European Foundation for the Improvement of Living and Working Conditions

EMCC case studies

Textiles and clothing sector: Herning-Ikast-Brande cluster, Denmark

Introduction

Cluster development

Employment and turnover

Pressures from globalisation and restructuring

Main challenges

Innovation

Localisation strategy

Skills levels of workers

Conclusion

Contacts

Sources

european monitoring centre on change

Wyattville Road, Loughlinstown, Dublin 18, Ireland. - Tel: (+353 1) 204 31 00 - Fax: 282 42 09 / 282 64 56
email: postmaster@eurofound.europa.eu - website: www.eurofound.europa.eu

The concentration of textiles and clothing companies in the Herning-Ikast-Brande area of Jutland in western Denmark is due to a long history of crafts in the region. In the 1980s, this concentration was very important to the companies involved, as it attracted many potential customers to the area. Since then, due to globalisation, these companies have relocated production activities to low-cost countries in Europe to remain competitive, but retained the knowledge-intensive activities of the business such as design, fashion, logistics, sales and marketing. Today, the cluster comprises mainly large clothing companies and several small but highly-specialised textiles companies. Despite competition from the Copenhagen area, several key features make the cluster attractive in terms of location – access to know-how, a strong cluster brand and the good reputation of knowledge centres such as Teko. Good business practice has led to the survival and success of the cluster over the last century; however, innovation and new technologies are considered the way to address present and future challenges. Today, the cluster is experiencing increasing turnover, expanding exports and rising employment.

Introduction

The origins of the textiles and clothing cluster in Denmark can be traced back to the heath farmers of the 17th century who began to use local wool from the sheep on the heath to knit stockings for sale – this represented the early stages of textiles and clothing manufacturing. The production of knitted goods in Denmark is still concentrated in the Herning-Ikast-Brande district in the Jutland area of western Denmark. Surviving the industrial revolution, local people succeeded in setting up manufacturing and trading companies, providing the basic characteristics of today's textiles and clothing cluster in the area.

Figure 1: Textiles and clothing cluster in Herning-Ikast-Brande area

Source: *Andersen, Bøllingtoft and Christensen, 2006*

Cluster development

In the 1980s and 1990s, a large proportion of the cluster's manufacturing activities were relocated to low-cost countries in Europe. Today, the cluster consists mainly of large clothing companies and several small textiles companies, which are highly specialised in the field. These companies mainly focus on knowledge-intensive activities, design, fashion, logistics, as well as sales and marketing. The main products currently include fashion clothing, home textiles, hosiery and technical textiles.

Cluster organisation

In total, about 770 companies make up the cluster (773 in 2005, according to Andersen, Bøllingtoft and Christensen, 2006), which are mainly large clothing companies, with several small textiles companies. This figure corresponds to the equivalent of about 10% of all companies in the Danish textiles and clothing sector. The area of Herning-Ikast-Brande has been recognised in the international and national literature on company clusters, of both a theoretical and an empirical nature, describing it as a well-established cluster within the textiles and clothing sector. However, companies in the cluster do not necessarily consider themselves as being part of a cluster. This might be explained by the fact that the cluster does not have a formal network organisation and cooperation within the cluster is not formally organised.

While the cluster is characterised by a low degree of formal organisation and formal relations, the companies in the cluster have a high sense of belonging and knowledge of each other. All of the companies have an interest in investing in the development of the cluster area as they are eager to survive in business. They all demonstrate an ability to stay competitive in light of increasing global competition. In general, the companies aim to continue the textiles and clothing tradition in the area. Strong informal local networks exist among company managers and employees, which implies high levels of knowledge sharing. Moreover, the level of close business cooperation between companies is increasing. While neighbouring companies were formerly the main competitor for each other, this is no longer the case. Today, the main competitors for the cluster are external companies in the export markets. Thus, the existence of external competitors and associated challenges promote business associations within the cluster – this includes sharing advice concerning outsourcing, sharing of contacts and helping each other to find suppliers in countries like China, and deciding on a joint approach towards shared subcontractors in order to achieve large-scale advantages. Companies are aware of the importance of close business cooperation and networking in order to jointly meet the common external challenges. No company in the cluster can operate alone.

Textiles, fashion and lifestyle knowledge centres

The Teko Knowledge Centre is Scandinavia's largest design and business academy within the fashion and lifestyle industry and is located in Herning in western Denmark. More than 1,100 students from Teko are currently enrolled in vocational training or advanced placement (AP) degree programmes within the areas of fashion and textiles, as well as furniture and furnishings. Thus, the fostering and nurturing of competences for the industry has its centre within the Herning-Ikast-Brande cluster, providing good conditions for developing workers' competencies in close cooperation with the companies in the cluster, for example, through apprenticeship arrangements. Correspondingly, the companies benefit from the chosen location of the academy in terms of recruitment. Moreover, Teko and the entrepreneurial house Teko Seeds offer new knowledge and advice to companies, employees and entrepreneurs within the industry, based on the provision of a wide range of further education and consultancy services.

A Knowledge Centre for Intelligent Textiles is also located on the property of Teko, but is completely independent and funded through private finance. In this regard, intelligent textiles cover the following to main categories: wearable electronics as well as new materials, textures and surfaces. Founded in August 2005 by people from the industry, the aim of the knowledge centre was to prepare companies for an industry within intelligent textiles which is expected to expand rapidly within a few years. The centre aims to make the Danish textiles and clothing industry aware of the potential for business within this area and on contributing to creating growth and development based on expertise within innovative thinking. The knowledge centre collects and presents knowledge regarding combining textiles with electronics, information technology (IT), surface treatment, medicine and nanotechnology. By engaging in close dialogue with leading knowledge-based companies and other establishments abroad within this area, the centre functions as the hub of knowledge in Denmark.

The area of intelligent textiles has increased significantly in recent years, and several Danish textiles and clothing companies have already developed new products which combine textiles and technology; however, potential development in this area is still considered to be substantial. Apart from companies operating in the textiles and clothing sector, the knowledge centre works with various strategic partners, particularly experts from abroad. This liaison is mainly due to the fact that the Danish research environment for intelligent textiles is particularly small and that the centre arranges informal dialogue between companies and researchers.

Furthermore, Herning houses the headquarters of the trade association for Danish textiles and clothing companies, the Federation of Danish Textile and Clothing (*Dansk Textil- & Beklædning*, FDTC). Founded in 1895, FDTC has changed its core mission since then in accordance with changes in the external environment. Today, the companies' market position and competitive working conditions are some of the main elements on the association's agenda, as a result of the radical changes prompted by globalisation.

The level of public involvement in the Herning cluster is low. Currently, the cluster is supported indirectly through an entrepreneurial programme managed by the Regional Growth Authority (*Regionalt Væksthus*).

Employment and turnover

The textiles and clothing sector was one of the most important manufacturing sectors during the period of industrialisation in Denmark, and the entire Danish textiles and clothing sector expanded considerably through the protectionist 1930s. At that time, however, the sectoral share of employment in the Herning-Ikast-Brande district was relatively low. However, when operations in the sector began to stagnate in the rest of the country in the 1950s, and subsequently began to diminish, employment continued to increase in the Herning-Ikast-Brande district. Thus, the area experienced considerable absolute and relative increases in employment levels up to the early 1970s, reaching up to 40%–45% of total employment in the overall sector. This development signifies the first wave of change in terms of the location of activities in the textiles and clothing sector in Denmark, mainly from the Copenhagen area of the Danish island of Zealand in eastern Denmark to the Jutland area in western Denmark, which includes the Herning-Ikast-Brande district (Illeris, 2007). Today, however, the cluster faces renewed and difficult competition from the Copenhagen region, which is currently the centre of fashion and lifestyle trends. New companies look to Copenhagen and other urban centres in terms of location decisions, and existing companies decide to relocate.

Overall, about 15% of all employed people in the Danish textiles and clothing sector work in the Herning-Ikast-Brande region (Andersen, Bøllingtoft and Christensen, 2006, based on data from Statistics Denmark, 2005). Thus, employment in the region and the share of employment in relation to the entire sector have both diminished considerably since the 1970s.

Many cluster studies assess the strength of a cluster based on employment data; where, for instance, relative employment levels denote strength, and the development in employment data denotes the extent to which the cluster is considered to be shrinking and losing position or enlarging and gaining position. In such analyses, the textiles and clothing cluster in Herning-Ikast-Brande is identified as relatively strong, specialised but shrinking and losing position (Copenhagen Economics and Inside Consulting, 2005; Danish Enterprise and Construction Authority, 2003).

However, such analyses are inadequate as other indicators lead to different results. For instance, based on export data, the Herning-Ikast-Brande cluster can be characterised as strong due to its high and increasing export levels. Value-added growth could be regarded as another indicator as illustrated in Table 1.

Table 1: *Levels of value-added growth (%)*

Change in value added growth 1999–2002		**Change in value added growth 2002–2003**	
Sector	**Cluster**	**Sector**	**Cluster**
2.3	14.9	3.9	9.3

Sources: *Statistics Denmark, 2005; Andersen, Bøllingtoft and Christensen, 2006*

It is not only significant that the cluster has experienced positive value-added growth from 1999 to 2003, but that the cluster's value-added share in relation to the entire sector has also been increasing. While the entire Danish sector has experienced positive value-added growth from 1999 to 2003, the development is considerably higher in the Herning-Ikast-Brande cluster.

Not a significant amount of new statistical data exists relating to the cluster specifically, but one of the interviewees for this study believes that general development in the Herning-Ikast-Brande cluster in recent years has been parallel to the overall development in the Danish industry. While unequal development has been evident throughout the latest century between western Denmark where the Herning-Ikast-Brande area is located and eastern Denmark where Copenhagen lies, thus changing the relative strengths of one area compared to the other, development in the Danish industry seems more homogeneous today.

Table 2 below presents an overview of the development in total employment in the Danish textiles and clothing industry from 2003 to 2007.

Table 2: *Total employment in textiles and clothing industry, 2003–2007*

	No. of employees					**% change**				
	2003	**2004**	**2005**	**2006**	**2007** forecast	**2003–2004**	**2004–2005**	**2005–2006**	**2006–2007**	**2003–2007**
Textiles and clothing	17,278	16,934	16,691	17,211	17,650	-2.0	-1.4	3.1	2.6	2.2
Clothing	9,536	9,576	9,605	10,224	10,789	0.4	0.3	6.4	5.5	13.1
Textiles	7,742	7,358	7,086	6,987	6,861	-5.0	-3.7	-1.4	-1.8	-11.4

Source: *FDTC, 2007*

From 2003 to 2007, the development in total employment within the entire Danish textiles and clothing industry has been increasing by an average of 2.2% over the entire period. According to an interviewee from FDTC, this reflects that companies have succeeded in coping with the competitive challenges of the industry and finding a good niche, after years of facing difficulties and decreasing employment levels. However, this development stems from a relatively large increase in total employment in the clothing subsector by 13.1% during the period 2003–2007, with particularly significant annual increases in the 2005–2006 and 2006–2007 periods. The figure also takes into account a relatively large decrease in total employment in the textiles subsector by 11.4% over the five-year period, with the most significant annual decrease of 5% in 2003–2004, followed by a decrease of 3.7% in 2004–2005.

With regard to developments in total turnover, 2004–2005 marks a period of significantly increasing levels of overall turnover, following a period of decline (Figure 3). This is the case in both the clothing and textiles subsectors. Total turnover in the entire industry increased by 17.9% during the period 2003–2007, which takes into account an increase of 28.9% in the clothing subsector and no change in the textiles subsector.

Table 3: *Total turnover in textiles and clothing industry, 2003–2007 (in DKK million)*

	Total turnover					**% change**				
	2003	**2004**	**2005**	**2006**	**2007** forecast	**2003–2004**	**2004–2005**	**2005–2006**	**2006–2007**	**2003–2007**
Textiles and clothing	28,834	27,754	29,918	32,025	34,007	-3.7	7.8	7.0	6.2	17.9
Clothing	17,831	17,830	19,918	21,512	22,989	0	11.7	8.0	6.9	28.9
Textiles	11,003	9,924	10,000	10,513	11,018	-9.9	0.8	5.1	4.8	0

Note: DKK 1 = €0.13406 as at 23 May 2008.
Source: *FDTC, 2007*

Exports have increased significantly throughout the entire textiles and clothing sector over the last number of years, from a level of about DKK 7.5 billion in 1992 to DKK 25.7 billion in 2006 – in euros, this corresponds to an increase of about €1 billion to €3.4 billion (Table 4). Today, exports represent more than 80% of the total turnover in the textiles and clothing industry, which takes into account about 88% for the clothing subsector and 65% for the textiles subsector.

Table 4: *Total exports in textiles and clothing industry, 2003–2007 (in DKK million)*

	DKK million					**% change**				
	2003	**2004**	**2005**	**2006**	**2007** forecast	**2003–2004**	**2004–2005**	**2005–2006**	**2006–2007**	**2003–2007**
Textiles and clothing	22,157	21,433	23,797	25,703	27,476	-3.3	11.0	8.0	6.9	24.0
Clothing	14,737	14,957	17,294	18,895	20,289	1.5	15.6	9.3	7.4	37.7
Textiles	7,420	6,476	6,503	6,808	7,187	-12.7	0.4	4.7	5.6	-3.1

Note: DKK 1 = € 0.13406 as at 23 May 2008.
Source: *FDTC, 2007*

As shown in Table 4, 2004 represents a turning point for Danish textiles and clothing exports. From 2004 onwards, annual overall increases in total exports have been significant, particularly within the clothing subsector. The development within textiles is also significant, which mainly concerns a change of substantial annual decreases in total exports, to positive, yet relatively small, annual increases in total exports. One reason for the high level of clothing exports is the sectors ability to produce design products at a reasonable price.

The main export market for both Danish textiles and clothing is Germany. Table 5 below reveals the seven biggest export markets for the entire textiles and clothing sector and also for the two individual subsectors, in 2005 and 2006, and the development in the level of exports between the two years.

Table 5: *Seven biggest export markets of Danish textiles and clothing industry, 2005–2006 (in DKK million)*

	2005	2006	% change 2005–2006
Textiles and clothing			
Germany	4,835	5,102	5,5
Sweden	3,725	3,765	1.1
Norway	2,502	2,383	-4.8
Netherlands	1,978	2,276	15.1
UK	1,693	1,936	14.4
Finland	1,528	1,605	5.0
Spain	957	1,204	25.8
Other countries	6,579	7,432	13.0
Total	23,797	25,703	8.0
Clothing			
Germany	3,647	4,066	11.5
Sweden	3,206	3,165	-1.3
Norway	2,054	1,920	-6.5
Netherlands	1,620	1,894	16.9
UK	1,401	1,462	4.3
Finland	928	1,118	20.5
Spain	869	1,085	24.8
Other countries	3,569	4,185	17.3
Total	17,294	18,895	9.3
Textiles			
Germany	1,188	1,036	-12.8
Sweden	765	818	6.9
Norway	519	600	15.5
Netherlands	418	513	22.7
UK	448	463	3.2
Finland	358	382	6.6
Spain	286	317	10.8
Other countries	2,519	2,681	6.4
Total	6,501	6,808	4.7

Source: *FDTC, 2007, based on Statistics Denmark data – combined nomenclature*

Textiles and clothing imports overall have also increased substantially over the 2003–2007 period – but not in relation to textiles by itself. Moreover, imports of clothing in Denmark were, as in most other western European countries, higher than exports during this period.

Table 6: *Total imports, 2003–2007 (in DKK million)*

	DKK million					% change				
	2003	**2004**	**2005**	**2006**	**2007** forecast	**2003–2004**	**2004–2005**	**2005–2006**	**2006–2007**	**2003–2007**
Textiles and clothing	24,616	25,169	26,000	28,179	29,919	2.2	3.3	8.4	6.2	21.5
Clothing	16,671	17,593	18,344	20,919	22,965	5.5	4.3	14.0	9.8	37.8
Textiles	7,945	7,576	7,656	7,260	6,954	-4.6	1.1	-5.2	-4.2	-12.5

Note: DKK 1 = € 0.13406 as at 23 May 2008.
Source: *FDTC, 2007*

Pressures from globalisation and restructuring

Starting in the 1980s, companies in the Herning-Ikast-Brande cluster seized outsourcing as an opportunity to proactively respond to globalisation and the increasing competitive pressure from companies in low-cost countries. In fact, Danish companies were among the first to move activities to other European countries – first to Portugal and Poland, then to the Baltic countries of Estonia, Latvia and Lithuania, and finally to Belarus, Bulgaria, Russia and the Ukraine, as well as to countries in the Middle East and Asia. The first activities exposed to relocation were the sewing processes, which were subsequently followed by folding, packing, cutting, hosiery, weaving and dye works. Thus, throughout the 1990s, the Herning-Ikast-Brande cluster went through a period of significant relocation of labour-intensive work processes to countries with lower wage costs, which consequently led to a period of massive restructuring in the area.

The increased global competitive pressure and the subsequent splitting up of value chains, as well as massive outsourcing, posed severe challenges for the sector and resulted in an employment decrease by more than 80% from 1975 to 2000. Rather than outsourcing, many companies simply ceased to undertake manufacturing and instead started up new business concepts and structures, based on sub-supplying from abroad, and focusing on design, sales and logistics. Companies were faced with new challenges in terms of survival, development of new business structures and organisation, and retention of the knowledge-intensive jobs, particularly within the clothing subsector. The specific responses of companies in the sector to the various new challenges included an increased focus on quality of products, design, sales and logistics, closer relations between suppliers and retailers, and the diffusion of exports markets.

Although the sector experienced a considerable decline in terms of employment levels, companies in the sector eventually succeeded in increasing exports by about 120% and total turnover by up to 105% from 1990 to 2003. Today, this positive economic development continues. As described previously, employment levels have also started to increase once again. As part of their business strategies, most companies currently focus on producing high-value products, design, marketing and logistics, and on expanding and increasing volume of production by acquisitions and mergers. Many companies have also chosen to outsource certain activities. Thus, the combination of design and sound business activities forms the core of the clusters' current strengths.

Companies in the cluster have received recognition for their ability, at an early stage, to adapt to and manage globalisation and any associated challenges by manufacturing products at locations where this is most efficiently done. They were also recognised for their ability to move up the value chain and integrate global production possibilities within their own value-shaping processes (Andersen, Bøllingtoft and Christensen 2006).

Impact of restructuring on employment

As already mentioned, the dramatic change in the Danish textiles and clothing industry led to a significant decline in total employment. However, contrary to expectations, a study by Olsen, Ibsen and Westergaard-Nielsen (2004) finds that, although employment in the industry dropped by more than 80% from 1975 to 2000, a surprisingly large number of employees who left their jobs, or were laid off, were rehired within the same industry by the mid-1990s. After this point, the majority of these workers were able to find jobs in other industries. Moreover, only a small number of people from the textiles and clothing industry entered unemployment compared with parallel situations in other manufacturing industries, while a larger share of textiles workers entered retirement and education. In the late 1990s, the former Ringkøbing county in western Denmark sent a questionnaire to people who had left the textiles and clothing industry during that particular decade. According to this survey, mainly those who had no formal education or who had only completed compulsory education remained unemployed or entered early retirement (*efterløn*).

Concurrently with this development, the inflow of people into the textiles and clothing industry has declined sharply. Hence, based on these findings, the Ringkøbing study argues that the reallocation problem in the textiles and clothing industry has been solved through a natural ‘phasing-out’ process and the ability of employees to find work in other sectors of the economy. Moreover, the gradual decline in recruitment of new and younger employees during the 1990s helped to alleviate the situation.

Main challenges

The biggest international challenges perceived concern trade liberalisations and economic developments in China. However, with regard to trade liberalisation, companies in Denmark take a positive stand towards increased liberalisation and try to seize it as an opportunity rather than a direct threat to business. Despite this outlook, it has become increasingly difficult for companies in the Herning cluster to survive and remain competitive; this struggle is expected to continue. In this regard, smaller companies are particularly vulnerable, whereas larger companies can manage to survive and grow more easily – for example, by seizing opportunities in foreign markets. This is reflected in a general tendency towards enlargement of companies through mergers and the establishment of subsidiary companies at home or in other countries.

One challenge or risk described in the interviews carried out for this study is the propensity for Asian companies – from China and India – to establish a presence in Denmark, employing workers from the country of origin, exploiting local knowledge and know-how, as well as imposing a significant competitive challenge in local and nearby markets. However, this risk is not considered by Danish companies as particularly new or threatening, since the long-existing parallel opportunity has not been seized by, for example, companies from Greece or Portugal. Furthermore, Danish companies believe that the eventual consequences of such a risk are likely to be exaggerated. The copying and exploitation of know-how and local knowledge is not easily achieved, nor are Asian companies expected to be able to produce and match the taste for products and quality demanded in Europe in the mid and high-end markets. Moreover, general language and regulatory differences between the countries will most likely impose significant barriers to the realisation of the new threat from Asian companies.

National challenges also concern the ‘speed of fashion’, which implies increased numbers of yearly collections and changes in customer loyalty. Moreover, this ever-increasing competition poses a challenge in that it forces companies in the cluster to be innovative – namely to stay competitive in the global market, and preferably in a good position. To do so, and to achieve continued growth, companies have to adopt new competitive parameters. As previously described, the combination of design and sound business represents the core of the clusters’ current competitive strength – adding innovation is generally considered the key to continual success. Whereas sound business practice was seen as the main reason behind the survival and growth of the textiles and clothing cluster throughout the 19th century, research, innovation and new technologies are widely perceived as crucial for dealing with present and future challenges.

Moreover, the ability to follow and manage the flow of a product from initial design to the final customers has become an important competitive parameter. Accordingly, one of the challenges highlighted in the 'Teko analysis 2007' (Teko, 2007) – an annual analysis of the main trends and challenges facing Danish companies carried out by the Teko Knowledge Centre – is related to retail and the importance of perceiving all activities as part of integrated value chains, with an ultimate focus on the end-buyers. To be specific, interaction with retailers is a new challenge, as it has become increasingly important to ensure good relations with retailers, in order to handle the increasing power of large retail chains and ensure adequate competences among employees in retail stores.

Innovation

According to an interviewee for this study, companies in the cluster are increasingly aware of the need for user-driven and technological innovation, and of the possibilities of intelligent textiles. Some companies embrace such opportunities, while others are more reluctant. In general, textiles companies are more open towards intelligent textiles and technological innovation than clothing companies, which is mainly seen as reflecting their markets and customers. Thus, intelligent textiles form a more obvious path for innovation within textiles, while clothing companies are more focused on design. Another interviewee highlights that the focus on innovation very often depends on the visionary outlook of individual people in top management.

Moreover, innovation is thought to be part of the well-known investment problem: (lack of) willingness to invest when business is flourishing because of little incentives, and (lack of) willingness to invest when business is down because of scarcity of resources. As the sector is currently performing particularly well, the interviewees believe that now is the time to be more focused on innovation and investment. However, considering the reality of the situation, a company manager states: 'Innovation will not be prioritised before the positive development changes – when companies are forced to create new innovative products' (Teko, 2007).

The most recent regional business development strategy 2007–2009 for the Central Denmark Region located on the north-central portion of the Jutland peninsula highlights the textiles and clothing sector as an important economic area of the region with increased potential for innovation (Region Midtjylland, 2007 and 2007a). Likewise, the interviewees for this study assess the general innovation potential in the region to be high. However, they consider that the area must adopt an overall stronger focus if the potential for development is to become a reality and materialise into the new products and solutions of tomorrow. The Teko analysis 2007 concludes with caution that innovation is fostered by mutual inspiration; in this regard, companies would benefit from increased dialogue with each other and external partners. Teko suggests that the cluster should initiate multi-networking with a joint focus on innovation.

Within the Herning-Ikast-Brande cluster, FDTC, Teko and the Knowledge Centre for Intelligent Textiles support innovation through network initiatives, and all three have marked innovation as a key focus and aim. In this case, FDTC has developed an innovation concept for textiles companies, and a concept for innovation in the clothing subsector is underway. In addition, FDTC is considering setting up an innovation centre.

Localisation strategy

The activities carried out on location today in the Herning-Ikast-Brande area are those which benefit from proximity to home markets and those which are knowledge intensive – activities that are related to design, fashion, logistics and marketing.

Location decisions in the cluster are usually defined by tradition. Most companies currently with headquarters in the cluster decided to locate in the area for reasons of family history rather than strategic considerations. In these cases, most often the founder of the company was living in the area when the company was set up. However, today, not many companies are moving to the area. In general, the cluster faces difficult competition from the Copenhagen area in the east of Denmark, which is generally seen as a more attractive location for companies, since it is the country's capital city and centre of fashion and lifestyle trends. The decline in the number of companies can be explained by spin-offs, mergers and closures.

The concentration of companies in the Herning-Ikast-Brande area is explained by history and craft tradition. In the 1980s, this concentration was particularly important to the companies located in the cluster, as it attracted many potential customers to the area. At that time, customers often stayed in the area for up to a week in order to get a good overview of the clothing collections of the many companies located there (Andersen, Bøllingtoft and Christensen, 2006). As the cluster's production activities have been relocated, the visits of potential customers have become more infrequent. This is also the case in relation to sales activities on location, as sales have since been undertaken by representatives and agents in the respective markets.

Access to know-how and a strong cluster brand based on well-established and well-renowned companies and Teko's good reputation are the key features that make the cluster attractive today from a location point of view.

Skills levels of workers

As shown in Table 7, the educational level of workers in the Danish textiles and clothing industry has been increasing since 1980. Quite notably, the percentage of unskilled workers with only compulsory education has declined considerably, both within textiles and clothing, while the percentages of workers with secondary school certificates, vocational education and training and higher education degrees have all increased considerably.

Table 7: *Educational composition of workers in Danish textiles and clothing industry, 1980–2000 (%)*

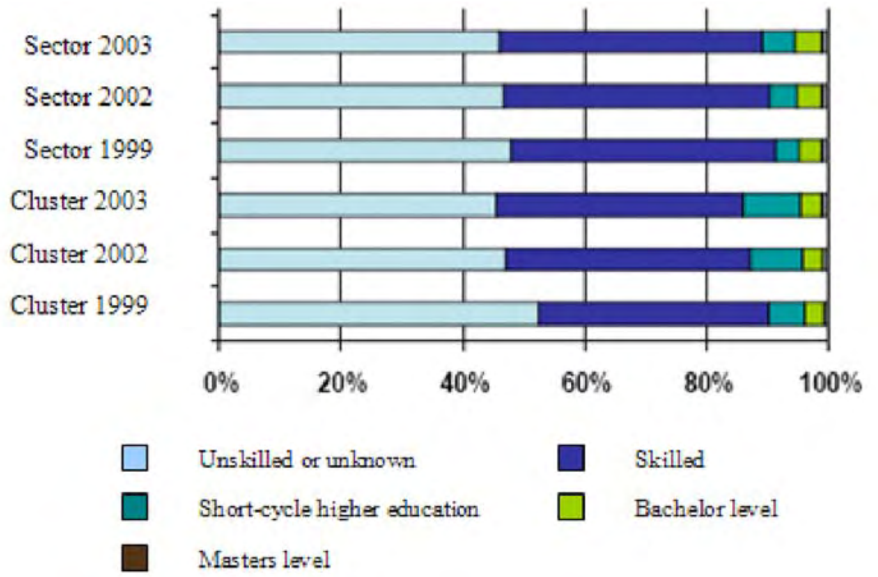
	Clothing		Textiles	
Level of education	**1980**	**2000**	**1980**	**2000**
Compulsory education	72	42	73	50
Secondary school education	3	17	5	13
Vocational education and training	22	31	17	28
Higher education	3	10	5	9
Total	100	100	100	100

Source: *Olsen, Ibsen and Westergaard-Nielsen, 2004*

The latest statistical overview of the development of the educational composition of the workforce in the cluster, compared with the development in the Danish textiles and clothing sector in general, includes data from 1999, 2002, and 2003 (Figure 2).

Both at national and cluster level, the share of unskilled workers has been decreasing from 1999 to 2003 – however, the relative change for the cluster is larger than the average for the textiles and clothing sector overall. This change corresponds primarily to an increase in the proportion of people with a short-cycle higher education degree.

Figure 2: *Educational composition of workers at cluster and national levels, 1999–2003*



Note: Sector refers to the entire textiles and clothing sector; Cluster represents the Herning-Ikast-Brande companies.
Source: *Statistics Denmark, 2005; Andersen, Bøllingtoft and Christensen 2006*

According to the interviewees, the trend towards hiring more people with a higher educational background and hiring fewer unskilled workers has continued since 2003. This employment strategy reflects the change of core functions due to the transformation of the sector since the late 1980s and highlights the need for increased 'professionalism' and an academic 'lift' in the sector. The latter trend is also reflected in the fact that companies in the cluster are hiring professional managers rather than people who have been in the business for many years.

Recruitment

The positive development of rising employment levels is met by increased recruitment problems. This is partly associated with demographics, given that only a certain amount of people were born in a particularly year, and a historically low unemployment level. In general, however, it has also become increasingly difficult for companies in the cluster to attract students and other employees to the area. Recruiting people from other areas of the country is generally very difficult, while many young people prefer to move towards Copenhagen and other urban centres, both to study and work. Teko is also exposed to competition from educational institutions in Copenhagen, despite its strong brand and reputation as a knowledge centre, as well as modern and high-standard facilities. In recent years, a higher number of foreign students have been coming to study at Teko, which is highly welcomed by companies in the textiles and clothing industry, as employers associate an inflow of new knowledge and ideas with foreign students.

As a result of the challenges associated with recruitment, companies in the region are increasingly moving activities away from the cluster to urban centres – for example, to Aarhus, which is the second largest city in Denmark, situation on the eastern side of the Jutland peninsula.

Training strategy and skills needs

The identification of main trends and challenges facing textiles and clothing companies in the Teko analysis 2007 serves as a basis for developing recommendations and providing a foundation for assessing skills needs and adjusting educational programmes.

According to the Teko analysis, companies are aware of the importance of retail; thus, the focus on retail, managing sales and sales development has never been stronger. For example, the Danish-based clothing company Bestseller, with headquarters in the Brande area of the cluster, is one of the largest fashion companies in Denmark and in Europe. The company has even established its own retail academy, Bestseller Academy, which was set up as a result of the company's strong focus on retail.

As regards the consequences for skills needs, the focus on retail implies a demand for sales and marketing competences among workers. In addition, companies are demanding strong communication skills, even among designers who are often involved in sales activities. Moreover, professional handling of communication is seen as crucial due to the perceived importance of a company's image and branding.

Following the wave of outsourcing and restructuring, a lot of knowledge was lost from companies in the cluster, in particular knowledge about materials and the right choice of materials which is vital for the quality of products. This loss of knowledge has been identified as a general skills need in the cluster. Today, the sector employs many designers, with a high level of knowledge and expertise in the area of design, but with little knowledge about the properties of materials.

As a consequence, training courses on materials and the basic, core knowledge of textiles are in demand. Such training is supported by what can almost be labelled a trend focusing on the importance of basic skills and 'going back to basics'. In this regard, the Teko analysis suggests seeking inspiration from eastern European countries which still have high levels of professional expertise.

In terms of the changes brought about by outsourcing and restructuring, a general trend towards hiring more workers with a higher educational background and hiring fewer unskilled workers can be observed.

Companies highlight the importance of specialist competencies within all parts of the value chain. Moreover, companies emphasise the need for skills related to high-level technical expertise, but find it difficult to recruit people with knowledge and specialist expertise in the fields of technologies and textiles. Apart from specialists, companies are also looking to hire workers with general competencies as an answer to current and future skills needs. According to the Teko analysis, companies consider it important to take a more analytical approach to the everyday challenges facing the sector, and consequently want to recruit individuals with higher-level 'general' skills and knowledge.

Conclusion

What makes the Herning-Ikast-Brande cluster particularly interesting is the fact that it has been deemed 'dead' several times, but has continued to find solutions to challenges posed by external developments in the wider economy. The cluster has managed to carry out large-scale restructuring in the textiles and clothing sector and has successfully redefined itself by developing new business models and structures. Moreover, the cluster has managed to change focus towards sales, design and logistics, and increasingly towards innovation. While sound business practice has been regarded as the main explanatory factor for the survival and success of the cluster as a whole throughout the last century, innovation and new technologies are widely perceived and acknowledged as the answer to present and future challenges.

Overall, the companies in the cluster seem to almost insist on perceiving globalisation and trade liberalisations as opportunities rather than threats. This determination and optimistic view might be the underlying reason why the cluster today experiences increasing turnover, as well as expanding export and employment levels.

SWOT analysis

Table 8 outlines the main strengths, weaknesses, opportunities and threats (SWOT) that the Herning-Ikast-Brande cluster faces.

Table 8: *SWOT analysis*

Strengths	Weaknesses	Opportunities	Threats
• Good brands based on know-how and the location of large, well-known companies • Renowned knowledge centres providing education, training, support for entrepreneurs and innovation are located in the area • Strong local networks, community identity and sense of belonging • High level of knowledge sharing and cooperation • Good dialogue between centres and companies to ensure that services match demand • Desire to survive, expand and exploit opportunities provided by globalisation • Strategic and proactive approach to relocation of activities and restructuring • Ability to combine design efforts with sound business practices	• No formal cluster organisation • Limited national expertise on high-tech areas (intelligent textiles) • 'Basic' knowledge of materials is lost due to relocation of manufacturing activities	• Inflow of foreign students could bring new knowledge and ideas to companies • Trade liberalisation providing new global market opportunities for companies • User-driven innovation • Technological innovation • Creation of innovation networks	• Increased domestic (Copenhagen area) and international competition (Asia) • Companies are not moving to the cluster but to urban areas • People are not moving to the cluster but to urban areas (recruitment problem) • Asian companies establishing a presence in the cluster and in key markets • Lack of investment in research and development (R&D)

Source: *Based on interview statements with company representatives, 2008*

Contacts

Federation of Danish Textile and Clothing (FDTC)
Website: **http://www.textile.dk/**
Address: Birk Centerpark 38, DK-7400 Herning, Denmark
Phone: +45 97 11 72 00
Fax: +45 97 11 72 15
Email: info@textile.dk

Teko Knowledge Centre
Website: **http://www.teko.dk**
Address: Birk Centerpark 5, DK-7400 Herning, Denmark
Phone: +45 97 12 70 22
Email: teko@teko.dk

Sources

All links accessed on 21 May 2008.

Articles and reports

Andersen, P.H., Bøllingtoft, A. and Christensen, P.R., *Erhvervsklynger under pres. Globaliseringens indflydelse på dynamikken i udvalgte danske erhvervsklynger*, Aarhus, Aarhus School of Business, Department of Management, 2006, available at: **http://www.hha.dk/man/cmsdocs/core/publications/erhvervsklynger.pdf**

Copenhagen Economics and Inside Consulting, *Udgangspunkt for vækst i Region Midtjylland*, Copenhagen, 2005, available online at: **http://www.ebst.dk/file/3635/udgangspunkt_for_vaekst_region_midtjylland.pdf**

Danish Enterprise and Construction Authority, *Kortlægning af danske kompetenceklynger*, Copenhagen, 2003, available at: **http://www.ebst.dk/file/1589/kortlaegning_kompetenceklynger.pdf**

Federation of Danish Textile and Clothing (FDTC), Various statistics, available online at: **http://www.textile.dk**

Federation of Danish Textile and Clothing (FDTC), *Annual Report 2006*, Herning, 2007, available online at: **http://www.textile.dk/Brancheinformation/Brancherapporter/Aarsberetning2006**

Illeris, S., *Clustering, innovation and the challenges of globalisation: The clothing district of Herning*, Denmark, Roskilde, Roskilde University, 2007, available online at:
http://www.regional-studies-assoc.ac.uk/events/lisbon07/papers/Illeris.pdf

Olsen, K.B., Ibsen, R. and Westergaard-Nielsen, N., *Does outsourcing create unemployment? The case of the Danish textile and clothing industry*, Aarhus, Aarhus School of Business, Department of Economics, 2004, available at: **http://www.hha.dk/nat/cmsdocs/ccp/downloads/textile_and_clothing4.pdf**

Region Midtjylland, *Fornyelse og vækst i en international vækstregion: Handlingsplan 2007–2008*, Viborg, 2007, available online at: **http://www.rm.dk/files/Regional%20udvikling/Analyser%20og%20publikationer/handlingsplan.pdf**

Region Midtjylland, *Fornyelse og vækst i en international vækstregion: Erhvervsudviklingsstrategi 2007–2009*, Viborg, 2007a, available online at:
http://www.rm.dk/files/Regional%20udvikling/Analyser%20og%20publikationer/handlingsplan.pdf

Teko Knowledge Centre, *TEKOanalysen 2007* [Teko analysis 2007], Herning, 2007, available online at:
http://www.teko.dk/

Websites

FDTC website: **http://www.textile.dk**

Teko website: **http://www.teko.dk**

Statistics Denmark: **http://www.dst.dk/HomeUK.aspx**

Interviewees

Section manager FDTC, Aage K. Feddersen

Manager of Knowledge Centre for Intelligent Textiles at Teko, Hanne Troels Jensen

Danish Technological Institute (DTI)

EF/08/47/EN 3

