing apparel; dressing and dyeing of fur</td>
<td>3,415</td>
<td>2,915</td>
<td>921</td>
<td>34</td>
<td>Manufacture of textiles</td>
<td>3,878</td>
<td>5,373</td>
<td>1,927</td>
<td>63</td>
</tr>
</tbody>
</table>


Note: Knitwear was classified as textiles rather than apparel in SIC 2003. In 2007, knitwear accounted for 12.4% aGVA of textiles. A comparison of SIC 2003 and SIC 2007 can be found in Appendix 1.
Appendix 6 The geographic concentration of apparel production

Apparel production by region aGVA 2013

Source: ONS ABS by country and region
Appendix 7 Marks and Spencer: from ‘90% of our goods are British made’ to ‘Best of British’

Marks and Spencer (M&S), the UK’s largest long-standing retailer, has played an important role in shaping the domestic clothing industry. M&S’ initial success in 1920 was based on its then innovative business model: purchasing products from manufacturers directly by bypassing powerful middleman who managed warehouses. M&S invested the cost-savings back into the manufacturers to develop the better quality products that contributed to its popularity and growth. M&S was widely seen as distinctive in creating paternalistic relationships with its suppliers and employees (Chapman, 2004). It had a Merchandising Development Department until 1985 which developed designs and specified materials and techniques for its suppliers. M&S suppliers, especially relatively small ones, grew dependent on its detailed instructions and control and would subsequently struggle to survive with a limited set of management competences. Before 1985, being a M&S supplier had financial benefits: from 1949-1984, M&S suppliers enjoyed higher returns and lower return volatility. The average return of M&S suppliers was 22.1% compared to 11.9% for non M&S firms, a premium of 10.2% (Toms & Zhang, 2016, p. 12). Within the vertical supply chain network that was closely controlled by M&S the relationship was mutually beneficial as M&S had shared risks and surplus with its suppliers. Meanwhile, M&S could capitalize on British consumers’ ethnocentrism and win more market share. M&S was a strong presence on the British high street with market share of 16% as recently as 1989.

In the 1980s, retail competition on the UK high street intensified and overseas lower-cost production became more accessible. In late 1980s, M&S reviewed its strategy and started encouraging its suppliers to source fabric overseas and move manufacturing offshore in order to lower manufacturing cost and thus support its own attempts to remain competitive. Such encouragement was camouflaged by reorganize its supplying network into a hybrid. M&S concentrated its UK supplier base by encouraging takeovers and then used suppliers with international expertise, Courtaulds, Coats Viyella and Dewhirst, as vehicles for offshoring. It appeared that for some time M&S believed that they could maintain their unique buying-British position with a hybrid or hierarchical supplying network. Economic downturn followed, the bursting of the dot-com bubble caused a global recession that hit the high street. Between 1997 and 2000, M&S’ profits halved to between £500 and £600 million, market share fell from 15% to 11%, and its shares dropped from 660p to 170p. In response to the crisis, or re-evaluation of British consumers’ ethnocentrism, M&S announced that it would increase its overseas sourcing further. Although M&S has often been portrayed as the villain in the decline of the domestic apparel industry, it supported the UK T&A industry longer than its competitors and delayed (but could not avoid) the full effect of changes in global supply chains. As remarked by Lord Feldman, who chaired the ‘Little Nddy’ on clothing, (first reporting on the challenges in the British clothing industry in 1978, and later part of the Parliamentary All Party Clothing and Textile Group which produced a report in 1999 documenting continuing pressures), M&S played a key role in developing and sustaining the domestic industry over many years but with the effect that its abandonment of its famous British pledge was felt very hard (2000).

The hybrid supplying network retained Courtaulds, Coats and Dewhirst, who hollowed out their UK manufacturing plants and become UK suppliers who owned factory overseas and also sourced globally.

231 Adapted from the heritage website Knitting Together’s virtual museum: http://www.knittingtogether.org.uk/cat5dec.html?cat=745.
232 Return on capital is defined as profit before interest and tax divided by owners’ equity plus long term loan Capital.
233 A committee set up under the National Economic Development Council; the little Neddys were established for specific industries.
The introduction of the ‘Best of British’ collection in 2013 in partnership with the British Fashion Council\(^{235}\) launched in just a few flagship stores - simply signalled that M&S, once a British retailer that purchased one third of the UK T&A industry’s total output, has become truly global just like its competitors and made in Britain was an exception. Supply chain development to defend profits has continued as the retail environment has become more competitive. In 2015, M&S hired sourcing specialists Mark and Neal Lindsey to streamline its supply chain: one consequence has been to seek lower costs by sourcing directly from overseas manufacturers rather than going through UK-based agents like Dewhirst and Courtaulds\(^{236}\). In summer 2016 M&S has a range of men’s’ suits called ‘Inspired by Saville Row’. Despite the nod to British tailoring this range gives little away in terms of provenance: some suits are described as made from ‘European cloth’ but with no information about place of manufacture.\(^{237}\)


Appendix 8 Top 25 Clothing exporters and importers in the world in 2014

<table>
<thead>
<tr>
<th>Exporter</th>
<th>Trade Value (Million US$)</th>
<th>Importer</th>
<th>Trade Value (Million US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  China</td>
<td>186,614.1</td>
<td>1  USA</td>
<td>93,176.6</td>
</tr>
<tr>
<td>2  Italy</td>
<td>25,157.9</td>
<td>2  Germany</td>
<td>39,634.0</td>
</tr>
<tr>
<td>3  China, Hong Kong SAR</td>
<td>20,510.2</td>
<td>3  Japan</td>
<td>31,167.2</td>
</tr>
<tr>
<td>4  Germany</td>
<td>20,349.4</td>
<td>4  United Kingdom</td>
<td>29,052.7</td>
</tr>
<tr>
<td>5  Viet Nam</td>
<td>20,174.3</td>
<td>5  France</td>
<td>25,092.4</td>
</tr>
<tr>
<td>6  India</td>
<td>16,680.4</td>
<td>6  Italy</td>
<td>17,650.3</td>
</tr>
<tr>
<td>7  Turkey</td>
<td>16,519.5</td>
<td>7  Spain</td>
<td>17,096.2</td>
</tr>
<tr>
<td>8  Spain</td>
<td>12,519.5</td>
<td>8  China, Hong Kong SAR</td>
<td>16,172.6</td>
</tr>
<tr>
<td>9  France</td>
<td>11,698.5</td>
<td>9  Netherlands</td>
<td>12,013.2</td>
</tr>
<tr>
<td>10 Netherlands</td>
<td>9,864.9</td>
<td>10 Canada</td>
<td>10,082.4</td>
</tr>
<tr>
<td>11 United Kingdom</td>
<td>9,039.8</td>
<td>11 Belgium</td>
<td>9,813.6</td>
</tr>
<tr>
<td>12 Belgium</td>
<td>8,930.9</td>
<td>12 Russian Federation</td>
<td>8,512.5</td>
</tr>
<tr>
<td>13 Indonesia</td>
<td>7,669.8</td>
<td>13 Rep. of Korea</td>
<td>8,471.9</td>
</tr>
<tr>
<td>14 USA</td>
<td>6,108.4</td>
<td>14 United Arab Emirates</td>
<td>6,588.5</td>
</tr>
<tr>
<td>15 Cambodia</td>
<td>5,338.9</td>
<td>15 Australia</td>
<td>6,524.4</td>
</tr>
<tr>
<td>16 Pakistan</td>
<td>4,991.0</td>
<td>16 Austria</td>
<td>6,347.7</td>
</tr>
<tr>
<td>17 Sri Lanka</td>
<td>4,918.9</td>
<td>17 Switzerland</td>
<td>6,130.9</td>
</tr>
<tr>
<td>18 Malaysia</td>
<td>4,766.5</td>
<td>18 China</td>
<td>6,124.0</td>
</tr>
<tr>
<td>19 Mexico</td>
<td>4,617.9</td>
<td>19 Poland</td>
<td>5,241.3</td>
</tr>
<tr>
<td>20 Poland</td>
<td>4,538.1</td>
<td>20 Denmark</td>
<td>5,211.3</td>
</tr>
<tr>
<td>21 Denmark</td>
<td>4,420.2</td>
<td>21 Sweden</td>
<td>4,646.8</td>
</tr>
<tr>
<td>22 Thailand</td>
<td>4,129.2</td>
<td>22 Mexico</td>
<td>3,586.8</td>
</tr>
<tr>
<td>23 Portugal</td>
<td>3,768.9</td>
<td>23 Turkey</td>
<td>3,228.8</td>
</tr>
<tr>
<td>24 Romania</td>
<td>3,628.8</td>
<td>24 Chile</td>
<td>2,983.1</td>
</tr>
<tr>
<td>25 Morocco</td>
<td>3,310.0</td>
<td>25 Brazil</td>
<td>2,939.6</td>
</tr>
</tbody>
</table>

Source: UN Comtrade
Appendix 9 Concentration of apparel manufacturing: UK, Germany, Italy, Spain, Portugal, Romania, Bulgaria, Poland and Turkey

The charts show a) the size distribution of apparel firms in each country (measured as numbers of employees) and b) the distribution of turnover according to firm size. Different patterns emerge. For example, the UK and Germany have a similar distribution of firms by size (number of employees); but relatively more of total German turnover is accounted for by larger firms. In Germany, the 1% of firms that hire more than 250 employees produce 45% of the sector’s turnover; while 81% firms (those hiring) less than 10 employees produce only 4% of its turnover. Firms in Spain and Italy are predominantly small with turnover distributed relatively evenly in 5 size bands.

Source: Eurostat
Size groups of Turkish apparel firms are slightly different from the above countries due to differences in data sources. Turkish firms are on average small; however, the 3% of firms that hire more than 50 employees produce 63% of the sector’s turnover.
Appendix 10 Company profiles for Chapter 5

Resilient 1: Growing luxury heritage brand, with corporate style of management that has been able to focus on marketing and communication

‘The brand will live without us being here’: this is a multinational with a British brand, or an international operation with its headquarters in London. It is successful because professional management has continuously invested both in communications with its target markets and in developing productive capabilities. The brand image has been well-maintained and developed in both established and newer markets.

To maintain a relatively high profit margin, only some products are made in the UK; others are sourced globally. The portion of UK sourcing has been increasing in the past five years, though it is not close to historic levels. The brand has enjoyed an upturn in the past few years and overseas sales have been growing substantially. However, the luxury market vulnerable to economic cycles and it is experiencing a slowdown in some markets.

The company is committed to ethical practice, pointing out that the supply chain of the brand directly supports thousands of jobs globally. The company is focused on protecting the brand image and long-term relationships with suppliers appear to be important as a part of this. For example, if one production line is being cut back, the company will try to find more work for the supplier that is affected.

Resilient 2: Growing heritage brand, sourcing and manufacturing efficiency and family ownership

The business is well-established and, with a brand built on its British heritage, it has attracted consumers from within the UK and overseas. Ownership has been in the same family since its creation and the company is still run by family members from two generations. However, being a British heritage brand with a proud family story to tell does not guarantee success; many heritage brands failed in this extremely cyclical industry. The business has broadened its product portfolio without leaving the core classic products. The diversification is carefully thought and trialled in a relatively conservative manner to ensure that expansion is consistent with the heritage. Hence, the marketing strategy covers multi-channels and products are priced in a range that is sensible for discerning domestic consumers - a strong sense of quality and design but not forbiddingly expensive. As a result, its domestic sales have grown over the past decade with (quite unusually) more than half of the sales coming from within the UK.

It has a UK factory that is highly efficient with a modern production system. The factory is well-managed and has succession plans for skills retention. However, even with a good employer image and heritage brand, it still struggles to find enough younger recruits to join the UK factory. To maintain the factory efficiency necessary to compensate for higher labour costs, operators work under pressure and this environment is perceived to be unattractive to a generation unused to factory work. The average age of the workforce on the factory floor is over 50 and replacement and training remain a challenge. Impressive global sourcing intelligence and capacity have supported its growth in the past decade. More than 90% of the products are now sourced from overseas suppliers, with whom it has maintained good relationships.

In addition to the sourcing and manufacturing efficiency, family ownership has been essential to its survival and success. There is a strong team of professional, experienced managers, who work with family
members. Patient family ownership has supported the business and allowed it to manage over difficult conditions. Although the business is much larger than the average apparel manufacturer, the owner has played an entrepreneurial role and retains a strong influence over future development.

**Precarious 1 Struggling on thin margins: family business, committed to ethical practice; with undifferentiated products and selling through intermediaries**

This is a small family business with a modern, well-organised and efficient factory that has had recent investment in machinery and technical equipment to help manage quality assurance. The owner-managers have multiple roles and are trying to build relations with fashion houses to try to generate higher and more stable volumes. Margins are very thin as intermediaries take what is perceived as a generous share of the margin between production costs and retail price. The firm’s products are sold by a range of UK high street retailers though they do not know whether their products are marketed by retailers as ‘Made in Britain’, or whether retailers charge a premium price to customers. The manager believes that large retailers would be willing to purchase from the business directly, which might improve the margins, but they also feel that they cannot afford to bypass the intermediaries as volume from one or two retailers would not feed the factory sufficiently to be efficient. They also perceive that retail buyers have no loyalty and the demand can be volatile, which would make direct selling risky. They recognise that there may be more market opportunities that could be exploited e.g. branding or direct sale to consumers but the owners are fully stretched and have no resources to explore these.

The managers have a good understanding of how much money they can make on different kinds of garment, and using different kinds of fabric quality; though it is sometimes difficult to refuse to supply orders even when the margins are expected to be miniscule. While the owner-managers are committed to maintaining production in the UK (rather than setting up facilities in, for example, Morocco) they face almost overwhelming challenges in relation to buyer behaviour and unfair competition.

In terms of buyer behaviour, their experience is of major retailers giving large volume orders to overseas factories where labour cost is much cheaper, so that what is supplied from the UK is likely to be small runs, speciality products and quick turnover. The firm’s products are not specialist: their main productive capabilities come from speed, reliability and consistency. They appreciate that their position in precarious, living almost from one order to another and aware that there is no guarantee of repeat orders or thereof compete with overseas manufacturers directly. In terms of unfair competition, the firm considers that their biggest problem is not overseas competitors but local manufacturers who do not comply with immigration, labour, health and safety and/or other regulations. The managers of this firm take pride in compliance and insist that they want to be ethical, yet they struggle against large numbers of local competitors who are not and who can offer low prices. They argue that the situation could be improved if retailers and intermediaries took their own ethical obligations seriously and created a level playing field.

**Precarious 2: Shrinking business under third generation of family ownership; undifferentiated products, direct sale without marketing budget**

The owner-manager is the third generation running the family business. It is located in a traditional garment-making region where most of manufacturers have left or become intermediaries and where there has been little growth after 2010. The business employees a couple of other family members and has 15 other workers but the owner is the sole manager.
The product is traditional and not design-driven. The owner-manager does the design and the quality is good but the owner recognises he cannot offer anything distinctive in relation to the product: Chinese manufacturers can make products of the same quality easily. As well as overseeing operations, he also manages the website and does marketing research. He tries very hard to understand why his website has not attracted enough new business for him to ensure the factory runs efficiently, even though he has a good customer response and re-purchase rate. He has considered using a marking agency, but did not consider that the fee they demanded was justified. Ownership support helps weather cyclicality and prevents exit, but there is no clear strategy for developing scale or marketing distinctiveness.

The manager is well-connected with other manufacturers and well-informed about industry developments. For instance, he has a Meet the Manufacturer event but was a bit disappointed as he felt it was mainly intended to connect CMT to retailers and brands, while he wanted to continue with direct sale to defend margins. Overall, the lack of market advantage limits funds needed to invest in the factory and enhance technical capabilities. For example, the firm lacks in-house engineering support. The production unit runs at around 50% operator performance, and is arranged like a workshop or sample room with a group of machines centralised and sewing machine operators moving to different machines or passing work to the next station.

Developer 1: Upgrading and succeeding: traditional CMT upgraded to brand; marketing campaign supported by patient family capital.

The business has been a traditional CMT for many years. The owner-manager has spent a lifetime in garment manufacturing and experienced many market cycles. The factory has been versatile, taking on different types of products over time in order to sustain the business. Recently, it has decided to launch its own brand and sell directly to mid-high end consumers, signal a move to a more vertically integrated business. It is now selling to stockists all over the world and directly to consumers online, building the brand with the help of some media attention.

Marketing has been an important part of the development of the business and professionals have been brought into a range of roles including design. In contrast to the marketing capabilities, the production system is very traditional: a tradition of low investment has resulted in relatively low capability. Production is arranged around a traditional batch-flow production system with clusters of machinery organised in islands and supplied by ‘service hands’, with what appears to be medium-high levels of work in progress. The production line is supported by multi-skilled workers, paid on a piece rate basis and little evidence of high pressure performance management. While quality control systems operate, production methods result in minor inconsistencies in the product, but this has been incorporated into the brand asset as evidence of a handmade product.

The injection of family capital is fundamental to the new brand launch. The upgrading process has been underway for several years without realizing any profit. However, the owner-manager remains optimistic and aims to carry on building the brand and expanding the manufacturing capacity. The key capabilities here are marketing based and success will depend on persuading enough customers to pay a premium price for a new (though heritage inspired) British brand. Two entrepreneurial owner-managers, combine a focus on brand and sales channel building, with a focus on factory floor management of process and people.
**Developer 2: Niche, family owned business: specialist sportswear manufacturer, with technical efficiency and seeking expansion and/or diversification.**

The owner-managers are brothers whose family founded the factory but closed it before the financial crisis, when they found it difficult to manage as customers stepped up their offshoring. In 2011 they saw an opportunity to restart manufacturing in the UK again, focusing this time on garment making and home furnishings. The factory is highly efficient and well-organized. They have paid careful attention to layout to enable workers to be mobile and efficient; there is also a strong emphasis on quality checking to reduce discards, rework and time wasting. The production process requires a highly disciplined, experienced and multi-skilled workforce who can cope with time pressure and close monitoring. Restarting a business in the last few years has brought home the recognition that the local infrastructure and skills base is largely lost, which has made it difficult to build up a skilled workforce.

The garment making business produces orders for sports brands and online retailers. Their manufacturing efficiency and the adoption of state-of-art technology enable them to provide flexible products that are versatile in design. They are comfortable in their niche and are able to fulfil relatively small orders as well as turning around urgent orders in a matter of hours, which helps to strengthen their advantage. The owner-manager is willing in principle to explore opportunities with high-street retailers but is also cautious of the imbalance of power and is aware of the difficulty of building marketing capabilities. The furnishing business is more traditional and provides a second stream of orders. In principle workers (and factory space) is flexible between these two operations though in practice this is limited.

The business has benefited from the Textiles Growth Fund, which provided grants to cover around 25% of the cost of their new machinery. The owner-manager is positive about political and financial support from local authorities, unlike some of our interviewees who are short of time, capacity and resources to exploit such opportunities. The rest of the investment came from family capital which has so far been patient. No profit was made in the first couple of years but the financial situation has since improved. Both owner-managers worked in the factory when they were young and the apparel industry is an important part of their personal lives; however, they are keen for the next generation to obtain a good education before they join the business.