IN-DEPTH ASSESSMENT OF THE SITUATION OF THE T&C SECTOR IN THE EU AND PROSPECTS

TASK 4: ASSESSMENT OF PAST OR ONGOING RESTRUCTURING AND MODERNISATION PROCESSES IN TEXTILE/CLOTHING ENTERPRISES IN 5 REGIONS OF THE EUROPEAN UNION. ANTICIPATION OF FUTURE MODERNISATION AND RESTRUCTURING PROCESSES.

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LIST OF ABBREVIATIONS

The following abbreviations occur more than once in the report. All other abbreviations are explained in the text.

ATC: Agreement on Textiles and Clothing

BAT: Best Available Technology

BREF: BAT reference documents

CAP: Common Agricultural Policy of the EU

CIS: Commonwealth of Independent States

CITYC: Centre of Information about Textile and Clothing Industry, A.I.E.

CMT: Cut, make, Trim

COMECON: Council for Mutual Economic Assistance

CSR: Corporate Social Responsibility

DM&T: Dansk Mode og Textil (Danish Fashion and Textile)

EFTA: European Free Trade Agreement

ERDF: European Regional Development Fund

ERP: Enterprise Resource Planning

ESDI: Escola Superior de Disseny

ESF: European Social Fund

ETS: The Emission Trading System

FP7: Seventh Framework Programme

GMO: Genetic modified organisms

IPPC: The Integrated Pollution Prevention and Control

ICT: Information and Communication Technology

ITA: Institut für Textiltechtil

KTU: Kaunas Technical University

LATIA: Lithuanian Apparel and Textile Industry Association

LVMH: Louis Vuitton Moet Hennessy

NKC: Nederlandse Kleding Conventie

NMS: New Member States

NUTS: Nomenclature of territorial units for statistics

PPE: Personal Protective Equipment

PPR: Pinault-Printemps la Redoute

REACH: The Registration, Evaluation, Authorization and Restriction of Chemicals

RTO: Research and Technology Organisation

TEXFOR: Confederation of the Textile Industry in Catalonia

T&C: Textile and Clothing

TFI: Teppich Forschungs Institut

TNO – Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek

SEVK: Greek Textile Industries Association

VAPRO: Vakopleiding Procestechnologie. Education on process technologies

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EXECUTIVE SUMMARY

The objective of this report is to provide an assessment of past or on-going restructuring and modernisation processes in textile and clothing enterprises in five textile and clothing manufacturing regions in the EU. We will present the drivers leading to restructuring, the effects on the industry, the business models that a company can implement as a strategy and the responses from other stakeholders. Moreover, it provides evidence of the impacts of restructuring processes e.g. business gains and employment levels. The cases have been selected at the level of textile district (Herning in Denmark), region (Catalonia in Spain), groups of regions (Northern Greece) or country (Netherlands and Lithuania) according to the relevance of the textile and clothing industry for the case.

Another objective was to analyse framework conditions and identify best practice measures and initiatives at company, regional and national level, concerning anticipation of change and management of modernisation and restructuring processes. The aim is that these examples may inspire policy actions and initiatives in other regions in Europe.

Restructuring processes

Restructuring processes can be defined in different approaches and levels of aggregation. At the company level, two different analysis are relevant:

- a financial approach sees restructuring as a significant modification to the structure, overall organization and assets of a company. It usually happens when the company is in a difficult financial situation. A deeper analysis points to restructuring of assets, debts, ownership, shareholders structure and revenue model. This may include acquisition or disposal of activities.
- a managerial analysis focuses on changes in business model, changes in position in the value chain, specialization or diversification, integration or disintegration of (industrial) activities.

In this study, as we combine an analysis of financial data and of company adjustment, we shall use both financial indicators and economic adjustment in terms of business model. We shall also use the term of modernization, which we shall define in the narrow sense of modernization of equipment.

Typology of restructuring

The analysis is inspired by the work done by Massey and Meegan "The anatomy of job loss"[1]. They propose the following typology to describe restructuring:

Disengagement: implies a stop of activities either by liquidation of the firms (and redeployment of assets in other activities), by bankruptcy or closure. The term disengagement is coined to describe a departure from the industry as a whole (closure or shift to an entirely different sector, such as real estate activities), and does not refer to a

[1] Massey, D and R. Meegan (1982). The anatomy of Job Loss. Methuen, London.

changing position in the value chain. This phenomenon is visible in the data of natality/mortality of firms. In the cases we have added selective examples of typical closures of companies.

For companies surviving, there are three quantitative patterns on the basis of Massey and Meegan:

Resist: Resistance refers to companies that maintain a stable or slightly changed turnover, and survive by cutting costs, improving processes, adding some value to products and services. These companies experience a fundamental change in their position in the value chain with the capacity to maintain its profitability, equity base and solvency ratio.

Recovery: Recovery refers to a decline in all indicators (most notably in turnover) but also to a recovery in sales and profitability as well as a stabilization or even increase in employment. We assume that this pattern could imply a change of the company's position in the value chain. Hence the recovery pattern may point to a change in strategy.

Downsize: The pattern of decline within companies is one of structural decline over the entire decade, with sometimes an acceleration of decline because of the effect of external drivers such as globalization or the financial crisis. Downsizing is visible in company data by a decline in sales and employment. The company adjusts its production capacity to its declining market share. It is compounded by a poor or no profitability over the period and an erosion of the equity base and the solvency ratio.

Business models

The responses of companies to the different patterns shall be examined in the five regional cases. These responses are often changes in business model of the company. The following business models have been identified:

- **Changing role in the value chain** – companies change, reduce or expand their core activities along the value chain, for instance by changing from being a production company to outsourcing production and focusing on design, logistics, and marketing.
- **Specialization and niche products** – focusing on products and/or production methods that increase the added value and are (to the same extent) less subject to competition from manufacturers using cheap labour to produce for the mass market. Examples are high-quality or environmentally friendly products or use of specialized sewing techniques.
- **Two string strategy** – combining two production locations, usually producing large volumes in Asia with longer delivery times (and lower costs) and small to medium volumes in Europe (or Northern Africa) with shorter delivery times, allowing for just-in-time delivery (and often higher costs) e.g. bespoke curtain production in Europe and ready made curtains in India.
- **Co-contractors, hybrids and new distribution channels** – finding new ways of selling products. Co-contractors add services to the sub-contracting work such as co-design; hybrids operate their own label while at the same time acting as sub-contractor to another branding company. For example new distribution channels may include setting up own shops or selling on-line.
- **Consolidation -** maintaining a position in a shrinking market by taking over competitors and combining increased market share with economies of scale. This is sometimes accompanied by rationalization in the direction of reduction of capacity or improvement of productivity.

Drivers of change in Europe

We assume that strategies are a response to drivers of change that we describe in chapter 2. These drivers were also identified in the general survey report (Task 1). Drivers such as globalisation or financial crisis concern all industries in general. Drivers such as technology, consumer demand or changes in distribution channels are more specific. Policies and regulation can be generic or specific to the industry.

Of course, the responses have effects. The business models imply a dynamic of change that may lead to survival of a firm and often a stable employment at the level of the company (not necessarily at the level of the region but at a global level). Resistance, which implies no change in the business model, may also lead to the survival of the firm, but goes along with declining employment. Downsizing delays the demise of the firm but brings substantial reduction of employment, while disengagement leads to an extinction of companies and reduction of employment.

In Europe, restructuring during 2006-2011 has occurred as consequence of a combination of trends.

First of all, globalization is historically a dominant driver in the textile industry. The industry has first suffered from the rise of new production countries, but it has also taken the opportunity to transfer production to other countries, taking advantage of the low cost of labour. In more recent years the European industry profits from access to countries with emerging economies. In order to understand the impact of globalization it is useful to distinguish between three components: globalization of production, globalization of taste and demand and regional integration (including European integration).

Globalization of production pushes companies to face challenges in terms of offshoring and outsourcing, value chain control and internal restructuring. Globalization of taste and demand is related to increasing buying power in developing countries and liberalization of trade. This trend favours companies with an established global brand, and pushes them towards organizational modernization as for example setting up licensing and franchising arrangements. The globalization of demand may contribute to the internal polarization of the industry. Indeed larger companies are better able to benefit from global markets. Especially in the clothing industry, we can see that several large size companies have emerged such as Burberry, Hugo Boss or Benetton. Initially, these were mainly manufacturers which later transformed into brand and retail companies. Regional integration is often an overlooked dimension of globalization. Since 2000 the EU has expanded from 15 to 27 members but even by 2000, the successive waves of EU accession were not fully assimilated in the industry. For the new member states the opening up of their markets coincided with the globalization of markets.

Secondly, looking at consumer demand and distribution channels, there are a number of long term trends such as increased power of retailers, but also a response from manufacturers to set up their own retail chains. There has been a growth in technical textiles and in the demand for more complex products. However, volume markets remain commodity oriented. In order to serve those companies, there is a trend towards either delocalizing production or shifting to “fast fashion” - the latter aspect possibly leading to re-localization of production. Changes in the distribution channels also impacted on the sector. Increasing power of consumer retail chains, verticalization, E-commerce, service providers and merchandising are all relevant trends that influence the path of modernization and restructuring of the sector.

The third driver of restructuring is technological change. In this study two types of technologies have been analyzed: ICT and production technologies. The technologies themselves have been described in the report on innovation, in this task only aspects related to restructuring are addressed. In terms of ICT the main consequence is that it has lowered dramatically transaction costs and transaction times. The relative impact of reduction of costs and time is probably higher over longer distances and for commodity products. In manufacturing technology,

textiles and clothing have taken diverging paths. Clothing technology has hardly evolved since 1990, in textiles incremental improvement of technologies has continued leading to higher productivity, higher efficiency at lower volumes, and lower set-up times and costs.

Fourthly, political and regulatory changes , have deep influence in shaping the textile and clothing sector in its modernization and restructuring process. Some, such as liberalization of trade and trade regulations, led to different waves of restructuring caused by the increase of pressure of external competition. Another major area of policy is fostering a more sustainable development. This ambition is expressed in increasing the standards to operate for companies in terms of protection of the consumer (product policy) and protection of the environment (process oriented policies). These policies have an internal dimension as they regulate the conditions to put products in circulation in the single market and also have an external dimension as they apply to imported products.

The final and fifth driver is the financial crisis. The crisis hit the T&C industry as a whole and resulted in a significant decline in employment and production in parallel with drops in imports (11% down from 2008) and exports (17% down) starting in 2008. Both the textile industry and the clothing industry were affected, however the textile industry experienced a more significant decline, just like intermediate products in other industries did.

Dynamics of restructuring

This analysis conveys a number of messages relevant for the analysis of the regional cases. In the first place an important dynamic of decline is related to the reduction in the number of companies. The number of companies declined in Spain (also in Catalonia) and Lithuania and probably also in Northern Greece. It explains a large part of restructuring in terms of turnover and production value as well as employment. In the Netherlands, the number of companies has increased slightly, but even with a stable number of firms there is job loss. Companies closing are on average larger than start ups. Examining the impact of business demographics on employment, company closure is the largest factor contributing to job losses in the textile and clothing industry. In order to understand the dynamics we looked at companies that stopped activities in the last decade which are influential or typical for the restructuring processes in Europe.

In the second place restructuring entails a downsizing of surviving firms partly by reduction in production volume and sales and partly by rationalizing employment at stable production output. The first trajectory is one of decline, the second one of resistance, however growth or recovery is also possible. What is clear is that almost all companies were hit by the 2008/09 crisis, in most instances after years of stability, sometimes after years of growth. The crisis led to a reduction in turnover, employment, profitability, financial assets and ability to resist. What is striking is that the capacity to resist of a majority of firms is still strong. Nevertheless, the potential job loss resulting from the closure of the 20% weak firms is considerable. This is a point to take into account when addressing the cases.

In the third place restructuring may mean consolidation. While consolidation is a major trend in Europe, it is a trend that occurred only in the Dutch case. In this region we see clear consolidation amongst the largest firms in textiles, especially carpets, and we see leading players in the top 20 in clothing and textiles. In all other cases no company is present in the top 100 of the industry and there is almost no consolidation, not even amongst SMEs.

Findings from the cases

Catalonia

The Catalonia case is a model of classic restructuring with signs of disengagement of companies in a movement of downsizing and shifting to downstream activities, mainly trading and retailing. The Catalonia textile industry has

remained for too long in commodity markets. The shift to products with higher technology content has been made by the research centres, but much less by the industry. The industry has with some success shifted to setting up trading activities through new distribution channels. Different types of business models were identified in the Catalonia case, but especially the changing role in the value chain was evident with outsourcing of either the whole production or as a two string strategy where only part of the production was outsourced. Specialization was in Catalonia especially centred on design and in one area (Olot) also on 'green solutions'. An interesting point in the Catalonia case is that what was previously seen as a cluster with collaboration and untraded interdependencies between companies has been replaced by an agglomeration of companies with little collaboration – due partly to the changing role in the value chain.

Herning (Denmark)

The Herning case shows an industry surviving after a restructuring process that has lasted several decades. The focus of the Danish industry is to maintain niche production in Herning and to deepen the technology content of its products. Hence it focuses on markets with high barriers of entry. Volume production has been offshored or outsourced. While Asia was the main recipient of this strategy, it seems now that in order to limit risks and the use of working capital, parts of the production is re-localized to Eastern Europe in what has been labelled a "two string strategy". In Herning, specialization and niche production has been based on specific product performances, quality and green solutions. Herning T&C companies have been highly export oriented for a long time due to the limited home market and this combined with the so-called 'flexicurity' labour market model makes the Herning T&C sector more 'restructuring friendly' than for example Lithuania and Catalonia.

Lithuania

Lithuania has only to a very limited extent used the two string strategy path, but has instead been a beneficiary of the "two string" strategy from Scandinavian companies. Indeed, Lithuania has been developing out of a strategy of subcontracting to a position of comakership. Specialization and modernisation have also been key factors in the business models in Lithuania. Lithuanian companies have been active in seeking clients in several old member states, focusing on products with higher value and technical content. The close collaboration between the T&C companies has been a competitive factor and has also resulted in the rise of agencies seeking new opportunities for the Lithuanian T&C companies, especially in the Scandinavian countries. The business association has played an active role in doing so.

The Lithuanian companies have gone from being extremely large companies in the Soviet times, to a high number of small and medium companies. Many of the T&C companies have their origin in these large Soviet companies. Foreign investments has played a major role in Lithuania and many of the companies have foreign owners and partners. One of the competitive advantages in Lithuania is the specialization on skills which are no longer present in old member states (Italy, France, The Netherlands) and also not in countries such as India and China. The companies are mainly contractors to European brands outside Lithuania and only a limited number have their own label/brand. This is very much due to a collapse of the large Soviet market and the small home market. It has been difficult for the Lithuanian T&C companies to create a name in other EU member states.

The Netherlands

The Dutch case is also an example of resilience. While the Dutch have delocalized clothing production, it is still the third producer of carpets and a niche producer of interior textiles and technical textiles. Its commercial strength at the time of the 2008 recession comes from an orientation to exports and a mix of sales to consumer markets and contract markets. However, the most striking feature is how the Dutch industry has used labour market flexibility

to absorb the shock of recession. In addition, despite its modest size, the Dutch industry has developed , a very active industry association providing depth in services but also collective arrangements softening the effects of recession.

Northern Greece

The Northern Greece case focused on the textile and clothing sector that developed around the cotton cultivation and production, being also the main part of the textile sector. Local factors but especially the agricultural support policies contributed to make farmers growing a standard quality of cotton (in terms of impurities and length of the staple), without incentives to step up to higher quality. This factor locked most of the textile sector, especially spinning, in a commodity product range; most of those companies were not prepared and did not have the time and resources to invest to face the impact of globalization of production and, later on, the financial crisis. The financial crisis accelerated the process, but only from the side of cost reduction.

The Northern Greece case shows that vertical integration in relation to premium quality is a factor of success but most companies remained in commodities. The current credit squeeze, the inflexibility of labour markets and wage formation and lack of redeployment of capacities hamper recovery. In the short term, regained cost competiveness may enable a revival, in the longer term a quality strategy is needed based on shifting to specialty fibres and yarns and eco-certified products.

Drivers in the regional case studies

On the bases of the cases globalisation and the financial crisis can be considered important drivers of change. Consumer demand and changes in distribution channels are drivers of change in some of the regions while in others shall be associated with globalization. Technology is not a direct driver of restructuring while policy and regulations is only a driver of specific restructuring and also possibly a driver of change.

Labour costs are an important competitive factor in an industry with global competition and with labour intensive processes. The Netherlands and Herning are used to high labour costs and have specialized accordingly and delocalized parts of more labour intensive production. Rising labour costs over the last decade have especially been mentioned in Northern Greece. These are associated with a lack of productivity increase and lack of specialization in niches that can sustain higher labour costs. Lithuania has not yet major problems with labour costs. It is of course a more expensive production location than Asia, but competitive in specialized markets and quick response.

Labour market flexibility is an important dimension for competitiveness in the Dutch case study. Flexibility may arise from adjustment of the work force to the volume of demand or to requalification. It was seen as a positive factor to absorb fluctuation in demand. However, it was also mentioned that the involvement of a flexible pool of workers, eroded the skills base of the industry.

The globalization of the textile market is probably the main driver of restructuring over the last ten years for the regions examined, but for high labour cost countries such as the Netherlands and Herning in Denmark it has already been so for forty years. The Herning companies had partly delocalized their production, but they were more recently faced with rising transport costs from off-shore production. For Greece, Catalonia and Lithuania it is an important driver as it led to changes in sourcing policies of retailers. It also led to more competition from low cost suppliers especially in commodities and large volumes. Lithuania gained somehow from inward investment and could maintain a position in specialized products.

Globalization also leads to market opportunities outside the EU. Howeve,r most companies examined were not able to pick up the challenge. In order to grasp those challenges it is required to have a strong brand, and also to have gained export skills within the internal market as well as a certain critical mass.

The financial crisis that started in 2008 had an important impact on the industry. There is a difference between regions and companies that had a dramatic drop in 2008/09 and a recovery in the second half of 2009, such as the Netherlands, Herning and Lithuania and Northern Greece and Catalonia that witnessed no recovery since 2009. The crisis caused a drop in demand, a weakening and disappearance of many retailers and a stronger pressure on costs. The impact on the industry is primarily a reduction of production volumes (which happens most often because of limited labour flexibility) but is also a financial loss as costs could not be adjusted to lower sales levels.

In analysing the role of consumer demand and distribution channels there has been an increase in the role of retailers and also a change in the structure of demand. In general large retailers have gained market share and SMEs supplying independent retailers are faced with a declining market. This is an important factor of restructuring in Catalonia. In none of the case studies there has been major trend in the companies examined of downward integration into retailing. In the Netherlands there has been investments into an internet presence. In the Netherlands the consolidation of retailing may be a factor in consolidation in the carpet and home textiles. In the Northern Greece the case we examined more upstream sectors for which changes in retailing had no direct impact. It had an indirect impact since Greek based garment suppliers to retailers lost their clients, this had a major indirect impact. In Lithuania volume markets were lost, but a specialized offer could maintain its foothold with large retailers.

Technology has not been identified in general as a strong driver of restructuring in the cases. However, the lack of uptake of technologies had a strong impact since altered the productivity gaps compared with the actual adoption of technologies. In Catalonia and Northern Greece the adoption of new technologies is low, which impacts on a very limited development of new products, processes and services. It did also not contribute to increase in productivity. In the Netherlands and Herning modernization of equipment may have led to control of costs through increased productivity. The industry is engaged in new products and processes in the Netherlands, but the impact on restructuring is not visible. Lithuania has been the most active in modernization through replacement. This has improved productivity, but the strategy and quality of management is more decisive as a factor of survival of companies. It shall be noticed that Lithuania was the only country were public grants were involved for co-funding of modernization of equipment.

Regulation is hardly a separate driver of change. The liberalisation of trade is a driver behind globalization, but not a self standing driver. Specific regulation associate with sustainable production is only a driver for specific segments. Some companies, most notably in the Netherlands, have considered regulation as an opportunity to specialize in regulated niche markets; moreover regulation may also have helped to control energy costs in the Netherlands. In Northern Greece the cotton sector has experienced a negative effect of the reform of the Common Agricultural Policy.

The drivers have led to the decline of the industry in all regions but also to business decisions from companies that were presented in each of the cases. In all countries but the Netherlands there has been a strong decline in the number of companies, most notably in Catalonia; this decline is likely to be the biggest cause of job losses. In the Netherlands consolidation through take-overs and flexibility of labour have absorbed most of restructuring. In Lithuania, Herning (Denmark) and to a lesser extent Catalonia we have seen many companies responding to restructuring by adjusting their strategies or business models. In Northern Greece we have seen very little adjustment. Even for the two companies having specialized in niche markets, their strategy has not avoided a serious decline in sales and profitability.

In Catalonia, Northern Greece and Lithuania the number of companies declined, mainly because of closure. In the Netherlands it increased slightly. Employment in the surviving firms declined in all countries but the Netherlands: the Dutch industry was in fact the only one to fully recover from the 2008/09 crisis. In the cases examined the majority of firms shows financial parameters enabling them to resist through the financial crisis, except in Northern Greece where decline is the dominant pattern. In the Netherlands and in Herning it is combined with recovery, in Spain and Lithuania resistance and downsizing are the dominant patterns. It should be said that the financial ability of resistance in the industry is still strong: the majority of firms in all the regions have a solvency ratio that banks consider as safe. However in Northern Greece the situation is rapidly deteriorating.

Best practices

The findings enable to identify best practices. In the case of new member states, with a dominance of subcontractors the business model of hybrids or co-contractors is a sound one. For companies it is in general sound to specialize in niches with some protection in specific segments like home textiles, specialty yarns and fabrics. The two-string strategy of delocalizing part of the production is a good idea, but in some instances analyzed in the cases was badly executed.

When it comes to bad and good practices, it is hard to distinguish between structural drivers, specific factors in the regional business environment and personal skills. The success of some company cases is often related to personal leadership, the ability to forge relations with clients, the curiosity to enter in new markets, the perseverance in taking step by step measures in a strategy. A constant aspect to be found in successful companies is not the strategy they choose, but the perseverance in implementing it step by step over a long period of time. We would like to stress that the best practices in most of the regions are rather exceptions in their regions. They do not seem to be the product of specific local conditions or local policies, but of the ability of entrepreneurs to escape the local context.

Partnerships

The restructuring process might have created new alliances or partnerships. We have found few of these new alliances or partnerships. If created, they might have been the result of implementation of plans started before the restructuring process resulting from the financial crisis. The companies examined in this report following a strategy of co-contracting or specialization have showed great interest in improving relations with customers. However, the term alliance or partnership does not really cover these more intense relations.

In general, the relations with training and research centres have become less intense. Firms are recruiting less from schools and with the restructuring more experienced workers can be recruited. The companies in the cases of this report have not shown a strong research agenda, thus from the relations with research centres did not emerge any impact.

Anticipation of restructuring

We have in each regional case examined the strategic responses to restructuring of stakeholders such as associations, social partners, research and education centres, and of course policy makers. What strikes from the cases is the low level of anticipation and the generally poor management of restructuring. Unfortunately the lesson that a restructuring can be anticipated has not been drawn by the collective bodies of the industry and by policy makers.

In none of the regions we could document anticipation of restructuring and consequently the measures to mitigate the impact. This anticipation could have been done by the companies themselves or by other stakeholders such as

public authorities or business/sector association. Although the financial crisis could not be anticipated, structural drivers such as globalization, changes in consumer demand, distribution channels, technology and regulation could have been addressed. In none of the regions has there been a strategic and comprehensive approach developed by companies, associations nor policy makers.

In many regions companies face skills shortage despite restructuring,. This is the case for classic technical skills such as weaving or specialized sewing which are skills needed to develop products with a higher added value. The skills shortage concerns also design, marketing, logistic and managerial skills that are needed to engage into branding, retailing or even co-contracting or partial delocalisation of production.

EU policies and funds

The impact of EU funds is very difficult to assess. Most projects funded through the ERDF were horizontal in nature (not specifically oriented to a sector), funded activities of intermediate organisation or financed innovation infrastructures. The impact on companies is often indirect, hence it had little effect on modernization of equipment or change in business models. An indirect effect is at stake when education or research infrastructures are improved.. In most countries the cooperation between industry and research – when organized in projects co-funded through ERDF funds were not successful. Moreover when horizontal actions, research infrastructures or intermediate organizations are co-funded, the results do not always reach companies

Conclusions

This report has pointed to drivers of restructuring, of which globalisation and the financials crisis are the most important ones. In Herning (Denmark), Lithuania and Catalonia this has led to substantial downsizing of the industry but also to practices of strategic changes. In the Netherlands the industry recovered after the financial crisis. In Greece however even the few companies that responded strategically to the crisis could not avoid being engaged in severe downsizing. The two key responses is to specialize in niche markets and to develop from subcontracting to co-contracting, hence offer more skills and service to clients. Good strategic choices, well executed go alongside companies having reacted too late and with less leadership.

The ability to sustain a prolonged financial crisis is severely curtailed by a growing number of firms in a weak financial position, lacking the means to redeploy. In addition, skills shortages are also inhibiting repositioning in other market segment with higher added value. The responses to restructuring have mainly been the initiative of individual companies, with little anticipation or support by industry associations, with the exception of the Netherlands, or regional/national authorities. Although the types of responses and the constraints on restructuring is not new, as many European countries have experience with restructuring in the textile and clothing industry since 1958, the collective learning inside regions and between regions is limited. Promoting exchange of practices across regions, but also fostering regional institutions that can facilitate restructuring is as important now as it was in the old member states in the 1970s and 1980s; learning initiatives of this type could be organised thematically or as cross-regional initiatives.

1. INTRODUCTION

1.1. OBJECTIVES

The objective of this task was to provide an assessment of past or on-going restructuring and modernisation processes in textile and clothing enterprises in the EU and their responses. This task provides an overview of drivers of restructuring and presents an anatomy of restructuring of the textile and clothing industry in the EU in terms of changes in the company business models. Case studies were carried out in five textile and clothing manufacturing regions of the EU with a particular emphasis on emerging strategies and business models and providing evidence for the impacts of restructuring processes.

Another objective has been to analyse framework conditions and identify constraints and best practice measures and initiatives at company and regional/national level concerning anticipation of change and management of modernisation and restructuring processes, so that these examples may inform policy action and initiatives in other regions in Europe.

1.2. METHODOLOGY

The approach to the task is a combination of desk and field research. The desk research has the objective of identifying and describing the main restructuring processes having an impact in the textile and clothing sector. The field research focused on company responses towards restructuring. The definition of restructuring is presented in section 1.3 including a presentation of the several quantitative and qualitative dimensions of restructuring.

The analysis of restructuring is rooted in a presentation of drivers of change that might lead to restructuring of an industry. There are drivers that are general to all the regions in Europe, But there are possibly for each case specific local drivers of change. In any case drivers usually have a direct impact on the firms such as disengagement (closure or delocalization downsizing for example. Drivers can also be seen as opportunities that have or have not been grasped by companies: in fact it could be that restructuring is also a consequence of not adjusting to competition at the pace of other regions in Europe.

The section 2.5 “The Financial crisis” at page 39 is based on interviews with analysts at ABN-AMRO, Barclays Bank, ING, as well as with the head of Credit Management Services at Modint, F. van Hoorn and accountants at Mazars. This section has used financial analysis reports of TAG New York, Textiles Intelligence, Verdict and Datamonitor.

The company responses to the drivers of restructuring have been classified and described as changes in business models. The theorization of the trends and the business models has then been tested into five selected regional cases by using available data and study and especially by carrying out qualitative interviews. We selected five textile case regions representing different aspects of the sector and a geographical spread. The cases have been selected at the level of district (Herning in Denmark), regions (Catalonia in Spain,), groups of regions (Northern

Greece that includes East Macedonia and Thrace, Central Macedonia, West Macedonia and Thessaly) or country (Netherlands and Lithuania) according to the relevance of the textile and clothing sector. The selection was validated with the European Commission and also took into account the distribution of cases in the other five thematic reports across the European Union.

The cases provide an insight into the restructuring drivers and business models in the five cases ,but *not* a full analysis of the industry in each case region. In Northern Greece we focused on the cotton spinning and weaving industry and the influence of the cotton production and ginning; in the Netherlands we focused on interior textiles; for Catalonia, Herning and Lithuania we went into several segments of the industry. However, the cases do provide an overview of the main restructuring issues faced by the industry and other stakeholders and the restructuring processes that have occurred due to the changes in the past decade.

For each of the case studies we have carried out 89 of face-to-face interviews with representatives from mainly companies, as well as telephone interviews with more focused company examples. When possible we have also examined closed companies, on the basis of archives or confidential interviews with former employees. We also interviewed research and educational institutes, sector organisations and regional policy makers responsible for main actions affecting the textile and clothing sector. The list of interviewees is provided in Annex I at the end of the report. Face to face interviews typically lasted one hour, telephone interviews or interviews on trade fairs typically lasted 20-30 minutes. Around 40% of targeted interviewees declined an interview. The interviews were conducted according to a check list with common elements across each case and specific questions. For few companies we did additional telephone calls. A small number of companies were described based on interviews with former managers or employees.

While in the regional cases a combination of statistics and interview data was used, we have framed in Chapter 3 a more general quantitative analysis. The first analysis looks at natality and mortality of firms in the industry. The balance between births and deaths of enterprises is a possible factor of restructuring: we assume that a reduction in the number of companies has an important effect on employment. The analysis is based on Eurostat data for the period 2004-2009. 2009 is the last year for which we had data for 20 member states. 2010 data covers a smaller, not representative set of countries at the time of this analysis (June 2012). The second analysis looks at the dynamics in companies that still existed in 2011, and had reported financial data for 2010. We look at the evolution of their turnover and employment. The data is gained from the Amadeus and Orbis database over the period 2001-2011, but the last available year of data differs between countries[2].. The third analysis looks at processes of consolidation at the European level, examining dynamics of mergers and take-overs.

To understand the dynamics of restructuring at company level we selected data of 1616 textile and clothing companies, with a closer focus on 616 companies from the five case study regions analyzed in this task and 1000 companies as a mirror group for Europe as a whole. Company data was gathered from the Orbis database[3] that contains financial and business data on over 99 millions listed and non listed companies worldwide. The database reports almost 180,000 firms in textiles and clothing, but only 20,000 present a complete dataset. We only kept companies reporting employment and turnover for the years 2002, 2007 and 2010. The years 2002-2010 give a long term trend, 2007 enables to compare pre-crisis and post-crisis. For the top 100 we cleaned the data of double entries and consolidated data and took out companies that clearly do not correspond to the industry. In particular

[2] Bureau van Dijk Electronic Publishing. Extractions made between May and July 2012

[3] Bureau van Dijk Electronic Publishing. Extractions made between May and July 2012

Nace 14 contains companies once classified as industry, but now mainly retailers such as Inditex, or companies such as Louis Vuitton and Adidas that were classified as shoe or leather industry in 2002 but as clothing industry in 2010. From the Orbis database we did a selective analysis on patterns of company closure. The reading of a total Profit/Loss and balance sheet over a longer period of time is highly time consuming and requires additional data for a full interpretation. The company data at the European level is given in chapter 3. The analysis of the companies for each relevant region is conducted in the regional case studies.

For interpretation of Orbis data we have examined additional data, especially the top 100 textile companies of the trade magazine Textilwirtschaft. This ranking has been compiled every year for more than 20 years and ranks companies by turnover. Unfortunately the ranking is not coherent from year to year and requires additional processing in order to be coherent and comparable (see Annex 1). We have used the Orbis database to get additional (missing) data. Industry and trade data has been sourced from Eurostat and national/regional statistical offices.

1.3. DEFINITIONS

Restructuring processes can be defined in different approaches and levels of aggregation. The Merriam-Webster definition is very general and defines restructuring as "*to change the make up, organization or pattern of* " a company. At the company level a financial approach sees restructuring as a significant modification of the structure, organization, assets of a company, usually when the company is in a difficult financial situation. A deeper analysis points to restructuring of assets, debts, ownership, shareholders structure and revenue model. This may include acquisition or disposal of activities. A managerial analysis shall focus on changes in business model such as change in position in the value chain, specialization or diversification, integration or disintegration of (industrial) activities. In this study we combine the financial analysis of company situation from available data and the study of managerial adjustments such as the changes of business model.

Restructuring is also a phenomenon identified at an higher level of aggregation such as industries or regions. At those levels restructuring is then the result of the aggregated dynamics of redeployments of assets and changes in business models of the single companies. At the level of regions or industries restructuring can be analyzed as the effect of common drivers, specific aspects such as strengths and weaknesses of the production structure and specific drivers in the production environment.

Restructuring is also referred to as a process of creative destruction but also as an intrinsic aspect of industrial growth[4]. Ruigrok and van Tulder translate the Schumpeterian concept of creative destruction to a paradigm shift in organization of value chains[5]. Restructuring involves demise of companies and creation of new companies. Restructuring is then a shift to an entirely different focus in industrial organization such as a focus on design and branding instead of a focus on manufacturing, or a shift from mass production to flexible production. Restructuring is also a reaction to dramatic changes in the importance of specific production factors such as labour costs or costs of raw materials. Abernathypoints to the possibility that restructuring activates changes in production processes,

[4] M. Storper and R. Walker (1989) The Capitalist Imperative: Territory, Technology and Industrial Growth. Blackwell, Oxford.

[5] Ruigrok, W. and R. van Tulder (1995) The Logic of International Restructuring. Routledge, London.

possibly under the impetus of new technologies[6]. In textiles this can be an ICT driven processes such as digital printing.

Peter Dicken brings in a geographical dimension in distinguishing between what he calls "*ïn-situ* adjustments" from locational shifts of production. Dicken defines "*in situ* adjustments" as a reduction in capacity or the change in scale (from discontinuous to continuous processes); locational shift corresponds to delocalization of production[7]. However the transformation to subcontracting or outsourcing model or consolidation of production from several to one location are also locational shifts[8].

The restructuring analysis in this report is inspired by the work on the anatomy of job loss in Britain done by Massey and Meegan[9]. That work is still valid today.

Disengagement: implies a stop of activities either by liquidation of the firms (and redeployment of assets in other activities) or by bankruptcy or closure. The term disengagement is used to coin a departure from the industry as a whole (closure or shift to an entirely different sector, such as real estate activities), not a changing position in the value chain. This phenomenon is visible in the analysis of on the number of firms expressed as the balance between closures and creation of new firms; along the text we refer to this kind of analysis also as demography of firms or natality and mortality of firms. In the cases we have added selective cases of typical closures of companies.

For companies surviving, there are three quantitative patterns on the basis of Massey and Meegan:

Resist: Resistance points to companies maintaining a stable or slightly changed turnover, but survive by cutting costs, improving processes, adding some value to products and services but with fundamental change in the position of the firm in the value chain. The resistance is also visible in the capacity of company to maintain its profitability, equity base and solvency ratio.

Recovery: Recovery points to a decline in all indicators most notably in turnover but a recovery in sales and profitability and a stabilization or even increase in employment. We assume that this pattern could imply a change of the company in the value chain. Hence the recovery pattern may point to a change in strategy.

Downsize: The pattern of decline is one of structural decline over the entire decade with sometimes an acceleration of decline because of the effect of external drivers such as globalization or the financial crisis. Downsizing is visible in company data by a decline in sales and employment. The company adjusts its production capacity to its declining market share. It is compounded by a poor or no profitability over the period and an erosion of the equity base and the solvency ratio.

The next step has been to look how companies have developed responses to these restructuring patterns, mainly in the form of changes in the business models. In the regional cases, we will especially look at companies responding to drivers of restructuring when being in a situation coined as the commodity trap and the subcontracting trap.

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[6] Abernathy W. (1983) Industrial Renaissance. Basic Books, New York.

[7] Dicken, P. (2007) Global Shift: Mapping the Changing Contours of the World Economy. Sage, London.

[8] Ruigrok, W. and R. van Tulder (1995)

[9] Massey, D and R. Meegan. The anatomy of Job Loss. Methuen, London.

The commodity trap is a situation of companies locked in a low margin activity, volume segment of a market. Because of the low margins, the means to upgrade are limited. The volumes may foster productivity but to upgrade often means that average production runs decline and factory utilization rates drop. The client base, the knowledge present in the firm does not stimulate upgrading. The way out of the commodity trap is a step by step specialization towards higher value added niches.

The subcontractor trap is a situation of companies locked in the position of a subcontractor with a limited working capital and with no direct access to the market. Subcontracting is a low margin activity and does not require marketing and design skills. The capital base of a subcontractor does not allow to finance the buying of fabrics. The way out of the subcontractor trap is a step by step integration of design activities e.g. by becoming co-contractor.

Both traps are urgent issues in a globalizing market. The commodity trap makes a company very vulnerable to low-cost competitors. The subcontracting trap makes a company, in addition to the just mentioned vulnerability, very dependant on sourcing decisions made by large customers.

The responses to the different patterns and situations shall be examined in the five regional cases. These responses are often changes in business model of the company. The following distinctive business models have been developed after the interviews have been carried out in the five regional cases.

- **Changing role in the value chain** – companies change, reduce or expand their core activities along the value chain, for instance by changing from being a production company to outsourcing production and focusing on design, logistics, and marketing.
- **Specialization and niche products** – focusing on products and/or production methods that increase the added value and are (to the same extent) less subject to competition from manufacturers using cheap labour to produce for the mass market. Examples are high-quality or environmentally friendly products or use of specialized sewing techniques.
- **Two string strategy** – combining two production strategies, usually producing large volumes in Asia with longer delivery times (and lower costs) and small to medium volumes in Europe (or Northern Africa) with shorter delivery times, allowing for just-in-time delivery (and often higher costs).
- **Co-contractors, hybrids and new distribution channels** – finding new ways of selling products. Co-contractors add services to the sub-contracting work such as co-design; hybrids operate their own label while at the same time acting as sub-contractor to another branding company. New distribution channels include e.g. setting up own shops or selling on-line.
- **Consolidation -** maintaining a position in a shrinking market by taking over competitors and combining increased market share with economies of scale, sometimes accompanied by rationalization (reduction of capacity or improvement of productivity).

The changes in business models are a response to drivers of restructuring that we describe in chapter 2. Drivers are general to all industries such as globalisation or financial crisis, or are more specific such as technology and consumer demand or changes in distribution channels. Policies and regulation can be generic or specific to the industry.

Obviously, business models of individual companies do not only reflect reactions to trends and drivers, but also company history and external factors such as regional and national regulatory context. Therefore, the company business models described are exemplary in the sense that they focus on the changes as consequence of restructuring.

Restructuring patterns and changes in the business model can lead to a survival of firms and often a stable employment at the level of the company but not necessarily at the level of the region. When a company delocalizes, it may lead to the survival of the firm however entails local reduction of employment and. Downsizing delays the demise of the firm but brings substantial reduction of employment. Disengagement leads to an extinction of companies and reduction of employment. Regions in which companies are successful in changing business model are able to maintain a critical mass and an environment suitable for further development of the industry. When downsizing and disengagement dominate, and companies are not able to adapt their business models, the critical mass is eroded and the environment is less attractive for start-ups or industrial change.

1.4. OUTLINE OF THE REPORT

In this study we will approach restructuring at different levels and from different sources.

In chapter 2 we present the common drivers for restructuring identified in the survey report (task 1) and further explained for the purpose of our analysis.

In chapter 3 we present and analysis on the dynamics in the number of companies as impact of the drivers of restructuring and an analysis of the financial data of the surviving companies in order to understand their capacity to resist and change their business models.

Chapters 4 to 8 are dedicated to the regional or national cases. For each of them an overview on the specificity of the sector and the scope of research is given. We then present the drivers of restructuring specific for the region. After we present the business models that emerged in the region in response to the drivers of restructuring drivers. The following section in each case is dedicated to strategic responses of other stakeholders such as policy makers, educational and research institutions and business or sector associations.

In chapter 9 we combine the analysis at the level of companies and the specific findings from the cases in order to provide a general framework of effects and responses to restructuring.

Chapter 10 features the general conclusions of the report.

2. DRIVERS LEADING TO RESTRUCTURING PROCESSES IN THE TEXTILE SECTOR

In Task 1, the main drivers of changes in the European textile and clothing industry were presented and described. In the following section we will briefly describe again the drivers that have a relatively bigger impact in restructuring. Five key general drivers of change were identified, which we have described below:

- Globalization
- Consumer demand and distribution channels
- Technology
- Policy & regulations
- The financial crisis.

The changes in business models are a response to drivers of restructuring that we describe in chapter 2. These drivers were also identified in the general survey report (task 1). Drivers are general to all industries such as globalisation or financial crisis, or are more specific such as technology and consumer demand or changes in distribution channels. Policies and regulation can be generic or specific to the industry. Drivers may have a direct impact, hence companies respond to them, they can have an indirect impact because companies do not respond to them. Some drivers are also specific to a particular country or region; these drivers are then separately analyzed in each case study. Drivers might also have differences in the impact with some having no tangible impact.

Moreover it must be noticed that during the analysis of the regional cases a number of case-specific drivers emerged. Those drivers are presented in each case separately.

2.1. GLOBALIZATION

Globalization is a dominant trend and impacted the textile industry on various dimensions; In order to better understand the impact it is also useful to distinguish between three components of globalization:

- Globalization of production
- Globalization of taste and demand
- Regional Integration (including European integration)

2.1.1. GLOBALIZATION OF PRODUCTION

Globalization of production was the first trend that started at the end of the 1960s as retailers started to source low value items directly from developing countries. Especially British, Dutch and German retailers and traders were the first to engage in sourcing. By doing so the retailers created a competitive pressure in the lower part of the

market. In countries where retailers were the first movers, industry was put under pressure to offshore[10] or outsource[11] part of their production. As Scheffer, (1992) reported, difference arose in sourcing patterns. The German industry kept working with European fabrics, whereas the British industry preferred to source fabrics in Asia while maintaining clothing production. Increase of sourcing and offshoring occurred in Belgium and France in the 1980s but only appeared in Italy, Spain, Portugal and Greece in the 1990s. The southern member states benefitted from delocalization of production until the 1980s while the eastern member states benefited from delocalization of production in the 1990s.

Overall the delocalization of production and sourcing was till 1990 mainly a trend in clothing, which only indirectly affected the textile industry. The textile industry was faced with a declining market as in a growing number of segments of the market, end products were made of fabrics made close to the point of assembly. From 1990 onwards the pressure of imported fabrics increased, even if the quality segments in clothing relied on combining European fabrics with low cost but nearby assembly. Nevertheless the production of clothing also created critical mass in developing countries for fibre production and processing. Especially after 1990 the combined strategy of downward and upward integration created in several developing countries, but most notably in India, China and Turkey, a complete value chain that until 1980 only existed in the USA and Europe.

Delocalization of production because of price pressure, itself induced by increased sourcing of retailers, is probably the dominant factor. However increasing productivity is an important factor of decline in employment in textiles. Many studies align in seeing the productivity increase in textiles as a result of enhanced global competition. In the clothing industry the ability to increase productivity reached its limits as further mechanization and automation reduces flexibility. Productive investment also demands considerable capital investment that can also be allocated to design and marketing.

Globalization of production chains presents companies with very real challenges as well as opportunities[12]:

Both offshoring and outsourcing enabled retailers and brands to keep prices stable and, through maintaining price competitiveness, to maintain market share. There has been a debate whether the benefit of lower import prices has gone to the consumer, the retailer or the manufacturer: in general gross margins of retailers have increased over time and also brand owners have been able to increase their gross margins. In some cases offshoring and outsourcing enabled firms to maintain activities in Europe however offshoring was detrimental to those firms not willing or able to delocalize production. Unless they would upgrade, they would lose the competition on price.
Outsourcing has made the sector more vulnerable to competition as knowledge about production, fabrics, materials moves out of Europe and out of European firms along with the production facilities and the product development. By 2010 while some developing countries have built up a total value chain, Europe no longer has a total value chain and depends on imports even for strategic production processes. On the other hand outsourcing has been the corollary of a changing position of part of the industry. The largest companies classified under NACE14 as clothing industry (erstwhile industrialists) are now mainly retailers capitalizing on brands, also at a global level.

[10] *Offshoring* describes the relocation by a company of a business process from one country to another

[11] *Outsourcing* is the movement of internal business processes to an external organizational unit

[12] This section is inspired from Dicken, P. (2007) Global Shift in particular 249-276 and Cattaneo O. e.a.. (2010) Global Value Chains in a Postcrisis World, World Bank Press, Washington DC.

For restructuring outsourcing leads to downsizing of industrial employment, change in functions performed by the firm and possibly loss of control over the value chain if the firm does not build up a strong brand or retail activity.

Offshoring. Some European companies still control their value chain albeit with foreign production. With offshore production such as with direct investment, knowledge stays within the firm. Offshoring has also been a major trend instead of outsourcing, especially for companies wanting to keep control of the value chain in specialized niches (either technical textiles, men suits or lingerie). In some instances offshore production may give access to new and emerging markets because of lower production costs, lower transport costs and absence of trade barriers. For restructuring, offshoring is literally a delocalisation of industrial jobs, but the company stays industrial in its profile. In cases where delocalisation involves shifting production units from e.g. Denmark to Lithuania there is de-industrialisation at Danish level but not at EU level.

Value Chain Control. This element downplays the fact that some European companies still control some value chains albeit with foreign production. For some forms of outsourcing, such as direct investment, knowledge stays within the firm. Offshoring has also been a major trend instead of outsourcing, especially for companies wanting to keep control of the value chain. These trends could prove a challenge for the European T&C companies if they lose control of the value chain and also the knowledge that comes with manufacturing. On the other hand it is a clear opportunity to save costs, it has the potential of opening new markets and to remain competitive.

Internal restructuring in companies as a consequence of globalization calls for new skills profiles, and education providers are put under pressure to deliver those skills. It is a challenge for the companies to find the new skills and attract workers to the T&C sector and on the other hand it could prove an opportunity as the production process is modernised and thereby becomes more efficient. Also when production is offshored or outsourced other skills are demanded especially in logistics. Not all regions have the skills base to assist this change (Levelt, 2010).

Globalization of production reshapes the position and role of the EU industry in the world. It also affects relations in the industry itself in Europe. Globalization of production creates tensions between first movers and second movers, it creates tensions between companies able to delocalize and those that are not. Northern European companies, having a longer experience with high labour costs, have been first movers whereas companies in Southern and Eastern Europe were confronted much later with the pressures to delocalize production. In addition, while delocalization of production first occurred until the 1990's to the benefit of countries now part of the EU, after 2000 the further delocalization outside the EU (e.g. to Ukraine or Vietnam) came at the expense of production inside Europe (IFM, 2004).

These tensions also have a clear geographical dimension of creating core and periphery regions inside the EU. Companies shifting to design, branding and retailing often need a metropolitan context as found in Paris, London, Milano or Copenhagen. Typical textile or clothing industrial regions are often less adequate environments for design activities. Lombardia and Nordrhein-Westfalen are the exception, combining industry and creative clusters. Textile companies often need specific geographical assets such as nearness to water for textile finishing whereas clothing production relied on a female surplus on the labour markets.

2.1.2. GLOBALIZATION OF TASTE AND DEMAND

Globalization of taste and demand is in relation to globalization of production a more recent phenomenon. This is mainly related to increasing buying power in developing countries and liberalization of trade that started as a consequence of the WTO treaty in 1994. Hence the adverse impact of globalization, in terms of loss of production

value, came well before the benefits of globalization in terms of new commercial opportunities and expansion of exports. The asset of Europe in this dimension of globalization is the cultural capital of style and brands. It is also in technical leadership and innovation in a wide range of products (e.g. wool fabrics and synthetic turf). Both assets combined are expressed also as textile components in other export products such as premium cars[13].

The globalization of taste and demand presents several challenges. The first one is that it favours companies with an established brand, often already taking advantage of the single market. Brands that are recognized in emerging markets have already established this position in Europe[14]. The second one is that taking benefit of global markets requires a strong organization (often achieved by covering the European market) and organization innovation such as setting up licensing, franchising arrangements. The third challenge is that global sales also imply other production arrangements such as production under license or setting up production close to the final market. This means that the benefits of globalization are not always visible in the trade balance but rather in the balance of payments.

The globalization of demand may contribute to the internal polarization of the industry. Indeed the larger companies are better able to benefit from global markets. Especially in the clothing industry a class of large size companies have emerged such as Burberry, Hugo Boss or Benetton. These were initially mainly manufacturers but transformed into brand and retail companies (still employing each more than 5000 people worldwide). The rapidly developing markets in China, Brazil and India also demand to produce close to the market. This can be for price reasons especially when brands want to reach out to middleclass markets or for just-in-time reasons. The shift of car assembly of European companies to Asia also means that first and second tier suppliers are asked to set up manufacturing activities close to the assembly lines. This trend favours large players like Faurecia (assembly of car seats), Borgers (non-wovens for automotive), or Autoliv (seatbelts and airbag fabrics).

2.1.3. REGIONAL INTEGRATION

Regional integration is an often overlooked dimension of globalization. Since 2000 the EU has expanded from 15 to 27 members but even by 2000, the successive waves of EU accession were not fully assimilated in the industry. For the old member states the formation of the single market preceded the globalization of markets by decades. Nevertheless many clothing and textile firms, especially SMEs, in e.g. France and the UK were only exporting to the rest of the EU to a limited extent even by 2000 (IFM, 2004).For the newer member states the opening up of their markets coincided with the globalization of markets. In order to make the analysis precise it is useful to distinguish between eastern and southern member states.

The southern member states are not identical. Italy was a clear winner of the formation of the single market from 1958 till 1995. From being the most cost competitive producer in Europe in 1958, it expanded significantly its production first inside Europe. Then, using its acquired design and quality leadership, it expanded further by exporting outside Europe from the 1990s onwards. The situation of Spain is also specific. Its industry was, at the accession in 1986, still highly oriented towards the domestic market. Its domestic market was also protected by a fine structure of wholesalers and a very high number of independent retailers. The advent of the single market led

[13] Jacomet, D. pp. 102-106, 231-237.

[14] This argument is proposed by Jacomet, 2007 pp.247-248

to the implantation of foreign retailers with their established sourcing base. They did not offer opportunities to local manufacturers, and created competition for smaller retailers, that still sourced mainly in Spain. The fragmented industry in Spain could not match the loss of sales in Spain with exports. Portugal and Greece have a long tradition of orientation to exports ever since a free trade agreement with the EC and EFTA in the 1970's. Their home markets were small and they had a clear benefit of rather low production costs, nearness and the European image of their products. However the accession of the EFTA members to the EU and the association agreements of the Central and Eastern European Countries eroded this advantage from 1992 onwards. However, Portugal had a broader manufacturing base than Greece, more vertically integrated companies and a stronger skills base.

The new member states share a past in a planned economy with a dominance of large conglomerates and trade within the COMECON. The breaking up of the COMECON and the process of liberalization and privatization caused several mechanisms to impact on the textile industry. In the first place local demand collapsed and trade between Eastern European countries collapsed. The only mechanism to survive was for the clothing industry to attract subcontracting orders and for the textile industry to find outside investors. The first strategy was in general successful from 1992 onwards, the second strategy rarely worked out. Western European textile firms were at that time not looking for new production locations and the equipment and skills of Eastern European firms was not up to the European level. The privatization process also brought its difficulties by bringing in or keeping incompetent management, making companies prey to asset stripping (especially real estate). Moreover, none of the new member states had the policies or institutions to accompany restructuring. Consequently, the newer member states industry were caught in a subcontractor trap and when local demand began to grow the western European retailers and brands were the first to benefit from it[15].

One could say that at the time of the liberalization of trade and even more after the phasing out of quotas in 2005, the new member states had not fully assimilated the changes of the previous 15 years. After 2005 those firms that moved to the role of hybrids and co-makers could access better credit to finance this strategy, but with the outbreak of the financial crisis in 2008 the means to persevere in this direction were severely curtailed[16].

2.2. CONSUMER DEMAND AND DISTRIBUTION CHANNELS

The T&C sector employs a wide spectrum of distribution channels, which vary significantly according to the company's position in the value chain; the type of product; market and customers; and specialization. The largest part of textile products are aimed at final consumers, such as clothing and home textiles. A smaller but growing part of textiles find their way in industrial markets or appear as components in consumer products such as cars. The trends in consumer demand are multiple and contradicting: the essence of competitiveness is to identify them and respond to them.

Traditionally the business to consumer market represents the main channel. With the advent of technical textiles, the business to business channel has also become more important. Retailing is still the main distribution channel

[15] Scheffer M. (2012) Trends in textile markets and their implications for textile products and processes In: Shishoo, R. (Ed.) The global textile and clothing industry: Technological advances and future challenges. Woodhead, Boca Raton.

[16] Scheffer M. (2012)

and evolutions in retail structure have a large impact on their suppliers. Increasingly, textile distribution channels are diversified and specialised. Some relevant current trends include[17]:

Increasing power of consumer retail chains (from supermarkets to department stores to large clothing chains) over products – introduction of 'private labels'. This development is not specific to the textile sector – it impacts all manufacturers of consumer products. The pressure from retailers force clothing manufacturers to carefully consider their strategy: Do they aspire to be no-name suppliers to private labels[18], which reduces costs associated with branding, but on the other hand requires a tight focus on price competitiveness, or do they go for branded product ranges and unique positions in a diversified market.

Verticalisation. Many clothing firms have reacted to the increasing power of retailers by setting up own stores (also through franchising). Department stores have also moved to a model of shop-in-shop allowing major brands to have outlets inside their stores. The share of multibrand retailers has declined dramatically, and with them the market share available for smaller brands. Because of the increased power of large retailers and verticalisation, the space for smaller brands has become smaller. Only niche brands in specific high end market segments can survive.

E-commerce. Since the mid-late 90s, e-commerce has grown significantly. E-commerce enables producers to shortcut downstream operators and sell directly to consumers, and is also a potential enabler for user-driven innovation. In the textile sector[19], it appears that the potential of this type of distribution is not yet utilised to the extent possible in comparison with other sectors. It benefits mainly large brands and companies with a good ICT infrastructure.

Distribution through service providers. An increasing share of textiles is sold through service providers, for example providers of health services, laundry service providers etc. This means that instead of selling directly to the users the companies sell to the providers of the services (an example would be hospitals where an external company is hired to provide different textile products and laundry service of these).

Merchandising. Merchandise accompanying music artists, films, games, sports such as football, and souvenir items sold in souvenir shops, museum shops etc. Usually includes clothes, and other textiles.

With an ever-shortening product life cycle of fashion items, companies can achieve a competitive edge by saving storage space and ordering relatively small quantities more frequently. The 'fast fashion' phenomenon was initially developed by brand-oriented companies like Zara and H&M, but has now spread over the entire retail market and also to the luxury segments. These companies use efficient supply chains to increase turnover by underpinning an accelerated speed of change in consumer demand.[20] Their competitive advantage is determined through their size, since they can contract large volumes.

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[17] Market Line (2012) Global Apparel, Textile and Luxury Goods. London. Anson, R. (2012) Global apparel markets, Textiles Intelligence, Wilmslow..

[18] Products (or services) which are generally manufactured or provided by one company under another company's brand. See http://retail.about.com/od/glossary/g/private_label.htm

[19] Examples of "design your own clothes" include e.g. www.spreadshirt.com (submit your own design), (crowdsourcing among aspiring designers).

[20] Barnes & Lea-Greenwood (2010)

Often the company that owns the brand relies on subcontractors for products especially in Asia (large orders), North Africa (medium orders) and more recently in the new member States (smaller orders). An exception is the Spanish label Zara, that until the early 2000s produced a majority of its products in Europe. Zara however started to outsource simple and less specialized garments to Asia, while still retaining their main production in Portugal and Spain. For some time this was perceived as an expression of Corporate Social Responsibility – a moral obligation to keep jobs in the region. However, in the current situation with increasing energy and transport prices, the decision to keep producing in Europe fits well into a strategy which relies on just-in-time production and distribution[21].

2.3. TECHNOLOGY

The fourth driver of restructuring is technological change. Restructuring can occur because of the uptake of new technologies, which may lead to productivity increase and rationalisation or it may sustain new products, better service and a more competitive position. However technology also affects restructuring when they are not adopted. This leads to a relative loss in productivity compared to other companies or to less innovation in products and services.

There are two main components in the technology driver: ICT and production technologies. The technologies themselves have been described in the report on innovation (task 6), in this section we will only address aspects with impact on restructuring. The main technology addressed is ICT. The manufacturing technologies are more diverse and only some aspects will be highlighted. ICT innovation is related to globalization and the structuring of the value chain.

ICT has lowered transaction costs and transaction times dramatically. E-Conference enables long-distance discussion of product development, e-mail speeds up the placing and follow-up of orders. E-auctions reduce prices for buyers of commodity products. The relative impact of reduction of costs and time is probably higher over longer distances and for commodity products. Internal automation in terms of enterprise resource planning has been much less decisive. Most systems were developed in the 1990s and were well established by 2000. The advances since 2000 have been mainly in speed and volume of processing, and user-friendly interfaces. It has led to deskilling of operatives working with ICT and has reduced the costs of acquiring ICT but not of implementation. The implementation of ERP systems is still complex and costly.

ICT has also dramatically improved management of retailing and of logistics. Collection of data at the point of sales has enhanced the market intelligence of retailers and, combined with internet and social media companies interfacing with the consumer, retailers have gained in power in the supply chain. The age of e-commerce has left the stage of experimentation and e-commerce is increasingly part of a multi-channelling strategy of established retailers and brands. ICT has enabled retailers and brands to present a larger offer and to change products faster. Over the last 20 years companies with a policy of vertical (quasi-) integration have had an advantage over looser value chains. Despite attempts in several countries to organize alliances of independent retailers and smaller suppliers their impact was limited compared to the efforts of large retailers and brands.

In manufacturing technology, textiles and clothing have taken diverging paths. Clothing technology has hardly evolved since 1990. The globalization of production to low-cost countries has taken away incentives to enhance

[21] Tokatli (2008)

productivity through mechanization or automation (Scheffer, 2009). In addition rapidly changing fashions and smaller production runs have discouraged mechanization which often led to less flexible equipment. Producers of sewing machines (mainly in Germany and Japan) have reduced R&D efforts and also shifted the production of machines to lower cost countries.

In textiles, incremental improvement of technologies has continued, leading to higher productivity, higher efficiency at lower volumes, and lower set up times and costs. Productivity growth through innovation has enabled companies to maintain a constant investment strategy to indeed control costs. Over the last five years the attention to energy and water savings has increased. This has also been supported by radical innovation such as digital printing which has become an affordable technology.

2.4. POLICY AND REGULATIONS

2.4.1. LIBERALIZATION OF TRADE AND TRADE REGULATION

Liberalization of trade is not an independent driver, rather it is one of the many forces behind globalization of trade and production. The European textile sector has a long history of imports putting pressure on its competitiveness. This pressure was alleviated, but never completely removed, by a comprehensive system of import limitations set up in 1960 under the Short and Long Term Agreement on Cotton and broadened in the 1970s into the Multifibre Agreement (MFA), which was extended five times until 1994. Alongside this multilateral framework, trade limitations were agreed upon in bilateral agreements with third countries in the 1970s and 1980s. Despite these arrangements there was import pressure on the EU industry, as the coverage in terms of products and countries was not complete and fostering trade diversion. Moreover, the quantitative limitations were subject to regular increases.

This pressure of imports was accelerated by the liberalization of trade with Turkey and North Africa in the first half of the 1990s, with Eastern Europe in the second half of the 1990s and with Asia from 2000 onwards. In 1995, the WTO was established and within it the ATC (Agreement on Textiles and Clothing), was signed. Under this agreement, WTO Members committed themselves to undertake initiatives which would lead to the removal of quotas and import restrictions by 1 January 2005, thereby making the sector adherent to GATT rules. For imports from China a longer transition period was later negotiated. Trade in this sector has been fully liberalised since 1 January 2009 and T&C products are treated as any other industrial products for all countries except North Korea and Belarus. For these two countries, the EU maintains autonomous measures, in the form of quotas for certain T&C products.

After the implementation of the ATC, there has been an acceleration in the export growth of Chinese textiles and clothing. China showed itself as a suitable venue for mass production and distribution. Further, Chinese suppliers were able to deliver products that satisfied European quality demands. This shift in production has had profound effect in Southern EU countries like Portugal and Spain, that until recently produced a significant share of textiles and clothing for European markets. However, besides volume imports, retailers and brands are looking for small scale and just in time production. Despite Chinese suppliers' ability to deliver in big quantities and high quality, delivery time still is relatively long, and with retailers finding credit opportunities diminishing, the suppliers closer to home become increasingly attractive, as was also the case during the downturns in 1980-82 and 1988-90. Particularly with respect to clothing, consumption is seasonal which requires a just-in-time approach to manufacturing, which the Chinese suppliers cannot always comply with. This has led European T&C companies to

look to opportunities to locate production facilities in Eastern Europe, where wages are still comparatively low, and where suppliers are better placed to produce sophisticated and niche products.[22]

Overall, the liberalization of trade led to a new wave of restructuring away from manufacturing of basic textiles and clothing. The liberalization of trade since 1994 has also been accompanied by gradual opening up of third country markets. The European Union has since 1994 devoted substantial attention to achieving a reduction of tariffs in third countries, besides the removal of quantitative limitations foreseen under the ATC agreement. Nevertheless, import duties for textiles and clothing remain worldwide among the highest for industrial products, while the EU has rather low import duties for T&C products.

2.4.2. EU POLICIES FOR SUSTAINABLE DEVELOPMENT

A second major area of policy of the EU, but also of other countries, is to foster a more sustainable development. This ambition is expressed in increasing the standards to operate for companies in terms of protection of the consumer (product policy) and protection of the environment (process oriented policies). These policies have an internal dimension as they regulate the conditions for putting products in circulation in the single market and also have an external dimension as they apply to imported products. Moreover, EU regulation on health and safety is often taken over by third countries either through bilateral agreements or autonomously. Therefore, the global trade in textiles becomes less ruled by fences (trade limitations) but by floors (standards).

Stricter regulationfor more sustainable products and processes requires companies to adapt. For processing, adaptation can mean investing into new technologies and modern equipment which might require a different type of skills set. Companies might decide to change the focus of their business model either specializing in a niche or concentrating on more standard activites. If the necessary investment negatively affects the financial situation of the company, it might be forced to stop activities.

A number of policies are related to product standards.. Regulation fosters higher quality standards and product development and creates costs of compliance. The impact of the three is to promote professionalization of the relevant companies. By doing so it creates niches for established companies but enhances barriers of entry for newcomers, from inside and outside the EU. In general the growth of technical textiles, which was above 10% annually between 1990 and 2007, was driven by stricter regulation. One cannot be extensive but two examples stand out showing product development driven by regulation in protective equipment and the automotive industry. The product requirements had impacts on the financial situation and the business models of companies specialised in these niches.

Personal Protective Equipment is covered by PPE Directive 89/686/EEC. It was however only from the end of the 90s that standardization was fully developed and that obligations on the users of PPE were made stricter in order to enhance security at the work place. Better risk analysis led to new developments in terms of protection against fire and flame, against chemical hazards and many others. Moreover acceptance of PPE led to more focus on ergonomics and aesthetics. From a focus on cotton/polyester, workwear moved to using combinations of fibers especially high end fibers such as aramides. In addition the PPE directive implied that products needed to be

[22] Source: Many Trade Press Clippings such as: Spotlight on...Rising costs in China create opportunities elsewhere, P.Mariah in Just Style 18 June 2012, or Textilwirtschaft, 22.12.2011: Made in Europe, and indicated by interviews.

certified. The increased standards for PPE was mentioned as a positive factor by some interviewees, in the regions of this report. However some interviewees also mentioned that companies not reaching higher standards had to downsize or stopped activities.

Textiles have made substantial advances in cars as textiles are versatile, light weight and recyclable. The share of textiles in cars has gone up from 50 kg in 1995 to 100kg in 2005. Airbags have become standard in cars. Composites have also gained use because they provide better safety for pedestrians when hit by a car. It is even likely to increase under the impact of European policies, in order to reduce energy use and CO2 emissions. This has sped up product development between textile firms and automotive firms (original equipment manufacturers and first tier suppliers).

There are a number of European policies in the field of energy and the environment, which significantly influence the competitiveness of the European textile sector, but also have potential importance for restructuring, since they require textile companies to control environmental aspects, not only of their own production, but also those of suppliers.

The Integrated Pollution Prevention and Control (IPPC) Directive aims at minimising pollution from various industrial sources throughout the European Union. According to this directive, textile enterprises of a certain size carrying out pre-treatment such as washing, bleaching, mercerisation, or dyeing of fibres or textiles are required to obtain an authorisation to operate. The conditions for authorisation must be based on Best Available Techniques (BAT). These techniques are described in a Reference Document from 2003. This document provides general information on the textile sector and on the industrial processes used within the textile sector (in particular fibre preparation, pre-treatment, dying printing and finishing). It provides data and information concerning emission and consumption levels and describes the emission reduction and other techniques that are considered to be most relevant for determining BAT and BAT-based permit conditions. A revision of the BREF[23] textiles was scheduled for 2009, but a new version is not yet available. The IPPC directive, while incurring costs for the companies, also compels the companies to replace or update outdated equipment, with possible gains for productivity as well as environmental sustainability.

The Emission Trading System (ETS) (Directive 2009/29/EC) aims to improve and extend a community's greenhouse gas emission allowance trading scheme. In this framework, textile companies can be impacted (i.e. be required to buy emission quotas) if they have combustion installations of a certain size. The Directive allows certain sectors or subsectors the ability to have fees waived if they are deemed to be exposed to a significant risk of carbon leakage. In the textile sector, this is the case for the sub sectors Preparation and spinning of cotton-type fibres and Manufacture of leather clothes.

The Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation was implemented in 2007 was met with a certain degree of criticism by especially SMEs interviewed for this case. In the textile sector, some believed that the Directive created an uneven playing field on a global level, and adherence to its requirements would incur extra costs on the enterprises. The textile sector has been affected by REACH, since enterprises in the sector are downstream users of a wide variety of chemical substances and preparations. However, REACH can also bring business benefits by increasing innovation in textiles chemicals. In addition some companies used REACH in a strategy of product stewardship and corporate responsibility.

[23] BAT reference documents

Liberalization of energy markets. As some parts of textile production is quite energy consuming, they have been influenced by the liberalization of the electricity and gas markets, in principle allowing consumers to choose their own supplier. The transposition of directives has however been uneven and in some countries, monopolies still hold sway. Energy costs remain a challenge in parts of the sector and gives impetus to reducing the costs, through conservation. The competitive pressure in this regard is strengthened as third country competitors are introducing programmes to reduce the cost of energy consumption in their textile companies.

Hence, the European Union has high demands on the T&C Industry and stands out as an international role model, in terms of use of chemicals, working conditions and consumer information. This could potentially give the European companies a competitive edge in markets with increasingly environmentally and socially aware consumers. In addition to these regulations and standards, the European Eco-label for Textile products has since 1999 provided an opportunity for companies to promote ecologically friendly products through a standardised certification especially used for children's wear.

In general the incidence of regulation for the largest sector, the clothing industry, is limited. The effect of regulation is nevertheless to create new niches or to increase the barriers of entry into some markets. This benefits those companies already established in these niches or able to enter them. It is however much less favourable for companies not able to position themselves in niches. The process oriented regulations are mainly relevant for the textile finishing industry but also for an industry like wool preparation. The product oriented regulations are mainly relevant for technical textiles and less for home textiles.

Three aspects are highlighted regarding the polarizing effect of regulation. In dyeing and finishing the process oriented regulations increase investments and costs for companies. These costs are especially high for smaller textile finishers. If these finishers are oriented towards bulk processes such as bleaching, dyeing and desizing that are price sensitive, there is little room to absorb higher costs. For finishers oriented towards technical fibers and technical finishes the costs can be absorbed in the higher margins.

Although the regulations affect only part of the industry, it affects a part that is vital to the entire supply chain. All textiles need to undergo a finishing process at some stage. The closure of textile finishers can affect an entire district. In Flanders two out of four commission finishers have closed, one was taken over by a client while some clients have taken strategic interests in the fourth. In Lombardia, Piemonte, the region of Lyon, and Nordrhein-Westfalen similar trends are visible. However for weavers not willing or able to (quasi-) integrate the costs, transport time, flexibility in dyeing and finishing may be affected. On the other hand the development of new products and processes favour those firms that are geographically and organizationally close to their clients. This closeness is also achieved when textile firms are taken over by clients, such as happened in Baden-Wurttemberg (see the task 2 report on innovation).

The effect of regulations can be absorbed by good assistance to companies. In the Netherlands, Belgium, France and Germany industry associations and research centers have been pro-active in assisting the industry to understand and implement new regulations. In Belgium this has been organized in a cross-sectoral approach. In some specialized sectors such as aramides, the (quite small) value chain has collectively managed the REACH registration process. However in the new member states technical assistance industry has not been that structured, therefore the difficulties and costs of compliance are higher.

The last aspect may reinforce a perception in industry that it is faced with increasing regulation, that is not always perceived as coherent for which different authorities are responsible, for which little assistance is provided and for which control on implementation in EU factories is right or wrong perceived as stricter than for imported products.

2.4.3. FINANCIAL, INDUSTRIAL AND REGIONAL POLICIES

A driver of change, but also a framework for response to restructuring and change can be given by financial, industrial or regional policies. Under this umbrella we cover financial intervention of public authorities that is either generic to all industries, specific to the textile industry or positioned within a regional policy framework.

The regulatory context of financial markets, of banking and of access to credit is indeed changing rapidly. An essential element is tightening of credit markets because of the Basel III agreement[24]. This effectively obliges banks to hold more capital as reserve for risk and hence restrict available credit. The role of public authorities is also changing in financial markets by offering guarantees to loans, to offer (temporary) fiscal or social benefits and in the framework for the State Aid rules. All these instruments are generic in nature and depend in their success to applicants effectively applying for them. But national and regional governments have to mediate between the need to control the use of public resources and creating conditions for growth. In 2009, the industry faced low demand and investment problems due to limited access to credit. Nevertheless, the temporary framework for State Aid measures to support access to finance in the current financial climate taken by the EU in 2008 to support member states were also supposed to help the T&C Industry. These measures were planned to end in 2010, but through pressure from inside, were extended for one more year[25].

All financial instruments fit either in horizontal industrial policies or in regional policies and in general there is no industry specific financial support; hence in most regions financial instruments focus on innovation and on SME support or on improving environmental efficiency while only in limited regions assistance to modernisation of industry is possible.

European financial instruments can be divided in two groups. Structural funds are implemented through a national strategy and allocation. Thematic instruments are directly managed by the European Commission. The best example of a structural fund is the ERDF.

The regulation of the European Regional Development Fund (ERDF) defines its role and fields of interventions, such as the promotion of public and private investments helping to reduce regional disparities across the Union. The ERDF support programmes addressing regional development, economic change, enhanced competitiveness and territorial co-operation throughout the EU. Funding priorities include research, innovation, environmental protection and risk prevention, while infrastructure investment retains an important role, especially in the least-developed regions. The implementation is almost always based on calls for proposals or on a open grant system. This means that a (group of) economic operators should apply for a grant. The proposal can be compared with other proposals in a competitive bidding process or needs to be approved by a programme committee. The ERDF has not a sectoral dimension; however in the period 1994-1997 specific sectoral programmes under ERDF were developed to assist regions with industrial reconversion. One of them, RETEX, concerned textile regions. The ERDF is implemented in national strategies and in national or in regional operational programs(e.g. in Lithuania or Denmark) operational programmes or in regional operational programs (Catalonia, Greece, Netherlands).

[24] BASEL III is a global regulatory standard on bank capital adequacy, stress testing and market liquidity risk agreed upon by the members of the Basel Committee on Banking Supervision in 2010-11. It is part of the Basel Accords developed in response to the deficiencies in financial regulation revealed by the late 2000s financial crisis.

[25] Euratex Annual Report 2009

The European Social Fund (ESF) has been implemented in line with the European Employment Strategy, and focuses on four key areas: increasing adaptability of workers and enterprises, enhancing access to employment and participation in the labour market, reinforcing social inclusion by combating discrimination and facilitating access to the labour market for disadvantaged people, and promoting partnership for reform in the fields of employment and inclusion. The European Social Fund can be used for broad "conditions creating projects" or can be implemented as generic grants for activities at company level (e.g. inclusion of workers with handicaps, or training of workers towards flexibility). ESF funds are distributed following an application for funding either on a project base or on the basis of a system of grants developed by member states.

According to the Community principle of additionality, European structural funds never fully cover projects: in fact member states or regions have always to co-finance projects. For the same principle Community assistance is required to be additional to national funding and not to replace it. For each objective the member states must maintain their own public expenditure at least at the level it was at in the preceding period. In addition funding to companies should also respect the principle of additionality, as they should not cover "normal business activities". In accordance to the framework for State aid there is a maximum ceiling for amounts granted to a company.26

The European Globalisation Adjustment Fund[27] (EGF)was used 10 times for workers made redundant in the textiles and clothing industry including in Lithuania and Catalonia. This fund is managed by the European Commission. Member States are eligible to submit proposals for intervention to assist workers displaced because of globalisation. Proposals do always involve assistance to workers and not to companies. The latter is explicitly excluded from the instrument. Funding may be allocated to outplacement, training, training for entrepreneurship. Funding is always additional to regional/national policies and funding.

Several instruments can be classified as thematic funds. They are directly managed by the European Commission and do not involve co-funding by member states or regions. They do however demand matching funding by the beneficiaries. The most relevant example of a thematic fund is the Framework Programme for Research and Development.

It is based on thematic work programmes and annual calls for proposals. The reports on Research and Development (task 2) and on innovation practices (task 6) analyse the Framework Programme for Research and Development in detail.

2.5. THE FINANCIAL CRISIS

A relevant driver is the financial crisis, a phenomenon that became acutely visible in fall of 2008 and continued into spring of 2009. In some countries, such as the Netherlands and Denmark the financial crisis was stabilized by mid 2009 and economic growth resumed until 2011. In Spain and Greece the financial crisis turned into an economic crisis that continued at least until 2012. The consequences of the financial crisis continues until this date, but we shall often more specifically refer to the 2008/2009 period as a major discontinuity in the evolution of the sector.

[26] http://europa.eu/legislation_summaries/regional_policy/provisions_and_instruments/l60014_en.htm

[28] http://ec.europa.eu/trade/creating-opportunities/economic-sectors/industrial-goods/textiles-and-footwear/

The financial crisis in 2008 and 2009 hit the T&C industry as a whole as witnessed by significant decline in employment and production. This development runs parallel with a drops in demand, in imports (11% down and exports (17% down) in 2008 [28]. Even though both the textile and the clothing industry were affected, the textile industry experienced a more significant decline, just like intermediate products in other industries. This development runs parallel with a decline in employment and production.

The following dimensions of the financial crisis are general and apply for all member states and sectors; however, they have different consequences in terms of magnitude according to the vulnerability of the sector. Indeed textiles and clothing were sector already weakened before.

The crisis has two main components. First, a drastic drop in the confidence in the financial system. This compromises running credit lines and credit insurance. Second, a decline in consumer consumption and consequently in industrial orders. Reduced consumptions also entails reduction in working capital leading to financial pressure towards suppliers.

While this scenario unfolded in 2008, in 2009 the existing credit lines had to be renewed based on the financial results of 2008. This often led to a further reduction of credit and the difficulty in growing or even in maintaining the current activity level. This is compounded in 2009 that credit insurers were reluctant to cover companies with high risk profile.

The impact of the crisis on companies is ultimately determined by the financial position of firms at the entry of the crisis, the ability to reduce financial risks or to attract capital and by the ability to adjust the cost level to the new level of market uptake. An essential factor is the ratio of shareholders capital and financial reserves in comparison to loans and debts, i.e. the solvency ratio. A healthy solvency ratio before the 2008 crisis was considered to be around 30%, but after the crisis this increased to above 40%. Before the crisis, the textile industry generally had solvency ratios over 30% while the clothing industry was below 30%.

The reduction of financial risks might be obtained by implementing a new business model. One could be to increase control over the value chain, i.e. vertical integration. However, such a business model is very costly to implement rapidly in a time of crisis, and is only possible for companies with a very high level of solvency or a unique ability to attract capital - which is rather exceptional in a time of crisis; hence it is mainly implemented by companies already engaged in such processes. One of the most effective value chain control measure is to integrate retailing since it reduces risks of default by retailers, gives the possibility to reduce stock in the production pipeline and to increase turnover time of capital. Another way to control the value chain is to integrate upstream activities which is rather a method to secure access to materials.

Another business model is changing role in the value chain by outsourcing activities. This is possible if production can be reduced easily or at rather low costs; however often involves expensive social plans and writing down assets. The flexibility of the labour market is a rather important factor that influences the ability to execute this business model. This flexibilisation of the firm thus implies a reduction of shareholders capital and a weakening of solvency in the short run. It is easier to carry out if it can be achieved by a partial bankruptcy. Despite this approach can be prepared, the speed of the entry into crisis made it difficult for companies to engage in it without substantial losses.

[28] http://ec.europa.eu/trade/creating-opportunities/economic-sectors/industrial-goods/textiles-and-footwear/

In any case the key indicator to determine the range of options is the solvency ratio; in fact 2008 clearly represents a shift in the paradigm of capitalism. The pre-2008 paradigm is to maximize profit with a low capital and use high leverage to reduce taxable profit. The post-2008 strategy is based on a much lower leverage, reducing dependency of financial markets by recapitalizing but also prioritising survival over growth. However for companies already prepared, the adjustment may enable faster growth strategies. This is especially the case for very healthy companies in segments with drastic restructuring.

Another impact of the financial crisis is indeed the mobilization of a substantial part of the capital to absorb losses in 2008-2009 or to increase working capital. This goes at the expense of acquisitions, modernization, international expansion and even delocalization. The reduced value of assets also means that the value of collaterals decline, e.g. property has less value which impacts on the size of long term loans needed to buy new equipment. However a crisis also means that assets can be acquired at lower costs, hence some strategies are cheaper to carry out.

3. ANALYSIS OF THE IMPACT OF RESTRUCTURING IN EUROPE

Industry transformations are always presented at the level of macro data as the overall trends in employment by industry. This level does not enable to do a more precise anatomy of job loss[29]. Restructuring, in quantitative terms, is the effect of several trends such as the decline in number of companies, delocalization of production by surviving firms, consolidation because of mergers followed by rationalisation, increase of productivity. Restructuring may entail a reduction in commercial activity (turnover) and production/employment, or it may also entail a stable commercial activity but with reduced production and employment in the region as for example in the case of a delocalization. However at the level of regions, countries or the EU as a whole the trend is the result of a large number of events and decisions at the level of companies.

It is important to position the business models adopted in the regions in the context of the dynamics and anatomy of restructuring in order to account not only the responses of the surviving companies. In order to examine the dynamics of restructuring we carried out two analyses.

3.1. ANALYSIS OF THE DEMOGRAPHY OF FIRMS

Disengagement reflects the reduction of the level of involvement of companies in an economic activity. It is a reflection of the business demographics in terms of mortality and natality of firms. However as mortality dominates the dynamics we use the term disengagement to reflect that the number of companies declines and that in a country or region an industry disappears. In fact disengagement differs from deindustrialization from the point of view of a country: as an example, in the Netherlands the number of companies has been rather stable for the past 20 years hence we cannot talk about disengagement but rather deindustrialization since they delocalized all the production activities maintaining only management, design and commercialization.

The number of companies in the textile and clothing sector declined in 22 EU[30] member states from 245,000 in 2004 to 205,000 companies in 2009. This is a decline by 16% over five years. It is not possible to connect the total level of job loss with the decline in companies. However company bankruptcy is likely to destroy more jobs than the creation of new companies creates new jobs. Over the period 2004-2009 there were 134,000 companies bankrupt; if we assume that they represent an average cross-section of the industry it could signify some 1m jobs were lost since the average employment of a textile/clothing firm is 10 persons. The 103,000 companies created between 2004 and 2009 are probably much smaller and lead to an employment in the order of 500,000 people[31].

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[29] Massey and Meegan, 1982

[30] We do not have data for Greece and Malta and no full time series for Belgium the Czech Republic, Denmark, Estonia,Ireland and the UK. On April 1st 2012 data included 2008, for 2009 some data was calculated.

[31] Own estimate based on Eurostat data

According to our projection the demography of the industry might possibly imply a net job loss of around 500,000 people. This represents close to 50% of the total job loss in the period examined and could thus be the main factor of decline in employment.

Table 1: Demography of the industry (source: Eurostat data)

	2004 *(number)*	2009 (number)	Change (%)	Births (number)	Birth Rate	Deaths (number)	Death Rate	Survival 5 Years (%)
Austria	2.025	1.566	-23%	466	6%	796	8%	57,32%
Bulgaria	5.403	5.701	6%	3.490	12%	3.263	12%	46,93%
Germany	11.380	9.475	-17%	4.724	10%	5.457	10%	36,80%
Spain	28.486	20.796	-27%	8.729	8%	15.651	11%	44,06%
Finland	3.797	3.658	-4%	1.729	9%	1.775	9%	44,56%
France	18.255	18.111	-1%	10.006	11%	7.336	8%	38,46%
Italy	65.974	53.045	-20%	22.975	9%	35.252	11%	25,74%
Lithuania	2.767	2.464	-11%	3.233	26%	3.531	26%	n.a.
Latvia	1.485	1.246	-16%	802	13%	950	13%	55,45%
Netherlands	3.080	3.365	9%	1.763	10%	1.502	10%	43,89%
Poland	30.017	26.884	-10%	15.810	12%	18.070	12%	33,58%
Portugal	19.335	13.670	-29%	11.441	17%	16.430	17%	41,64%
Romania	8.160	6.944	-15%	4.689	14%	5.248	13%	65,25%
Sweden	4.042	4.571	13%	1.789	8%	1.593	8%	52,44%
Slovenia	1.759	1.319	-25%	388	6%	784	9%	33,16%
Slovakia	4.750	4.742	0%	4.005	17%	4.910	21%	40,28%

EU 20	247.016	206.653	-18%	103.135	10%	133.971	11%	n.a.

Focusing on the regions examined in the case studies, we shall have to revert to the level of member states, since we do not have regional data. We only have data for Spain, the Netherlands and Lithuania. Spain experienced as all Southern European countries a strong decline in the number of companies (-27%). Lithuania is in intermediate position with a decline of 11% in the number of companies. In the Netherlands the number of companies increased by 9% over the period. After having analyzed the differences and similarities in the regional cases we assume that Denmark has possibly a pattern close to the Dutch one and Greece is likely to be close to the Spanish pattern.

In Spain and the Netherlands the rate of newly formed companies is rather low with rates of resp. 8% and 11%. In Lithuania the birth rate of new companies is much higher at 26%. However in that country the rate of companies stopping activities is equally high. Of the newly established companies only 44% survived the first five years in Spain and the Netherlands. It is likely that the survival rate of newly formed companies in Lithuania is lower, and in Denmark slightly higher.

The financial crisis of 2008/2009 leads to a stronger decline in the number of companies of teh EU as a whole. The average annual decline in number of companies between 2004 and 2009 is 8,000 companies. In 2007 the decline is below average (-5,500 companies). In 2008 it is clearly above average (-11,000 companies). But it is again below average in 2009 (-6,400 companies). However this is the result of much fewer new companies started in 2008 (2,000 below the average of 18,000/year) while the number of deaths of enterprises is slightly above average in 2008 and above average in 2009. Hence the crisis is mainly reflected in fewer start-ups (or split-ups, or spin-offs) in 2008 and a higher than normal mortality in 2009. The figures are however not so far off the trend that there is a clear crisis effect. The mortality in 2009 was 1.5% higher than in 2005. The number of start-ups was 11% lower in 2008 compared to 2007. In relative figures the birth rate grows from 7.6% in 2004 to 8.8% in 2009. The annual death rate evolves from 9.8% in 2004 to 12.4% in 2009.

The weakened situation can arise from (the combination of) three scenarios:

- A situation of losses because of lower sales than costs. This loss can be with or without looking at depreciation of assets.
- A situation of cessation of payments because of the inability to pay interests on loans or to repay those loans. Those loans can be contracted with third parties (e.g. banks) but also with shareholders.
- A situation of cessation of payments because clients (debtors) are unable to pay their dues whereas creditors are asking theirs.

These scenarios can unfold over a short period of time as a dramatic worsening of conditions or unfold over a longer period of time. In the analysis of companies that stopped activities in the period 2005-2010, the majority show a trend of declining sales, with a decline in costs and a structural situation of losses. The minority closed after a growth in debts, a number of companies in this situation had pursued after 2000 active policies of growth through acquisitions or international expansion, but based on increasing reliance on loans rather than funded out of equity and internal profits. The third situation could not be derived from the data, however companies in Southern Europe often have a high exposure to debt. Most companies that went bankrupt in 2008/09 already had a weakened financial basis built up in the period before 2008.

3.2. ANALYSIS OF TURNOVER AND SOLVENCY OF FIRMS

In order to assess the impact of the crisis we examined companies with financial data available from ORBIS, in the textile and clothing industry (616 firms) in the five regions selected as cases. We have identified three dominant patterns for the surviving companies based on the typology of Massey and Meegan:

Resist: the dominant pattern in the industry is of companies that have a stable evolution with years of limited growth alternated with a strong decline in turnover. The typical pattern is of a drop in turnover in 2002, followed by growth in 2003/04, a dip in 2005, resumption of growth in 2006/07 a drop in 2008 that continues in 2009 and a recovery in 2010. This is the dominant pattern in all regions in the case studies. It is also the dominant pattern in textiles and amongst subcontractors.

Recovery: the recovery pattern is of a structural growth in the years 2002-2007 a strong decline in 2008/2009 and a recovery in 2010. Since few companies experience sustained growth, the category of recovery also covers companies with a limited decline in 2008/09 within a more pronounced growth pattern over the decade. This pattern is the recessive pattern in the Netherlands and Herning. The recovery pattern is prevalent in technical textiles and in the luxury/branded segment.

Downsize: The pattern of decline is one of structural decline over the entire decade with sometimes an acceleration of decline in 2002 and 2005 and always a further decline in 2008/09 with no recovery in 2010. This is the recessive pattern in Greece, Catalonia and Lithuania. This pattern is prevalent in companies in the commodity trap, mainly in the textile industry ,such as in spinning and also in knitting firms.

Amongst the largest 500 companies, the recovery pattern appears in largest minority followed by companies in the Resist pattern and a relatively small share of companies in presenting Decline dynamics. The difference explaining the pattern of the large firms is that they are more often engaged in technical textiles, more often active with renowned brands on the global market and more often engaged in retail activity. It is also amongst the largest companies that the combination of consolidation and solvency ratio is lower. Larger companies are more attentive towards maintaining an acceptable profit level and rationalization is most prevalent. Rationalization even occurs pre-emptively before a situation of loss occurs. The effect of public quotation plays a role and also for companies not quoted, credit lines are determined by covenants with banks clearly indicating boundary values.

Financial resistance can be measured by looking at the solvency ratio. The solvency ratio expresses the share of capital (shareholders capital and upheld profits or reserves) as a share of total liabilities. We examined the ratio of the last year available (generally 2010) with the pattern of profitability over the recent years available. If one takes the largest 500 companies reporting data, 429 report their solvency ratio. Textiles and clothing sectors report in comparable numbers. The share of companies with a weak solvency (below 20%) is 16% in the textile industry and 17% in the clothing industry. However the share of companies with a strong solvency (above 40%) is equally high in both sectors: 60% in the clothing industry and 54% in the textile industry. The remainder is considered to be average (between 20 and 40%) - this is 33% of firms in the clothing sector and 30% of firms in the textile sector.

However, what surprises amongst the companies in the cases, which are often of a smaller size, is also their ability to resist. In Herning, Catalonia and the Netherlands the companies have a strong equity basis and high solvency ratio. Of the 616 companies reporting the solvency ratio in 2010, for 328 firms (53%) it was above 40% which is considered safe over the last years. For 190 firms the solvency ratio is even over 60% which is considered very safe. Another 148 firms (24%) are in a medium category between 20 and 40%. However, for 140 firms (23%), the solvency ratio is below 20% which often means that banks do not give new credits or withdraw existing credit facilities. In addition these firms are often close to bankruptcy with one more year of losses. The picture is probably

slightly less negative as this group also comprises firms within larger groups, wherein the mother company is able to recapitalize the daughter firm.

This analysis conveys two images. The first one is that a very substantial share of the larger firms and of the companies in the five regions selected are able to sustain a crisis and a longer period of recession. However, the second one, is that 15-20% of companies are in a very vulnerable situation. In employment terms the situation is even more concerning since the 140 companies with a weak financial position employ together employ almost 30% of workers in the five regions concerned. This represents 80,000 workers for the five regions. For the 72 weakest larger firms the share in employment (50,000 workers) is lower but still 12% of the total. Hence, one may draw the conclusion that without even examining other factors, a substantial share of employment (probably around 20% of the total in the industry) is at risk in the EU because of the financial weakness of the firms. In a sustained recession this is a real risk.

We may assume that this group of companies has few means to engage in a new business model. Moreover, the space to make errors is also limited. For these 20% of the companies only a recovery of demand or improvement of competitive conditions can give breathing space.

What is striking when looking through the list of vulnerable firms is that some started implementing new business models by shifting from subcontracting to hybrids or moving out of commodity markets to higher added value products, pointing at expanding exports. The investments engaged in the period 2004-2007 did however not result in a profitable return in 2008/09. Timing might have been of essence here. We shall see some examples of bad timing in the regional cases.

For the companies with a strong financial basis the ability to resist a bad year is good as they show a pattern of cost reduction, limited or no distribution of profit. Their ability to sustain a crisis is high. At the same time their desire to take risks, to engage in new business models and to invest is likewise limited. They seem to favour choices that do not involve risks in terms of skills needed, equipment to acquire or financial engagements to take. In Catalonia, Herning and the Netherlands a large majority of firms have a healthy financial basis. In Lithuania and especially Greece the industry is far more vulnerable: their. The equity base is weaker or weakened by many years of losses and the solvency ratio is low.

3.3. ANALYSIS OF EMPLOYMENT DATA RATIONALIZATION AND DOWNSIZING

Another dynamic of restructuring is rationalization and downsizing. Both mechanisms imply a change in the size of the company without substantial change in the technical processes or commercial orientation. Rationalization can be the consequence of consolidation by acquisition and integration of two factories into one. Change in employment can also be the effect of strategic reorientation on production processes and market strategies.

In order to assess this dynamic we examined for the textile (Nace 13) and the clothing industry (Nace 14) the available data of the 100 largest and 1000 largest European based companies in terms of employees for each industry. The choice of the top 100 and 1000 is arbitrary, but for the largest companies we could interpret the data based on publicly available information.

The data below enables to give an indicator of structural evolution and on the impact of the crisis. However, it indicates the overall employment in the company, including activities outside Europe . Thus it also includes element of globalization of production and downstream investment for example for retailing activities in foreign markets., but does not enable to identify the proportion of employment in Europe and in the industries in the strict sense.

Table 2: Evolution of employment in selected group of firms (source: Eurostat data)

		2002 Employees	2007 Employees	2010 Employees	Annual Variation 2002/2007	2007/2010
Textile	Top 100	201,000	148,000	143,000	-4%	-1%
Textile	Top 1000	567,000	420,000	318,000	-4%	-8%
Clothing	Top 100	225,000	195,000	150,000	-2%	-7%
Clothing	Top 1000	562,000	513,000	361,000	-1%	-10%

The changes in employment patterns are different between the two periods and different between the two industries. In the period 2002-2007 the decline of employment is much lower than the rate of labour turnover and close to the productivity growth for both industries. While we do not have a full coverage of labour turnover, elements from literature point to a rate of 7-10% in the European industry[32]. Labour turnover is higher under favourable economic conditions. Productivity growth is in a range between 3 and 4% a year[33]. It is likely that the

[32] http://www.ipg.uni-bremen.de/socose/Comparative%20Report%20WP%20III.pdf or http://www.cipd.co.uk/binaries/recruitment_retention_turnover_annual_survey_2009.pdf

[33] http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Textile_production_statistics_-_NACE_Rev._1.1 and http://www.viva-systems.com/english/enterprise_paper_02_2001.pdf

value added per worker increases: in this period the dynamics could be dominated by technical or commercial change and less by consolidation.

Most relevant is to point that in the textile and clothing industry a component of employment increased through globalization of production. This could be inside the EU (to new member states) or outside the EU (e.g. in Tunisia, Turkey or China). In the clothing industry, an important source of growth is the growth of retailing by the firms in the dataset (inside and outside Europe). Since the labour intensity of retailing is not much different than that of manufacturing, employment levels are likely to remain stable in the firm when developing retailing rather than manufacturing.

However, in neither textile nor clothing, did both trends compensate for the dynamics of downsizing and consolidation. Consolidation is only a factor in the textile industry and goes together with rationalization, since the combination of two companies often lead to synergies with the impact of a 20-30% loss in employment as emerged from our calculations. Consolidation (through acquisition) did hardly happen in the clothing sector. The growth of the largest companies is mainly one of internal growth.

The period 2007-2010 stands in stark contrast to the period before. In both industries the top 1000 companies experience a substantial decline in employment of around -8% in textiles and -10% in clothing a year. This goes along with a pattern of decline or at best stability in turnover. Although productivity may grow, this occurs in a situation of stable or declining production volume. As we have seen before two patterns dominate evolution of turnover: accelerated decline without recovery after the crisis, or stability or light growth followed by recovery.

As emerge from our calculations on the dataset, after 2007 the employment decline is bigger than the labour turnover or productivity growth and points to downsizing and consolidation (and integration of capacities, thus it leads to rationalisation). The striking figure is that in the top 100 companies in textiles, employment is almost stable. This is to some extent the effect of recovery in employment in sectors like technical textiles (which in 2010, unlike in 2002, dominates the top 100) and also of global expansion of technical textiles firms. However there is an impact of consolidation to be discounted. Of the 2007 top 100 in textiles, 14 companies regrouped into 6 groups in 2010, with the impact a loss of employment of 5000 workers. The take-over by top 100 companies of companies below the top 100 also led to a decline in employment in firms before classified as medium size firms.

In the clothing industry, the employment figures changed drastically after 2007 in both the largest and the medium sized companies. The trend is the combination of downsizing and of strategic change. The growth in retailing has generally stopped and also a further growth of production controlled abroad is halted. In fact some companies with major overseas production interests such as Quantum and Courtaulds (both UK) sell their factories or stakes to the local partners.

The overall impact of consolidation and rationalization is hard to measure, but the total job loss in the 2000 largest companies is close to 300,000. Extrapolating to the industry as a whole this might be a total reduction of 400,000 to 500,000 jobs. However, this transition combines the impact of several individual trends: downsizing, consolidation, rationalization, and technical/commercial change. It is impossible to precisely quantify the impact of each aspect. However, downsizing (reduction in employment connected to reduction in turnover) seems to dominate the other trends where employment declines with stable or growing turnover.

We examined the 1000 companies in each industry one by one, and within this group several patterns emerge. A large number of companies, over 70% of the total, have a stable or slightly growing turnover (0-5% annual growth) combined with a stable to slightly declining employment (0-5% annual decline). We could call this rationalization. Close to 15% of the companies see a reduction in turnover higher than 5% annual decline, but employment decline

over 5% a year (average around 10%), this could point to a logic of downsizing. A small number of companies have annual growth rates over 5% with stable or growing employment. A small number of companies combine growth in turnover with declining employment. Where we could trace it this often concerns delocalization and/or closure of industrial activities.

3.4. ANALYSIS OF CONSOLIDATION TRENDS IN EUROPE

The analysis on consolidation is based on the yearly top 100 ranking made by the trade magazine Textilwirtschaft. This ranking has been compiled for more then 20 years and rank companies by turnover.

In clothing, the largest company has almost the same size in 2009 as in 2001; the same is true for the number 20 in the ranking. In textiles the largest ranked company and the 20th largest ranked company are even smaller in 2009 than in 2001. In clothing, the number of companies with more than €1 billion turnover has increased, in textiles it has decreased. In 2009 the clothing industry has more large companies than the textile industry, which does not so much contrast with the situation in 2001 but certainly with the situation in 1990. The leading clothing firms now have more weight than the top textile firms.

The type of companies in the top 20 are also changing. The conglomerates of the 1980s and 1990s were mainly horizontal diversifications within member states. They had limited internal synergies and made the groups more dependent on national markets. Up to the 1980s a leading trend for textile firms was to take over their clients (e.g. VEV-Prouvost taking over Rodier). In the 1990s horizontal take-overs were dominant, e.g. with a consolidation trend amongst Marks&Spencer suppliers in the UK or multibrand firms in Germany. These groups were often managed according to financial objectives, with little industrial and commercial integration. Probably the formation of conglomerates often required substantial management skills and time to achieve integration and growth through acquisition was rarely successful, if not followed by integration.

Diversified companies were still of substantial importance in 2001 but no longer in 2009. The larger firms of 2009 have mainly grown from internal resources albeit sometimes with external equity (e.g. Hugo Boss under Premira or G-Star with ABN-Amro participations). In 2009 multibrand and monobrand companies dominated the ranking. Especially the larger companies in clothing have grown by pursuing a policy of internal growth around brands, integration of retailing and internationalization. Acquisitions are actively integrated and managed by the acquiring firm. In textiles acquisition (but also disposals) is a more salient feature and the dominant trend is to seek market share in specific product/market combinations. This strategy is developed by TenCate as a combined buy/build and fix-it/exit strategy. Buy and build refers to acquiring and integrating activities. Fix-it/exit refers to restructuring an activity and to sell it.

Consolidation especially occurs in specific segments, which mainly accounts to rationalization of productive capacities. This is especially true in carpets and technical textiles. A sector with major consolidation has been the carpet industry in which Belgian and Dutch companies have played a major role. Balta (taking over Domo), Desso (taking over ENIA) and Beaulieu are the clear leaders in this consolidation process. This process also involves internationalization with setting up factories in emerging markets. TenCate, Low and Bonar (UK) and the Daun Gruppe (DE) are important players in consolidating the technical textiles sector.

Thus what we have witnessed in textiles is the emergence of more focused companies at a substantially smaller scale than in the 1990s. These companies have emerged more from internal growth than through acquisitions, they are often based on a narrow portfolio of brands or product market combinations. They derive their identity from a

mission and strategy rather than a national base and/or a financial management approach. They do not aim at national dominance but rather at leadership in a niche at European scale (until 2000) or global scale (from 2000 onwards). The scale is between €100 and 500 million turnover. If larger they have a clearly global outlook and their growth is mainly in the USA and Asia (e.g. with TenCate).

In the clothing industry, the major trend has been one of internal growth around core brands with a downstream investment in retailing. Only in luxury clothing multibrand companies thrived, most notably LVMH and PPR groups. This model has also inspired companies like Diesel and Devanlay to develop into a producer of brands. Also of relevance is that the 20 largest clothing firms in 2010 are mainly not industrial. They are large in turnover and in commercial influence, but they contract out a substantial part of production. A very large number of suppliers and subcontractors depend on them.

Consolidation has happened and also created companies with actual or potential leadership. However consolidation has hardly attracted new investors or reduced dependency on banks. The industry as a whole has not consolidated. The overall characteristic of the industry is to remain fragmented.

3.5. CONCLUSION

This analysis conveys a number of messages which are relevant for the analysis of the regional cases In the first place an important dynamic of decline is related to the reduction in the number of companies. The number of companies has declined in Spain (also in Catalonia) and Lithuania and probably also in Northern Greece. It explains a large part of restructuring in terms of turnover and production value as well as employment. In Netherlands, the number of companies has increased slightly. But even with a stable number of firms there is job loss. Companies closing are on average larger than start ups. Examining the impact of business demographics on employment, company closure is the largest factor contributing to job losses in the textile and clothing industry. In order to understand dynamics we shall attempt to explain them by looking at companies that stopped activities in the last decade which are influential or typical for the restructuring processes in Europe.

In the second place restructuring entails a downsizing of surviving firms partly by reduction in production volume and sales and partly by rationalizing employment at stable production output. The first trajectory is one of decline, the second one of resistance, however growth or recovery is also possible. What is clear is that almost all companies were hit by the financial crisis, in most instances after years of stability, sometimes after years of growth. The crisis led to a reduction in turnover, employment, profitability and ability to resist. What is striking is that the capacity to resist of a majority of firms is still strong. Nevertheless, the potential job loss resulting from the closure of the 20% weak firms is considerable. This is a point to take into account when addressing the cases.

In the third place restructuring may mean consolidation. While consolidation is a major trend in Europe, it is a trend that occurred only in the Dutch case. In this region we see clear consolidation amongst the largest firms in textiles, especially carpets, and we see leading players in the top 20 in clothing and textiles. In all other cases no company is present in the top 100 of the industry and there is almost no consolidation, not even amongst SMEs.

4. CASE STUDY: CATALONIA, SPAIN

4.1. INTRODUCTION

4.1.1. CATALONIA IN FIGURES

Catalonia is an autonomous community in north eastern Spain, with the official status of a 'nationality' of Spain. In 2009 Catalonia had a population of approximately 7.5 million inhabitants of which the majority (approx. 4.4 million[34]) lives in Barcelona. The population of Catalonia has increased by 1 million since 2001. Employment has grown from 2.8 million in 2001 to 3.1 million in 2010[35].

Unemployment is high in Spain (21.6%) and although it is lower in Catalonia (19.2%) it is still well above the EU-27 level of 9.7% (2011 figures). The unemployment rate has more than doubled since 2001 when it was 8.6%.

Catalonian exports increased dramatically between 1991 and 2010, with an increase of more than 300% in the decade from 1991, but a significantly slower growth in the following decade of 34% between 2001 and 2010.

Although the unemployment rate is high, the economic activity rate is at 63.0% (2011 figures) higher than both the Spanish (60.0%) and EU27 (57.6%) averages. The R&D expenditure ratio in relation to GDP is at 1.7% higher than the Spanish average (1.4%), but below the EU27 average (2.0%)[36].

4.1.2. THE TEXTILE SECTOR IN CATALONIA

The textile and clothing (T&C) sector in Catalonia has existed for centuries and has been the key economic driver of many cities and towns in the region, but its structure and composition has changed several times over the centuries. The sector played a major role in Catalonia's industrial revolution and was one of the engines of the industry in the region. However, the T&C sector has been losing importance in the Catalan industry as other sectors are becoming more dynamic with larger growth prospects. The T&C sector has also been heavily affected by the intensive reorganisation and restructuring processes of the recent decades caused by rapid changes in demand and market behaviour, and by strong competition from new producer countries such as China, India, Pakistan, Turkey and Northern Africa.

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[34] Eurostat http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tgs00080&plugin=1

[35] Figures from Government of Catalunya: 2011 *Figures of Catalunya*, edited by Statistical Institute of Catalunya (Idescat).

[36] 2011 figures from Statistical Institute of Catalunya (Idescat) and Eurostat

However, Catalonia is still an important T&C region: almost 45,000 people are employed in the sector – the majority in SMEs. The number of employees in the T&C sector in Catalonia accounts for 30% of the total number of T&C employees in Spain and 8% of industrial employment[37]. In a European perspective, the employment in the T&C sector in Catalonia represents 2.4% of EU sectoral employment.

The main activities of the textile enterprises in the region are manufacture of yarn and fabrics, and of clothing and knitwear. Below is an overview of the main T&C activities and clusters in Catalonia identified by the local government. As the figure indicates, the most important centre of the T&C industry, in terms of employment, is the clothing cluster in Barcelona and its environs.

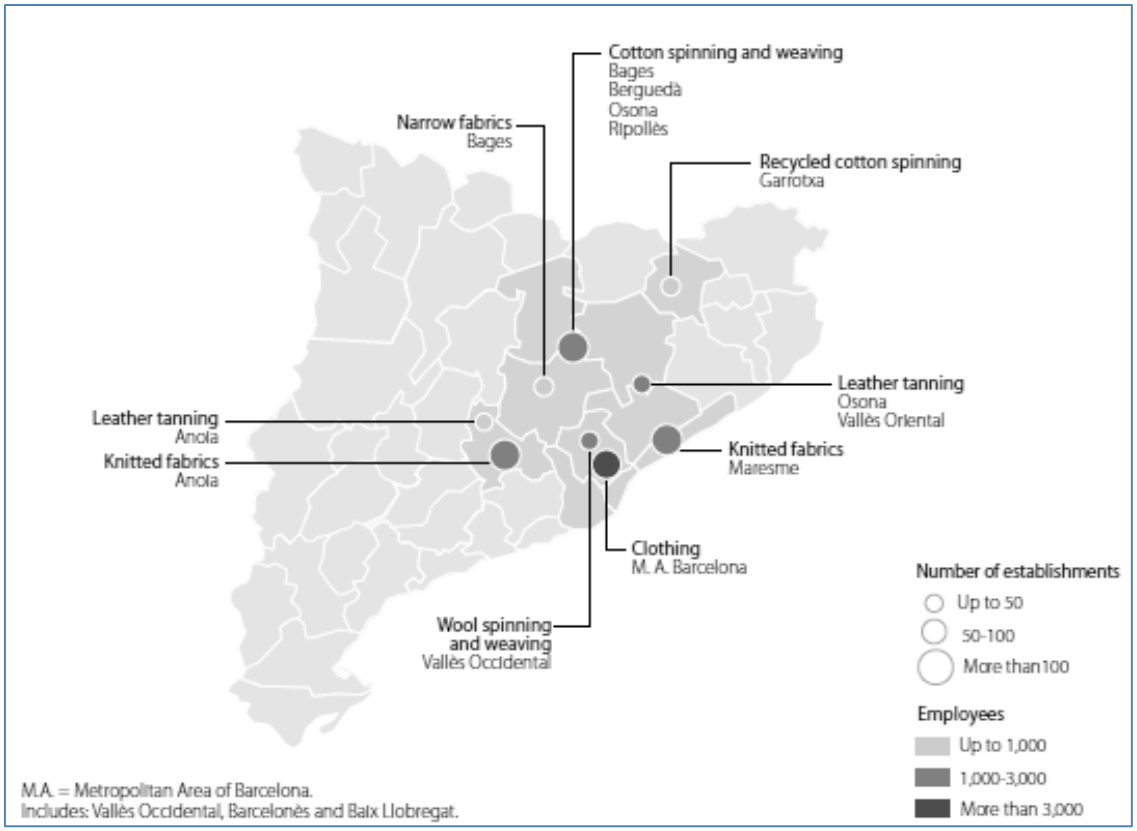

Figure 1: Textile clothing clusters in Catalonia

Source: Government of Catalonia Ministry of Labour and Enterprise (2010): Clusters and Competitiveness: The case of Catalonia (1993-2010)

Textile companies in the region include raw materials suppliers, manufacturers of primary textiles (spinning, weaving, dyes and finishes), producers of clothing, distributors (multi-brand shops, department stores, pure brand distribution, and brand name companies with physical store locations (franchises/own shops)). The textile companies in the region are mainly SMEs, of which most are independent and family owned.

[37] Source: Centre of Information about Textile and Clothing Industry, A.I.E. (CITYC)

Local business networking has become less important, as companies have reduced the number of suppliers and internationalised their sourcing base. Thus, although the above map and the Government of Catalonia identifies a number of clusters, the interviewed companies and business associations no longer see themselves as belonging to an integrated textile cluster, but rather an agglomeration of companies with no or few interdependencies. According to the interviewees, exchange of knowledge and/or staff between competitors is low, there is little or no cooperation concerning education and training, and only general information is exchanged through trade associations. However, most of the companies have bilateral relationships with local schools or research institutes.

The textile sector in Catalonia experienced a rapid decline on all counts except the value of its exports over the last decade. The table below shows the key indicators for the industry for the years 2002, 2005, and 2010[38] .

Table 3: Evolution of the textile and clothing industry in Catalonia

	2002	2005	2010	% change (02-10)
Companies	2,560	2,100	1,420	-44%
Employment (Thousands)	91.6	72.1	44.6	-51%
Production (M€)	6,055	4,950	3,695	-39%
Added value (M€)	2,494	2,080	1,515	-39%
Exports (M€)	3,040	2,852	3,275	+7%

Source: Centre of Information about Textile and Clothing Industry, A.I.E. (CITYC)

Since 2002, the number of textile companies in the region has decreased by more than 44% (1,140 fewer companies from 2002 to 2010), employment has decreased by just over 50% (47,000 jobs), and production and added value have also declined heavily. The only positive indicator is an increase in exports over the period as a whole, although there was a dip around the middle of the decade.

Interestingly, even after the onset of the financial crisis exports rose, from €2,956 million in 2009 to €3,275 million in 2010. However, as shown in the table below, the development in exports differs considerably between subsectors: where the apparel (clothing and knitwear) and other textile manufacturers have experienced an increase in their exports, companies manufacturing yarns and fabrics have experienced a large decline (38%).

[38] Source: Centre of Information about Textile and Clothing Industry, A.I.E. (CITYC). Comparable data only available for these three years.

Table 4: Evolution of the export in textile and clothing industry in Catalonia

	2002	2005	2010	% change (02-10)
Yarns and fabrics	1.346	1.100	833	- 38%
Apparel	1.126	1.119	1.819	+ 38%
Other textile manuf.	568	633	623	+ 10%
Total	3.040	2.852	3.275	+ 8%

Source CITYC 2011

Spanish consumer confidence has been steadily declining and was in 2011 at one of its lowest levels, reaching 70 points on a scale from 0 to 200. This low level has been attributed to extremely high unemployment, lower disposable income and financial volatility. The decline in the home market has been one of the main factors behind the increased focus on exports. The positive development in exports seems to continue, with overall Spanish textile and clothing exports increasing by 12% in 2011 compared to 2010[39].

Our financial analysis for Catalonia is based on 298 firms in the textile and clothing industry. Between 2006 and 2010 (the last available year) the turnover of these firms declined from €1913 million to €1699 million, with growth in 2007, a strong decline over 2008 and 2009 followed by a good recovery in 2010. Turnover shows a small growth and profits recover after 2009. Employment in the 298 firms declined in four years from 17,192 people to 13,692 people (-20%). If we characterize the patterns of the companies, 193 firms have resisted through the crisis and have had small reductions in employment (between 5 and 15%) over the four years. In 34 companies employment grew over the period, so we can speak of a recovery pattern. However, 74 firms downsized, of which 16 with a stable or growing turnover which points to a change in business model. The set of firms is financially solid since 170 firms (57%) have a solvency ratio over 40% but 66 companies (21%) are in a weak position with a solvency ratio below 20%. Overall, the dominant pattern is one of resistance with downsizing as secondary pattern.

[39] Country Profile: Export potential for Spanish textiles and clothing, WTIN Intelligence, April 2012, http://ei.wtin.com/article/HMFRIZ32is/2012/04/19/country_profile_export_potential_for_spanish_textiles_and_cl/

4.2. DRIVERS AND CHALLENGES OF RESTRUCTURING IN CATALONIA

The previous section showed the patterns restructuring of the T&C sector in Catalonia in terms of a large reduction in the number of companies, in turnover and in employment.

The following section will describe the specific drivers of change in the region and how these have affected the T&C sector in the Catalonia region.

4.2.1. GLOBALIZATION

According to the interviewed companies and sector organisations, the liberalization of regulation of import quotas in 2005 has been one of the drivers for the decline of especially the primary textile sector, as it brought many international competitors into Spain and increased import from low-cost countries.

However, many of the companies mentioned that, even prior the trade liberalization, the outsourcing trends in the textile sector had already 'done the damage', and the liberalization simply reinforced this trend. It has been necessary for many clothing companies to outsource part of their production to other countries, especially China, but also India and Northern Africa, as a result of price competition. The impact of globalization has been that the bankruptcy of many primary textile companies and an internationalization and fragmentation of the value chain. This has weakened the network amongst the T&C companies as described in the previous section and led to a decrease in flexibility of the remaining companies, as they are now dependent on subcontractors from Northern Africa, Asia and more recently Romania. There are now very few local sourcing opportunities and the previous strong network between the companies in Catalonia has been lost. There were signs of personal relations between companies in Olot and Igualada, but even here the companies highlight the loss of the previous strong network due to large job losses and company closures.

Several company interviewees mentioned that they see signs that production is starting to return to Europe with some of their European competitors now placing parts of their production in new member states rather than in Asia, but also that the reduction in the number of textile companies means that it is unlikely that production will return to Catalonia/Spain as the skills and workers are no longer present. Interviewees also stated that the outsourcing companies in Asia and Northern Africa now deliver high quality and include very large companies with access to skills, which will increase competition further.

4.2.2. CONSUMER DEMAND AND DISTRIBUTION CHANNEL

According to all interviewees, the change in demand structures of both consumers and, especially, retailers have played a major part in the restructuring of the T&C sector in Catalonia.

Previously, the different types of retailers had large stocks and placed large orders well in advance, giving the producers large orders and time to adjust to demand. In recent years this pattern has changed to a just-in-time system. The retailers now require the clothing companies to deliver within a very short time period. This naturally also trickles down to the textile companies. Hence, in order to stay competitive, the companies need to be extremely flexible or have a stock of the required product ready. However, this can be problematic as the demand changes constantly and there is a risk of the stock remaining unsold.

This change in demand should benefit local primary textile companies, however, although the companies can deliver quicker than the companies in the Far East, they are unable to compete on price with similar companies in for example Romania. Adding to this, the skills are disappearing, so especially the clothing companies in Catalonia are forced to outsource production or parts thereof.

Consumer demands and changes in fashion have also played a vital part in the restructuring of the business strategies, both in a negative and positive way. An example is highlighted below.

Box 1: Castellet Y Castellet

5. *Castellet Y Castellet provides an illustrative example of the struggle of many of the traditional clothing companies in the region. Castellet y Castellet is a family owned company and produces ties and scarves for men. The main market is Spain and it presented a drop in turnover and employment of 50% since 2007. The owner indicates two main reasons for this: a change in fashion trends (fewer men wear ties compared to previously) and a lack of sufficient financial resources to allow the company to expand into new international markets.*

The company received funding from the Catalonian regional government to go to international trade fairs, but the representative complain that such funding is often received a long time (up to 6 months) after the fair. In addition, the company experiences great difficulties in getting access to finance to explore opportunities in overseas markets such as China and India, where they see a growing market for their products. In order to get loans, the company has been faced with a requirement to demonstrate either a large economic potential or security of the business. This is a real problem for many of the small textile companies in the region.

The large dependency on the Spanish home market is, according to company owners, a major issue for many of the local companies, especially due to the large decrease in consumer confidence as described above.

For other companies changes in consumer preferences in areas such as sales channels (e-commerce, outlets etc.) and in fashion have proved positive. One example is the rise in demand for quality and diversity in children's clothing, which has meant that smaller companies can sell their own labels if they work in the right niche area. In the business models section below, there is an example from a company that managed successfully to use these changes in demand, to change their own label into what could be called a brand.

5.1.1. THE FINANCIAL CRISIS

The most severe impact of the global financial crisis on the Catalonia T&C industry has been felt in the home textiles market, where the financial crisis starting in 2008 has hit harder than in many other member states. This has resulted in a decrease in consumer confidence and consequently in the demand for textiles and clothing in the home market. As can be recalled from the introduction, the largest share of the T&C companies' turnover has been created in the home market up until now.

Although exports have increased, many of the T&C companies in the region are micro and small businesses and, according to the interviews, they are struggling to enter the international market. Whereas many EU member states have been exporting for more than half a century, Spain did not start to focus on exports until after the end of the Franco regime in 1975. Also, Spain did not enter the EU until 1986 and prior to this point in time, they were

not to the same extent exposed to competition on the local market. The relatively late adjustment to entry into the EU (i.e. a relatively late exposure to competition) has, according to some of the companies, resulted in slow responses to economic and market changes such as the financial crisis when compared to other EU countries.

However, the difficulties are also related to access to finance and lack of management resources in the companies. Many companies are family owned which makes it hard to attract external management. The number of graduates from textile schools has already been low for more than a decade. The interviews with the companies revealed that it has been extremely difficult to obtain loans because banks require security, which many of the companies are unable to provide. Companies applying for loans also say that they are penalised by the impact on the sector's overall image of the large decline which has resulted in an image of a declining sector with little or no future. This is surprising since the financial analysis shows that the majority of firms still have healthy balance sheets, even if trends in development of turnover are rather showing stagnation and a strong downward impact of the 2008/09 crisis.

Summing up, the financial crisis has added additional pressure to the forces already at play with respect to globalization and changes in consumer and retailer preferences, as described in the two previous sections. The financial crisis has resulted in a significant reduction in domestic demand, forcing companies to look into internationalisation (exports) for which they are often ill prepared. Adding to this is the lack of access to finance because banks have become much less willing to lend as a direct consequence of the crisis. This makes it difficult for companies to finance measures aimed at restructuring, whether these be oriented towards entering new markets, investing in new production locations, or other initiatives. Ultimately, this may mean that companies in a weak financial position (e.g. low solvency ratio and declining turnover) may have been forced to shut down rather than attempt restructuring their activities.

5.1.2. TECHNOLOGY

In relation with the general framework technology is a minor driver in Catalonia. In general the uptake of new technology has been lower than in textile regions such as Lombardia and Baden-Wurttemberg. This might have lead to a loss of competitiveness for example in printed fabrics or in technical textiles. The focus of companies has rather been on downsizing and change in business strategies. There is little evidence of substantial modernization through replacement of equipment; the lack of technological dynamism may thus be a negative factor.

5.2. COMPANY RESPONSES AND BUSINESS MODELS

The perception of the future in the interviews with the companies differed greatly – however all agreed that the current economic situation in Spain has a significant impact on the industry as both demand and access to finance is decreasing.

This section will highlight the main strategic responses used by the companies as a reaction to the drivers and patterns of restructuring mentioned before.

In Catalonia, three main business models were identified:

- Co-contracting/hybrids
- Diversification and specialization
- Two string strategy

In the following, each of these three strategies will be described, providing concrete company examples to illustrate the practical implications of these business models.

First, however, we take a closer look at the technical textiles sector in Catalonia to see whether this has offered a restructuring path for Catalonian companies.

Box 2: Technical textiles in Catalonia

6. *Technical textiles is in general in Europe a rather successful segments in the last decades in textiles. We took the Catalonian case to test whether there is a pattern of companies that over the last decade made a transition from fashion textiles or home textiles towards technical textiles. This is not the case: technical textiles is largely a self-standing segment of the industry. Transition to technical textiles cannot be considered a response to the restructuring of the last decade. However, the technical sector has itself not been immune to restructuring over the last four years, and is also likely to be vulnerable over the next years.*

7. *In Spain it is rather a small sector. Most firms in this sector are based in Catalonia, but with 19 exhibitors (most of which at a collective industry stand) at Techtextil in 2011 (the most important International Trade Fair for Technical Textiles and Nonwovens) it is a modest presence even compared with Belgium or the Netherlands. It is however the largest group of Southern European (except Italy) technical textile firms before Portugal (13) and Greece (1). Most of the companies active in technical textiles were traditionally active in this sector. Sati and Sauleda are typical in this case. Others, such as Finsa, Antex and Estambril, made a transition from fashion to technical textiles but did so before 1990. Sedatex also has some sales in technical textiles, but it remains chiefly fashion oriented. IBQ is the only recent newcomer as it was established in 2002. We have not found cases of more recent transitions towards technical textiles. Only Sati used its presence in technical textiles and in home textiles to develop a more technical range of interior textiles for hotels, cruise ships etc.*

8. *IBQ and Estambril present interesting models since they are mainly engaged in developing and commercializing fabrics and are only active in limited parts of the supply chain. They subcontract part of the production to third parties, while focusing on finishing and coating in-house They are also small niche players in a European market dominated by firms like TenCate or Schoeller. Estambril is one of the six manufacturers licensed by Dupont to make aramide-based protective fabrics. IBQ has developed protective fabrics with coatings. They have both been able to get out of commodity protective fabrics, unlike many competitors and cater for the needs of clients with high demands.*

Sauleda and Sati are vertically integrated and have a broad export orientation. Antex pursues a global strategy with a commercial and industrial presence in Latin America. Delocalization aims primarily at being close to the customer. Finsa has become part of the German Group GKD while other German groups have subsidiaries in Spain mainly to supply automotive assembly (e.g. Borgers, AundE and Freudenberg). Therefore nearness to customers has assisted the development of production.

The position of the technical textiles sector is however vulnerable. In the first place, the financial position of the selected firms is weak with a solvency ratio below 20% for Sauleda and Sati. In the second place turnover development as well as profitability is lower than in comparable firms in Europe. In the third place, it is highly dependent on the automotive production in Spain. This contracted severely in 2009, and after a small recovery in 2010 declined further in 2011 and 2012. There is a risk that with a restructuring of car assembly in Europe, sites in Spain may be closed. In the fourth place none of the technical textiles firms have a commanding position in Europe. Few companies have a strong technology base (e.g. hold patents). Further downsizing is thus likely.

8.1.1. CO-CONTRACTING AND HYBRIDS

The Catalonian regional government has seen opening of new distribution channels as a way forward, and indeed this strategy has proven a success for a few companies in the region. However, according to the interviews in Catalonia, the main barrier to this type of restructuring is reluctance in companies to change their traditional distribution channels. The company Star Textil is a good example of the business model co-contracting and hybrids. Their success is very much based on renewing themselves and especially through new distribution channels.

Box 3: Star Textil – creation of own brand

9. *The Catalonian company Star Textil was founded in 1981 by Francesco Algas and three years later his wife created the brand name Boboli. The two companies merged in 1984. Since then, the company has been through several restructuring processes. From the onset, the company focused on manufacturing garments for other brands with a clear focus on exports. In the early 1990's, the company started to distribute their own brand name to multi-brand shops.*

10. *In the late 1990s, the company found that it was no longer economically viable to produce in Spain, so outsource production in Morocco and later, in the Far East. In the year 2000 the company decided to focus more aggressively on new distribution channels and focus their product lines on children's clothing.*

By 2011 they sold their garments to more than 800 sales points in specialized multi-brand shops in Spain. On top of this, since 2000 they have started and operated their own exclusive shops under the name Boboli in order to maximise the expansion of the label and empower the brand. At international level, they now have more than 500 sales points and 50 shops in 40 countries worldwide. The transformation of the company has led to significant changes in the composition of staff. Previously, 10% of the employees worked in administration, design and marketing – by 2011 this share was 90%. According to the CEO, the key to success for the company has been their ability to renew and adapt themselves to the market conditions.

The above example shows that creating your own brand is a lengthy process, from thinking about putting their own label on the garments, finding relevant distribution channels, marketing and finally achieving consumer recognition of the label/brand.

One asset of the region is, according to the companies, that Barcelona is known for fashion and this helps the companies when launching labels outside Spain. Also, although hard hit by the latest financial crisis, the large home market is still seen as a major advantage compared especially to smaller member states.

10.1.1. DIVERSIFICATION AND SPECIALIZATION

In Catalonia, specialization has been the main change in response to restructuring patterns of several companies. One example of regional specialization is provided by the area of Olot in Catalonia where companies have specialised in using recycled cotton as a raw material. Although recycled cotton is nowadays widely used, being Olot a first mover, it still have a competitive edge in this niche area.

One of the companies interviewed, Filatura Vera, went from being a spinning mill producing cotton thread to specialising in using recycled cotton as a raw material.

Box 4: Filature Vera – Specialization in recycled yarns

11. *Filatura Vera was a traditional spinning mill based in Olot, Catalonia. In 2008, Filatura Vera closed down its own factory, because it was unable to compete on price with especially India and Indonesia. In order for the company to survive, a new factory was needed. However, it did not make sense to invest approximately €10 million in new facilities in a declining sector with severe competition from the Far East. Instead, the company concluded an outsourcing deal with neighbouring company Hilados Dusol, so a share of Hilados Dusol's production is produced by Filatura Vera.*

12. *Filatura Vera has developed expertise in recycled yarns and provides support to foreign suppliers (India, Pakistan, Bangladesh) in order to produce the most basic yarns at a competitive price while matching Filatura Vera Quality standards. Hilados Dusol also produces for its own customers but is more focussed in its production while Filatura Vera has increased its range of products and suppliers.*

13. *The drastic restructuring in 2008 meant that Filatura Vera went from 55 to 3 employees, while turnover 'only' fell from €6 million to €2 million. However, the restructuring process has been a success and in 2011 the company overshot its turnover forecast by 30%, reaching a turnover of approximately €4 million (and doubling the 2010 turnover).*

It is clear that the globalization and focus on recycling in especially Asia has led to a restructuring of the companies in Olot. The downsizing has been very pronounced with respect to the decrease in the number of employees, while the impact on turnover has been significant, but proportionally smaller, than the impact on the number of jobs (cf. the example of Filatura Vera described in the box above).

Some of the other companies interviewed also focus on specialised and high-end products, but mentioned that even here competition is extremely tough, in this case mainly from other EU countries.

Diversification into new markets, especially international markets, has also been a company response in Catalonia. This is mainly a response to the declining home market. Such market diversification is mainly attempted by medium-sized and large companies with internal capacity to search for and enter new markets. The example of Star Textil above is also an example of market diversification.

The interviewed micro and small companies stated that they attend international trade fairs, but that they were still struggling to reap the benefits from these.

13.1.1. TWO STRING STRATEGY

The business model combining internal production of high-end products with outsourcing of low-end products has been adopted by several clothing companies in Catalonia. This, according to the companies, was necessary in order to cope with competition from low-cost countries on price (outsourcing) while being able to produce within proximity to meet the demand of the retailers and avoid large stocks. The latter driver differed amongst the companies. Some decided to produce in the area, and this was, according to the companies, only possible by investing in new machinery and modernising the production. Others, decided to outsource production of smaller scale and high quality products to new member states or Northern Africa, maintaining in this way to some extent

the competitive advantage of proximity. A good example is Punto Blanco that has managed to stay competitive through a two-string strategy.

Box 5: Punto Blanco – Two-string strategy

14. *Punto Blanco provides 40% of the socks sold in the Spanish department store chain El Corte Inglés. The control of stocks has recently been switched from the retailer to the producer. Using a vendor managed inventory online system, Punto Blanco controls the stock in all the brand stores in the whole of Spain. The system allows them to follow the amounts sold and the remaining stock, so the stores stocks can be refilled in time. However, according to the company, the logistics involved in this supply chain strategy requires physical proximity between production facilities and markets. Therefore, and also with a view to maintaining the high quality of the Punto Blanco label, the production of the high quality socks still takes place in Igualada in Catalonia, while the bulk production is produced in Asia.*

Two other examples of Catalonian industry applying a two-string strategy in response to the challenge of globalization, adjusting their production to the requirements of clients, are DOGI Group and Sedatex, described below. While Dogi chose to set up factories in Asia to follow the sourcing strategies of leading lingerie makers, Sedatex chose to develop sourcing services for clients based on its textile printing technology. Both companies implemented the new business models over the past decade (starting around 2001-02).

Box 6: Dogi Group – Two-string strategy

15. *The Dogi Group was already by 2000 one of leading players in elastic fabrics for lingerie in Europe. This was a sector vying for concentration with leading players in Europe such as Courtaulds (later Sara Lee Intimate apparel) and Sherwood. When Courtaulds restructured in 2001, Dogi acquired its elastic fabrics division. In 2007, Dogi bought the leading American player, EFA. A long term trend is the shift of lingerie production to lower cost countries, since the making of bras is very labour intensive. The volume market shifted to Asia, with locally supplied fabrics. The quality lingerie production remained controlled by European firms, using Tunisia as the main sewing country, but with European fabrics. Dogi chose to follow its clients and set up factories first in Thailand, then in China and in Sri Lanka. The strategy was to produce fabrics close to the assembly of the products. Dogi maintained its production in Spain, which it concentrated from 4 to 2 factories. Despite these strategic choices, however, Dogi was not profitable. The Spanish production was in a situation of overcapacity while the building up of production in Asia went too slowly to enable to make profits. The policy of expansion and globalization led in the years 2001-2007 to an increased financial gearing - a high level of loans - while no profit was made from 2004 onwards. Dogi went bankrupt in 2010 and after the disposal of one Spanish factory, the joint ventures in Thailand and Sri Lanka, as well as a restructuring of debt, it restarted in 2011. The conclusion is that Dogi understood well the changing market dynamics in lingerie, but took on too much debt to finance its internationalisation and was too slow in implementing it.*

Box 7: Sedatex – Two-string strategy

16. *Sedatex is a traditional printer established in Barcelona. It has followed vertical integration for weaving and*

printing in Spain and was well positioned to serve Inditex, Mango, Desigual and other retailers with unique printed fabrics, but the volumes and prices it could offer were increasingly not compatible with the international expansion of these retailers; on the other hand these retailers still wanted to use the designs of Sedatex in their collections. As Sedatex turnover started declining from 2002 onwards, in order to meet the demands of its clients, Sedatex set up a division called PACT'04. The purpose of PACT'04 is to support clients in sourcing products from Asia, using the design base and design skills of Sedatex in printed fabrics. By doing so, the client could benefit from Sedatex designs, have the benefit of rapid deliveries as existing designs and printing cylinders were used and gain advantage from the lower costs of production in developing countries. While Sedatex turnover has continued to decline (from €102 million in 2007 to €97 million in 2010), the turnover of PACT'04 has grown from zero in 2004 to €26 million in 2010. It has maintained the employment basis of Sedatex in Spain at a level around 160 people. The share of personnel involved in production has however declined, while staffing in design and logistics has increased. This shift in business model was indeed successful; the ability to offer a total service is beneficial for clients and it enables to optimize the use of intellectual property (designs) and discourages to some extent the counterfeiting of designs by its clients.

16.1. STRATEGIC RESPONSES BY POLICY MAKERS, BUSINESS ASSOCIATIONS AND EDUCATIONAL INSTITUTES

The following section will show how the support institutions (policy, research/educational) have followed the overall restructuring of the sector and attempted to meet the demands of the industry. We will first look at public support to the sector (both policy and funding), as well as the role of business associations. This is followed by a discussion of the role of research and education institutes.

16.1.1. POLICY SUPPORT

The Government of Catalonia published in 2010 the report *Clusters and Competitiveness: The case of Catalonia (1993-2010)*[40]. It was a cluster study where focus was on learning from the most successful companies in the region – basically to find elements in their business models which could be a driver for success for other companies in the region. Subsequent government initiatives were based on the findings of the cluster study and focused on helping companies to export and create new distribution channels. However, according to the interviewees, the problem is that only a few large companies have been successful using these business models (examples are Zara, Mango, Desigual) and these models are very difficult to transfer to small companies. However, it should be said that these government initiatives have been beneficial for some of the companies interviewed, helping them focus on new distribution channels in their business strategy.

[40] Government of Catalunya, Ministry of Labour and Enterprise (2010): Clusters and Competitiveness: The case of Catalunya (1993-2010)

One of the issues mentioned by the interviewed companies is that the region no longer works as a cluster. Although a cluster on paper, there is little communication and no steering from any association. Despite a restructuring engaged from 2000 onwards, no strategic plan has been developed by the industry.

It was also the view of the companies that the public support is very limited. Financial support decreased from 2005 due to the economic downturn and prioritization of other sectors. ERDF funding is in the operational programme oriented towards projects co-funding SME support and access to innovation. These projects are always collective, and focus on dissemination of research, exports and market information. Several of the interviewed companies indicated that they realise that the sector has experienced a massive decline and may therefore not be seen as a priority sector for (public) support. However, they felt that even having now survived many different challenges, the negative image of the sector remained the same. None of the companies interviewed for this case had directly applied for or benefited from EU-funded regional support instruments.

The regional government of Catalonia submitted a proposal to the European Globalisation Fund to assist workers made redundant in the textile industry in 2009 (see box 8)

Box 8: European Globalisation Fund in Catalonia

A proposal to the European Globalisation Fund for workers in the textile industry was submitted by the regional government of Catalonia in 2009. The proposal covered 1100 workers, from 33 firms. Some were made redundant because of reorganization, others because of closure or bankruptcy of the firm; the proposal targeted also workers Filatura Vera in Olot. The subject was briefly mentioned in the interview, but since firms are not beneficiaries of the intervention it was not further addressed. This box is based on publicly available sources[41]. The proposal was justified because of increased competition from China after liberalization of trade but also because of the strength of the Euro against the dollar that reduced the competitivness in export of the whole region..

The intervention was planned towards 1100 workers with a total budget of 6,6 Mln Euro, of which a 50% funding through the EGF,. By 2011 only 0,5 Mln Euro was paid out. The main objective was to provide training and job seeking assistance to workers. Only 53% of workers were reached by the intervention. Those not reached were often over 55 years of age. Only 5,2% of the targeted workers (30 people) were effectively re-employed, which is amongst the lowest rates amongst EGF interventions. Entrepreneurship was also less successful than in other interventions. 66 workers were targeted for training and support towards entrepreneurship of which 10 participated. There were no start-ups reported by 2011. The relative failure of the plan supported by EGF is explained by GHK[42] because of the negative employment trends in industry in Catalonia since 2009 but also to the low geographical mobility of workers.

16.1.2. BUSINESS ASSOCIATIONS

[41] http://www.lex.unict.it/eurolabor/documentazione/altridoc/ricerche_rapporti/EGF_mid-rev_Jan12pdf.pdf

[42] http://www.lex.unict.it/eurolabor/documentazione/altridoc/ricerche_rapporti/EGF_mid-rev_Jan12pdf.pdf

The two business associations interviewed (Texfor and CITYC) have an important lobbying role, both locally and in the EU. However, the interviewed companies perceived these business associations as having little direct impact on the companies. Another organisation is FITEX[43], a private non-profit institution, whose main role is to encourage innovation in the knitting industry. FITEX is supported both by the Catalan Government and the companies and works primarily with smart textiles, but has recently engaged in other non-technical activities requested by the companies; an example is provided below.

Box 9: FITEX – Exploring international opportunities

A group of companies in cooperation with FITEX and supported by the regional government has created FITEX Hong Kong. The companies (SMEs) were able to search for new suppliers individually, but struggled to search for market opportunities and increase quality control. Therefore, in order to create critical mass, the companies joined forces with support from FITEX and employed experts in Hong Kong to assist the companies in everything from finding new suppliers to searching for market opportunities, and helping with regulatory issues. The latest from FITEX is that they are planning to open a FITEX Romania as they see opportunities for the local companies to source more work from within Europe, which will make quality control easier and also become easier to comply with consumer and client just in time demands.

The above example shows that there is a demand for support to the companies in export activities to emerging markets with a large market potential. The lack of a common strategy in the T&C sector and the lack of communication between T&C companies in the region, indicates that there is a need to develop a common strategy for some of the challenges, such as access to finance, support for exports in key markets and training.

16.1.3. RESEARCH/EDUCATIONAL INSTITUTES

Many of the interviewed companies mentioned that access to skills could be an issue in the near future as many workers in the T&C industry belong to a generation close to retirement. It was also perceived by many interviewees as unlikely that the production lost through outsourcing will return as there are few workers left with the right qualifications and skills. The interviews with both companies and the educational institutes indicated that students are mainly interested in fashion and not in textile technology, and although the companies are requesting more management skills, they still need their employees to have a basic knowledge of industrial processes.

The Fashion School ESDI in Sabadell provided a good example (text box below) of how important communication is between the companies and the educational institutes. Direct interaction with company representatives showed that what companies were looking for was candidates with a broader knowledge of the whole value chain rather than specialist expertise.

Box 10: ESDI Fashion School – Collaboration with industry

The management of the Fashion School ESDI in Sabadell has regular meetings with the industry through a company representative appointed by the companies in the region. Through these meetings, the school discovered that many of the companies did not need an expert in a particular field, but instead a person with a good knowledge of different parts of the value chain, including fabrics, design and management skills. ESDI reacted to this and started a

[43] Private Foundation for Textile Innovation

course combining these skills. The companies in Catalonia have shown large interest in this course. However, again it is mainly the large companies such as Mango and Zara benefitting from this as the majority of the students apply for jobs at these companies. The reason is that these large, well known companies are popular amongst the students, but also because they tend to be directly involved to a larger extent than smaller companies (through visits, projects).

As regards research institutes in the region, the technological institute Leitat close to Barcelona is modern and well equipped with some of the latest technology within smart and technical textiles technological domain. This modernization involved an investment of 13 Mln Euro, partly covered with ERDF funding. Leitat has identified seven markets/sectors where there is a fit with their research strengths, most in the field of nanotechnology and biotechnology. One of these is the textile sector and Leitat sees this is a major opportunity for the companies to find new innovative ways of working. Technology transfer activities have been co-funded through the ERDF and specifically within Interreg III-A and IV-A projects. As with the research centers Cetemmsa and Intexter, both in Catalonia, some research projects were also co-financed through ERDF.

However, there is a gap between the research offer of Leitat and the innovation demand of the industry. Leitat works closely with many Spanish T&C companies, but only a very limited number of companies from Catalonia. The main usage of Leitat by the regional companies is within product testing, which is useful, but far from cutting edge. The number of companies from the region engaging in R&D projects is very limited. Hence, the region's T&C companies do not reap the full potential benefits from the presence of this facility.

The situation can be viewed from two angles. Either the companies are not innovative enough to engage with Leitat or there is a mismatch between what is offered and what the companies need. Most likely, it is a combination of the two. Again, better communication between the companies and research/educational institutes could possibly increase the options for and the breadth of collaboration.

16.2. KEY FINDINGS

The T&C sector in Catalonia has experienced a large decline in turnover, number of companies and employees over the past decade. The three main drivers behind this development have been identified as globalization, changes in customer and consumer demands, and more recently the financial crisis of which the consequences continue to be felt in Spain.

The globalization of the T&C sector, with outsourcing of production to low labour cost countries and the increased competition, are the key factors in the restructuring of the Catalonian T&C sector. The number of companies and jobs in the sector was by 2010 halved compared to 2002. This has led to a fragmentation of the value chain in Catalonia and has resulted in fewer interdependencies between T&C companies of the region. Thus, what used to be a cluster, with strong links between companies, now tends more towards being a simple regional agglomeration of companies with weak linkages between them. Closely linked to the general globalization driver is the change in customer demand from large scale orders to just-in-time deliveries, which are another important factor pushing companies in the region towards restructuring.

The financial crisis, starting in 2008 but continuing into 2012, has had a significant impact, manifesting itself in a shrinking home market, change in consumer behaviour and difficulties in access to finance. A number of the interviewed companies indicated that the credit crunch is severely felt and that it is difficult to secure financing for

restructuring activities such as modernisation or export drives. Spanish consumer confidence is at a record low and the reduced home markets hits the Catalonian companies especially hard since they have not traditionally been very export-oriented.

Exports increased significantly in recent years however ,from a low starting point and only in clothing and 'made up textiles' whereas exports of yarns and fabrics have decreased. Many of the family-owned and smaller companies are still struggling to enter foreign markets. The Catalan Government has focused on new distribution channels and exports in their strategy for the cluster. The rationale behind these initiatives is "learning from the best", based on studies of successful exporters such as Zara and Mango. However only a few companies had real benefit from these initiatives since the business models on which they are based (large international firms) are difficult to apply for SMEs. However, it has had an impact on the way the companies are thinking, as the majority of the companies mentioned distribution channels as something they were focusing on; but for many this shift in the company priorities has not been enough to remain competitive.

Companies changed their business models in order to respond to the restructuring drivers. These were the main ones that emerged:

Two-string strategy: In order to stay flexible and meet the just-in-time demand, some companies have located their bulk production in low-wage countries – primarily in Asia, but increasingly also in the new member states (Romania) - while keeping production of high-end products in Catalonia. The main driver behind this model is the change in demand structures from retailers, from large volumes towards just-in-time deliveries, and this has trickled down the value chain.

Co-contracting and hybrids: The Catalan Government's focus on promoting new distribution channels has to some extent been taken up by the companies. An increasing number of companies have established their own label through a number of new distribution channels. However, there is still reluctance and management issues (lack of skills and support) towards export expansion, and as the home market has contracted drastically, the Catalonian T&C companies are under severe pressure.

Diversification and specialization: As in many other T&C regions in the old member states there has been a focus on specialization (for example on use of recycled cotton), niche markets, and high-end products. In this way, Catalonian companies can distinguish themselves from their competitors in low-cost countries that mainly focus on bulk production of low-end to standard goods.

Collaboration between the companies with universities and technical institutes in the region is limited and mainly concerns testing while R&D collaboration is rare. The facilities are very good, but they are hardly used by the companies. The Fashion Schools are collaborating with the industry and have created new courses tailored to the requirements of the industry, but again, many of the graduates from the schools are hired by large brands such as Zara and Mango rather than companies in the region.

To sum up, the decline in the T&C sector in Catalonia has been severe and major restructuring is taking place in the surviving companies. The economic situation (financial crisis) is a great issue as many of the companies are very much oriented towards the domestic market. Finding new export markets seems to be a suitable way out together with the change in business model and the FITEX Hong Kong initiative appears to be a step in the right direction, both in terms of exploring new markets, but also for bringing the companies closer together to explore new opportunities.

17. CASE STUDY LITHUANIA

17.1. INTRODUCTION

Lithuania has a population of approx. 3.5 m inhabitants, with the majority living in urban areas. Vilnius is the capital as well as the largest city in Lithuania with approx. 350,000 inhabitants.

Lithuania had a relatively high registered unemployment rate at 17.8% in 2010, an increase of over 4% from 2009, but down again to 15.4% in 2011. After having dropped more than 14 percentage points in 2009, GDP growth increased in 2010 to 1.3% and in 2011 to 5.9%.[44]

The agricultural sector and the service sector account for 3.4% and 68.7% of GDP respectively. The industry sector accounts for the remaining part of GDP (27.9%) with focus on the metal and electronic industries, food processing and textiles. The textile industry accounts for 7% of exports, and Lithuania's main export commodities are minerals, machinery equipment, and chemicals. The main export partners (2011) are Russia (16.6%), Latvia (10.2%), Germany (9.3%) and Poland (6.9%). Imports are determined by the same or similar goods as exports to the same trade partners.[45]

17.1.1. THE LITHUANIAN T&C SECTOR IN FIGURES

The Lithuanian textile and clothing industry is spread across the whole of Lithuania. However, the majority of the industry is concentrated around Kaunas, the 'textile capital of Lithuania', with approximately 60% of the total textile/clothing production based in Kaunas and surroundings. Siauliai is an important outer knitwear production centre. But in addition to that locations are spread over the whole of Lithuania in cities such as Vilnius, Raseiniai, Panevezys, Alytus and Birzai. Factories in smaller towns have been closed during restructuring (cf. the Drobe case later in this report).

The total turnover of the Lithuanian textile industry was rather unstable in the period from 2000-2010, and the development of the two sub-sectors, textile and clothing, has followed substantially different patterns. As the figure below shows, the textile industry saw a substantial drop in turnover from 2000 to 2003 followed by an increase in 2006-2007, whereas the clothing industry saw a substantial increase in turnover with a minor drop from 2003-2007. In 2007-2008 both sub-sectors were hit extremely hard, most likely due to the financial crisis, but they

[44] Statistics Lithuania, Annual data on labour force, employment and unemployment and Main indicators of economic and social development.

[45] Statistics Lithuania, Exports and imports by CN section

appear to have recovered with a substantial increase in turnover since 2009, especially in the clothing industry where, as we shall see, a number of companies have managed to secure a position as subcontractors to European (in particular Scandinavian) branding companies. Textile production suffers among other things from the drastic decline in the Lithuanian agricultural production of flax, which means that raw materials now have to be imported.

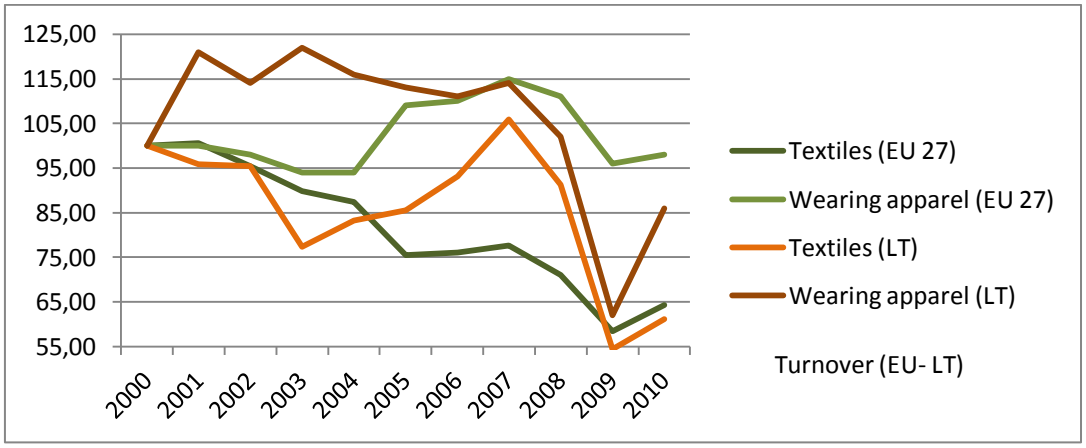

Figure 2: Turnover in the textile (NACE DB17) and clothing (NACE DB18) sub-sectors 2000-2010, Lithuania and EU27 (Index 2000=100)

Source: Euratex (Eurostat)[46]

As the figure indicates, the turnover in the Lithuanian textile and clothing industry has not followed the European development except for the fact that the increase in turnover between 2009 and 2010 in EU27 is also visible in Lithuania. The turnover in the textile industry increased more than the EU average in the years 2004-2009 - where the turnover dropped even faster than the EU average during the previous years. However, the turnover in the Lithuanian clothing industry increased more than the EU average until 2008.

The years from 1993 to 1998 show a very large change in exports after the fall of the Soviet Union. In 1993, 17% of the exports of went to EU countries, but this figure increased to 70% in 1998. The year 1998 is considered to be a turning point in terms of exports for three main reasons:

- Import customs were removed for Lithuanian T&C products for the EU market in 1997.
- Import tariffs were introduced by Russia for the Baltic States, which made it extremely difficult to compete on the Russian market.
- Financial crisis in Russia in 1997-1999.

Together, these factors account for the drastic change in export orientation away from Russia and towards the EU. The table below shows the main trade partners for the Lithuanian T&C sector in 1997 where Russia is the main export destination with one quarter of the export. However, already in 1998 it has been reduced to only 7% and countries like Germany, Denmark and the UK became the main trade partners.

[46] Data for the clothing industry is here labeled as wearing apparel as used in official statistics (NACE14: wearing apparel). The same will for the other case that present data at national level.

Table 5: T&C export destinations 1997 and 1998

Country	1997 (% export)	Country	1998 (% export)
Russia	24%	Germany	23%
Germany	12%	Denmark	11%
Belarus	11%	UK	9%
Ukraine	9%	Russia	7%
Latvia	8%	Sweden	6%

Source: Lithuanian National Statistics Office

In 2001 the export share to Russia dropped as low as 3%, but in 2007 Russia returned as an export destination with 8% and in 2011 Russia was once again the largest export destination with 23%.

However, when looking at exports of Lithuanian origin textile, clothing and leather products in 2011, Russia has disappeared again. The reason for this is, according to LATIA, that Lithuania is a re-export country for textiles and clothing products going to Russia (via Lithuania). In other words, foreign companies use the knowledge of Lithuanian companies and their network to enter the Russian market, but the products are not of Lithuanian origin. The export value of Lithuanian T&C products is 2.45 million LTL (approximately €709,000) and the re-export value is 1.5 million LTL (approximately €434,000).

The diagram below shows a somewhat similar distribution of exports between the two sub-sectors. The Lithuanian export of textiles dropped steadily from 2003 with a brief recovery in 2005-2007 and then another drop in 2008, followed by an increase in 2009-2010. However, the apparel sub-sector experienced an increase in exports, with a small drop in 2005 and 2008. Total exports of textiles and textile products is now at a higher level than in 2000 as they increased significantly from 2009 to 2010.

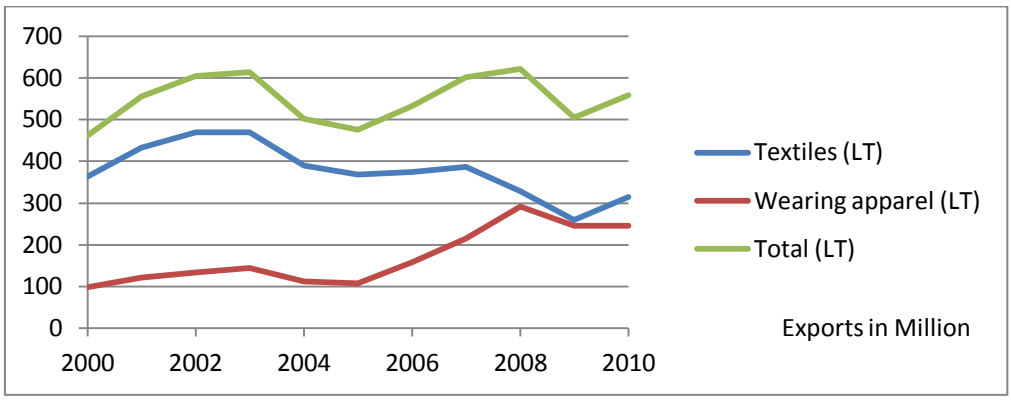

Figure 3: Lithuanian Textile exports 2000-2010, real figures (million €)

Source: Euratex (Eurostat)

The main markets of the Lithuanian textile industry are the largest countries of Europe. For example, in 2007 Lithuania exported textiles worth more than €400 million, of which more than €270 million went to EU countries (a similar situation was also seen in the clothing industry – 530 and 440 million respectively). Overall, the Lithuanian textile industry is affected by the economic situation in the largest countries of the EU.[47]

With regard to the volume of domestic production, the Lithuanian development differs once again from the European. This applied in particular to the clothing segment until 2007, where no substantial decrease can be traced in Lithuania, as was the case of Europe. The Lithuanian textile industry differs from the EU average due to a substantial increase in the years 2003 - 2007. However, a sharp drop during 2007-2009, most likely as a direct result of the financial crisis both at home and in export markets, led to the overall level of domestic production volumes in both sub-sectors being almost halved during 2000-2010. However, recovery seems to set in from 2009.

[47] Rimvydas Milašius, (2010) Lithuanian Textile Science and Industry: A Retrospective on the 70th Anniversary of the Department of Textile Technology, *FIBRES & TEXTILES in Eastern Europe* 2010, Vol. 18, No. 1 (78) pp. 7-13.

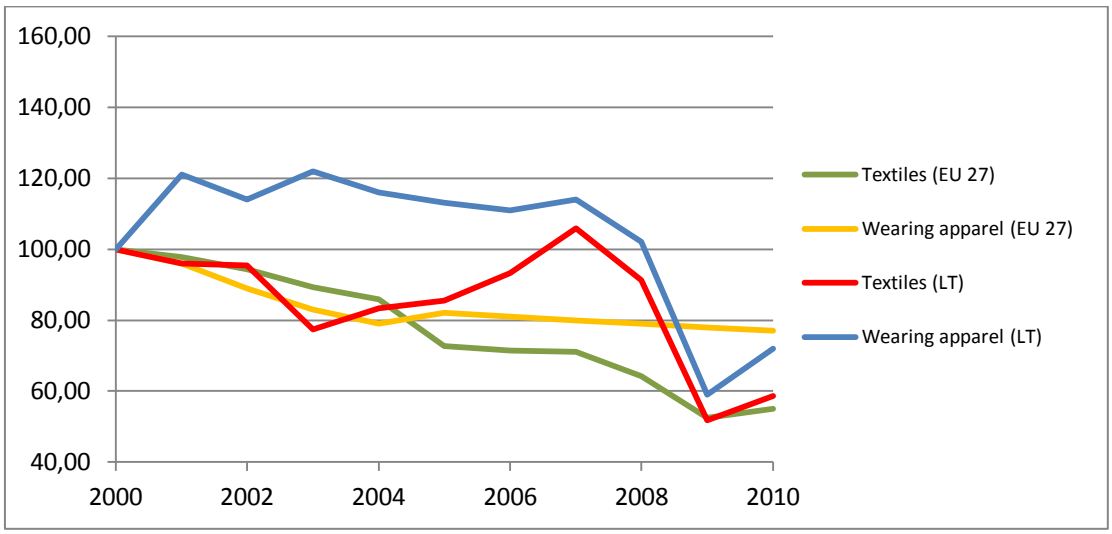

Figure 4: Volume of production 2000-2010 in Lithuania and EU27 (INDEX 100=2000)

Source: Euratex (Eurostat)

Employment in the textile and clothing industry has been decreasing as the number of enterprises dropped between 2000 and 2010 –by 75% in the textile industry and by 37 % in the clothing industry. The many enterprise closures can mainly be attributed to a lack of orders from international customers – as the vast majority of the Lithuanian T&C companies are subcontractors. However, increased competition on the domestic market through import of cheaper products from Asia has also put pressure on the companies, causing closures.

Nevertheless, the clothing industry actually saw an increase in employees from 2000-2003 followed by a large drop until the recovery started setting in after the financial crisis in 2008-2009 as seen in the figure below.

In 2010 the employment figures from the official Lithuanian Statistics department[48] showed that the overall employment in the T&C sector is approximately 25,000 distributed on approximately 6,000 in textiles and 19,000 in clothing.

[48] http://www.stat.gov.lt/en/

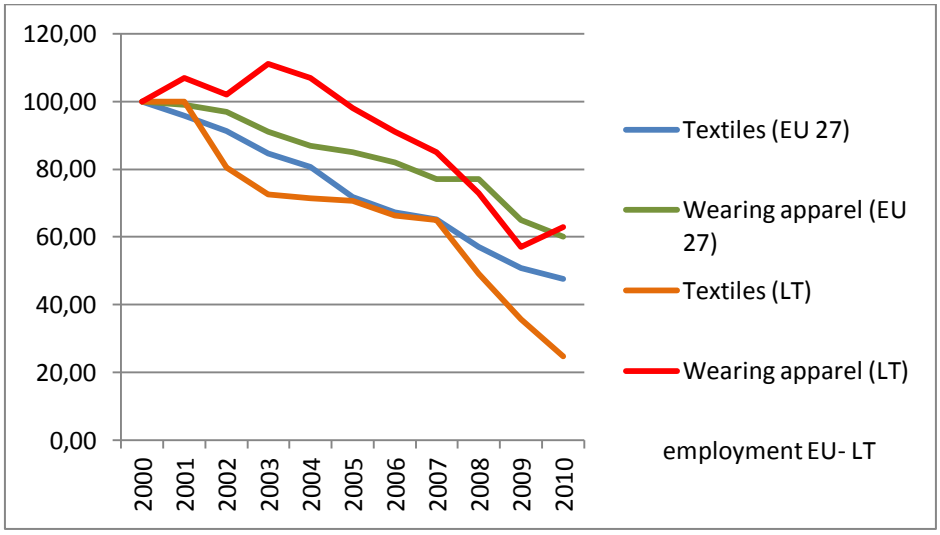

Figure 5: Employment of the sector 2000-2010 (Index 100=2000)

Source: Euratex (Eurostat)

The sub-sectors with the largest share of employment in the Lithuanian T&C sector are *'manufacturing of made-up textile articles, except apparel' and 'textile weaving'* as seen in the figure below.

Figure 6: Employment of the sector on subsectors 2002-2007

Source: Eurostat Data, Structural business statistics, own calculations. 2004 figures not included due to data error.

In terms of value added there has been a positive trend in the Lithuanian T&C sector of increasing labour productivity. Measured in gross value added per actual hours worked, labour productivity of the Lithuanian T&C sector has increased from €3.6 in the year 2000 to €5.6 in 2010 (current prices), while the manufacturing sector in general increased its productivity from €4.7 to €11.4 during the same period[49]. According to LATIA, the Lithuanian Apparel and Textile Industry Association, the reason why there is such a low valued added in the T&C sector is due to lack of capital for investment in new equipment and technologies. There is however, a positive trend as the labour productivity in 2010 was almost 30 per cent higher than in 2002 and looks to continue to grow. This is according to the interviewees due to automation, new equipment, but also due to companies engaging in lean processing. However, some subcontractors have also started to work with higher value added activities, especially service functions (design, logistics). Finally, some companies have started to work with own labels as well (cf. section 4.3 on company responses and business models).

The following section highlights some of the main drivers behind the restructuring that has taken place in the Lithuanian T&C sector.

17.2. DRIVERS AND CHALLENGES OF THE RESTRUCTURING IN LITHUANIA

Four critical events have led to the restructuring of the textile sector in Lithuania. Common with other regions is globalization and the financial crisis. Specific of Lithuania is the fall of the Soviet Union, which led to Lithuanian independence and a change from planned to a market economy and more recently the accession of Lithuania to the EU. Moreover technology has been an important driver of restructuring in Lithuania

17.2.1. GLOBALIZATION

The globalization of the value chain in the end-1990's resulted in increased competition based on outsourcing from the Far East and especially China. It became extremely difficult for the Lithuanian T&C companies to compete with China on low labour costs. This competition had an impact on the companies working as subcontractors for especially non-Lithuanian companies, but also on companies with own labels as cheaper 'made in China' products entered the Lithuanian market. By 2000, the number of employees in the sector had been reduced to approximately 40,000, compared to 120.000 in 1991 when the large state-owned companies still existed and demand was based on decisions made in Moscow.

Lithuanian companies were unable to compete with the Far East and other low-wage countries and thus became less attractive for international investments from a production point of view. Therefore, the T&C sector followed a new approach that meant offering a broader range of services. While the mainly foreign customers manage, design and market their products, the T&C companies provide sewing, quality control, packaging and logistics.

In addition, shifts in requirements of especially large retailers have forced the branding companies in the old member states to be more flexible and comply with quicker delivery times. This so-called 'fast fashion' has made the Baltic region an attractive place for Scandinavian companies to outsource production and lately also an

[49] Source: data provided by Latia

increased number of services. The reasons for this outsourcing include geographical proximity (shorter transport), flexibility and also that the cultural gap is much smaller compared to the Far East, which enables the branding companies to comply more easily with the changes in customer demand.[50]

Furthermore, companies are adapting to international standards and obtain certificates that enhance their credibility when seeking to increase the number of foreign clients.[51] Several companies have focused on environmentally friendly products and services, and some have obtained an ISO 14001 certification to show commitment to not only the quality of the products, but also the production process.

17.2.2. THE FINANCIAL CRISIS

The impact of the financial crisis has, as described above, been severe for both the textile and apparel sector. However, some Lithuanian companies have benefitted from the restructuring happening elsewhere. A few of the interviewed companies saw the financial crisis as positive, especially agents, service providers and subcontractors. The reason for the positive outlook is that the economic downturn has resulted in a need for further cost savings in the old member states combined with the new customer demands leading to just-in-time deliveries. Therefore, particularly Scandinavian companies have outsourced further activities to Lithuanian companies to reduce costs and ensure flexibility at the same time.

However, many companies working under their own labels as well as some subcontractors experienced a downturn in orders as a direct consequence of the financial crisis, resulting in a reduction in turnover and employment. Nevertheless, since 2009, the production volume in both in both the textile and clothing sector has been growing and employment has risen in the apparel sector, but not in the textile sector. The interviewees mentioned that some textile companies have invested in automation and thereby reduced the number of employees. Furthermore, many of the companies mentioned that the companies that have survived the crisis have performed well over a long period.

17.2.3. THE FALL OF THE SOVIET UNION

The Lithuanian textile sector has a long tradition that goes several hundred years back. The industrial success already came before World War Two when the country was one of the leading flax fibre manufacturers in the world, producing 3.3% of total world production. Lithuania was also the main supplier of apparel and textiles in the Soviet Union as part of the centrally planned economy, which led to increased diversification in materials and apparel. In the Soviet Union, 20% of the entire production volume came from the textile industry. Being part of the planned economy also meant that the Lithuanian textile industry had a strong base of experienced textile workers compared to other former Soviet Union republics.

[50] See Danish Case Study

[51] Ministry of Foreign Affairs of Denmark. The Trade Council. Baltics. Edited July 2010.

One of the drastic changes was that after the collapse of the former USSR in 1991, companies had to deal with a drastic shift from a huge (200 million consumers) centralised Soviet market to a market economy. The companies also had to become export oriented as the size of the Lithuanian home market (population 3 million) was far too small for the large companies that were set up to supply the Soviet market. For instance, the cotton mill Alytaus textile had 6,000 employees, the sewing company Lelija had 3,000 employees, the wool company Drobe nearly 4,000 employees, and the linen textile company Linas 4,000 employees.

The business model was based on the central production planning under strict control from Moscow. The central Textile Ministry in Moscow would announce annual production plans indicating the volumes to be produced each year. Fashion models were developed by Vilnius Fashion House and those models (5-6 options) were supplied to all factories to produce and later distributed to consumers all over the Soviet Union. Material was also sourced from other Republics of the Soviet Union as it was one single market without trade restrictions. For instance, cotton yarn to Alytus Cotton mill was supplied from Uzbekistan, wool yarn for Liteksas, Drobe and other woollen textile producers were supplied from southern Russia, while linen yarn was grown locally and also supplied from Belarus and western Russia.

After 1991, the state-owned companies were privatised and the majority were taken over by their directors - in most cases former top directors are still owners of these companies. In fact, most of the existing companies already existed 20 years ago. However, they were restructured into a number of smaller units with narrower specialisation instead of one big company with the wide range of products and the whole production chain (yarn production – weaving – finishing – dyeing – finished products). Since 2000, it is mainly the weaving function that is left in these companies. The numbers speak clearly: In 1991, there were 97 companies operating with 100,000 employees. In 2011, this concentration on less than 100 companies had shifted to around 1,000 companies with approximately 25,000 employees.

There are only a few cases of new companies with no relation to the former large companies – some of these are described later in this report.

After the fall of the Soviet Union, foreign investors saw an opportunity to purchase the companies that were already private (today all T&C companies are private). The main reasons were access to cheap labour and skills. About 15% of companies are now owned by foreign capital. Almost all foreign investors are from EU, mostly dominated by investors from Scandinavian countries.

Many companies did not survive the 1990's and, according to our interviewees, some of the key reasons for their inability to survive were lack of management skills, including knowledge of export markets and generally how to run a business in a market economy. The privatization process in the early 1990s brought many new owners who were aiming for short term returns rather than long term investment, which hastened sometimes the closure of former state-owned companies – as in the case of the company Drobe in the text box below. In addition, the decrease in financial support from the government was an important factor. Such decrease naturally is one of the key drivers of the restructuring of the textile industry in Lithuania, as the economy changed from a planned to a market economy. Therefore, the skills and finance brought in by foreign investors were important in the transition from state-owned companies to private companies.

In the text box below, an example of restructuring and privatization of one of the large state owned companies – in this case unsuccessful – is presented.

Box 11: Drobe – unsuccessful restructuring and privatization

Drobe, established in 1920, was one of the largest textile companies in Lithuania, producing wool fabrics. By the time of the fall of the Soviet Union, state owned Drobe had 4 factories in Lithuania (2 in Kaunas, 1 in Silute, 1 in Vieciunai) which together employed more than 3000 people in 1992, in spinning, weaving and finishing. After the dismantling of the Soviet Union, like other Lithuanian textile companies, Drobe could no longer export to Russia mainly due to lack of credit. Drobe had to reorient to the European market. This reorientation involved a substantial downsizing and reorganization of the factories while improving the quality of fabrics, to meet European standards. Like most textile firms in new member states, Drobe had outdated equipment, only partly modernized in the 1980s. In 1999 a restructuring plan involved the closure of two sites, the concentration of weaving into one plant, and a second plant for combined spinning and dyeing (mainly yarn dyeing). The number of employees was reduced from 3,000 in 1992 to 1,500 in 1999. Production volume declined from some 10 million metres in 1992 to 6 million in 1999.

In 2000 after the controlling share in the company was bought by the European Bank for Reconstruction and Development[52], Finnish investment funds "Finnventure Rahasto IV" and "V Ky" and the International Finance Corporation, the company was restructured, leaving two factories in Kaunas and aiming to eventually have just one. More than €10 million were invested in equipment for the remaining two factories. By 2000, 80% of the production was being exported to the EU (Drobe was one of the suppliers for Hugo Boss), while 20% was exported to Russia and the Ukraine. Drobe kept its specialization in woollen fabrics but focused mainly on blended fabrics. Part of its production was in rather mid-market polyester/wool blends and part in more fancy mixes of wool and linen and other blends. In order to increase quality, the finishing of fabrics had been subcontracted to a company in Biella, Italy (specialised in wool). This led to higher costs and complex logistics. Despite the investments since 2001 the company was incurring losses. In 2003 Drobe made a loss of €5 million on a turnover of €27 million with 1,070 employees while in 2007 losses were still €2 million on a €18 million turnover with 700 people employed. The production fell below 3 million metres of fabric.

In 2006 Drobe was bought by the Lithuanian owned "Plaza Corporation" which carried out further restructuring of the company in terms of changing management and renegotiating payment terms with both suppliers and buyers, aiming for quick returns. This strategy was probably an overstatement of its influence since both clients and suppliers refused to accept the offered terms. In addition the new management engaged in asset stripping, especially in selling off real estate in a sale and lease-back construction. In 2008 the company filed for bankruptcy. There is some reference to labour unrest in the restructuring process. However, a lack of involvement of workers was reported throughout the restructuring process.

The Drobe case illustrates some of the fundamental weaknesses textile firms faced in the new member states. The restructuring had to be accompanied by downsizing (since the Russian market was lost), while simultaneously investing in modernization of equipment and processes. Drobe successfully became a co-contractor in basic and fancy fabrics, but overplayed its hand, probably because of shareholders desiring to attain quick wins. Hence the privatization led, in the case of Drobe, to shareholders who were not fundamentally interested in a long term industrial perspective. The EBRD acknowledged in 2009 the failure of the Drobe investment and ascribed the failure to the lack of an industrial investor[53].

[52] http://www.ebrd.com/english/pages/news/press/2000/26apr07x.shtml

[53] http://www.ebrd.com/downloads/country/strategy/lithuania.pdf The EBRD acknowledged that a comparable investment in Yulon in Slovenia was successful because of association of an industrial investor, Aquafil Spa (Italy).

17.2.4. ENTERING THE EU – NEW OPPORTUNITIES AND CHALLENGES

After joining the European Union in 2004, many of the big sewing companies were bought by large international, mainly Scandinavian companies; Lithuania was, and still is, considered a flexible production place with relatively low wages. These characteristics developed because of the competition in the free market and the desire to build up a new competitiveness. Again, the country's location by the Baltic Sea and in the centre of Europe, connecting the West with Eastern Europe and Russia creates a logistical advantage and makes it attractive for international companies to use Lithuania as a production location inside the EU.[54]

New markets

Entering the European Union also provided new opportunities for penetrating new markets and increasing funding opportunities. Penetrating new markets is vital for Lithuanian companies, as the local market is very small. This has been a major success for many companies, but mainly through foreign companies outsourcing production to Lithuania. However, trying to enter new EU markets with their own labels is extremely difficult and several interviewees also mentioned that having an established name in Europe is essential when trying to enter markets outside the EU. Some industry representatives consider that these difficulties with getting Lithuanian labels into new markets is due to the reputation of the country as a former Soviet Union republic without a track record in Western fashion and a low-skilled labour force. As shown above, exports have increased steadily over the last 20 years, but this is mainly linked to outsourcing activities by EU companies.

Joining the EU also had negative effects, including textile workers emigrating to old member states offering higher wages - mostly young people not willing to take the low paid jobs. Approximately 50,000 people (not just textile workers) are leaving the country every year. In total, more than 700,000 people emigrated from Lithuania due to the bad economy during the 20 years since the fall of the Soviet Union, mostly to the UK and Ireland. The Lithuanian population has decreased from 3.7 million people in 1991 to only 3 million in 2011.

However, emigration is not the only factor that has led to a lack of access to labour. The jobs in the textile sector are mainly low-paid and according to the interviewees, many workers have shifted to other low-paid jobs in Lithuania, mainly because they require less physical work – mainly supermarkets and other parts of the retail sector. Many companies mentioned in the interviews that access to labour is extremely difficult (more on this in section 5.4).

Entering the EU resulted in increased regulation, but none of the interviewed companies referred to the increased regulation as problematic.

The trade liberalisation in textiles in 2005 had an impact on the Lithuanian T&C companies. As Lithuania had just joined EU on 1 May 2004, the companies had had little time to accommodate themselves in the then EU25 single market with no local trade regulation, when they were immediately dropped into the global market with limited import restrictions to the EU for third country producers. This sudden exposure to international competition resulted in bankruptcy for almost 50 per cent of companies and consequently a drastic drop in employment[55]. The opinion of the Lithuanian textile sector organisation LATIA is that the trade liberalisation had a negative impact on

[54] Lithuanian Apparel and Textile Industry Association (LATIA).

[55] Source: Input from LATIA.

especially new member states as this happened in a transitional period for their textile and clothing companies, that were already struggling to accommodate themselves in the EU market.

The text box below, however, provides the success story of the company Klasikine Tekstile, which made the most of entry into the EU through good management and step-by-step development. An underlying explanation is most likely that this company was the result of true entrepreneurship, founded in 1991 and thus not burdened by the legacy of management practices and production facilities of the large state-owned companies that were geared to operating within a planned economy.

Box 12: Skalmantas[56] - commercial success undermined by financial issues

Skalmantas was a clothing company in Lithuania established in 1962 and specialized in the manufacture of leather attributes for horse-riding. Before 1990 it diversified into the making of leather garments. Skalmantas was privatized as a group in 1992 employing around 500 workers in different sites in Vilnius. A further restructuring was carried out in 1999 as the clothing division was spun off the group. By that time the clothing division was making clothing from both leather and textiles in a division with 120 employees. Over the years 2000-2004 Skalmantas successfully repositioned itself in the market of military equipment (belts, bags, covers) and protective clothing. It secured orders for the Lithuanian army as well as for the Estonian and Latvian armies. It became involved as a subcontractor for the British, Danish and Norwegian armies. The increase in UN missions as well as the military interventions in Iraq created a temporary surge in demand for equipment. Skalmantas used well the opportunities of increased requirements demanded for personal protective equipment, unlike most clothing manufacturers in the newer member states that had difficulty to comply with higher demands for protective clothing. Skalmantas had taken the opportunity of those growth years to invest in specialized equipment for the welding of seams and for sewing large parts in heavy duty fabrics. It was thus one of a few specialists in Eastern Europe in the sewing of very technical fabrics such as Cordura, Goretex, Nomex and Kevlar. These special skills were also shown at trade events were actively promoted via the internet. In 2005 Skalmantas joined a FP6 funded project, led by the Dutch company TenCate. However in 2006 Skamantas had to file for cessation of payments and the company was liquidated. The bankruptcy of Skalmantas was not a commercial failure since it had a good client base and order book but was caused by a series of economic and financial issues which included too large investments to secure its specialization, a weak control over costs (in fact it had no cost control system in the factory) and losses from miscalculation of the cost price and the prices to ask from the clients. Finally it suffered from late payments by clients (especially in the military market) which could not be covered by bank credit lines. After the liquidation of the production facility in 2006, Skalmantas continued as a product development and contracting operation under the name Skalmantas Projects, but never regained a substantial footing in the market.

17.2.5. TECHNOLOGY

Technology is an important driver. Foreign investment (e.g. Barker) has led to the influx of more modern equipment. Also medium size firms as Klasikine, Omniteksas and Audejas have modernized their equipment, sometimes with public grants. However some large formerly state owned companies modernized heavily (in the case of Drobe with EBRD financing) but with no positive outcome. Except Klasikine, the linen industry did not modernize. Most modernization is in replacement of existing technologies, complemented with some specialized equipment for niche markets. It shall have contributed to productivity growth. But the companies modernizing

[56] Case prepared on the basis of interviews with the former management of Skalmantas

where also those with expanding sales. Hence job losses were more likely to be caused by companies not modernizing, or were modernization did not remove other causes of demise.

17.3. COMPANY RESPONSES AND BUSINESS MODELS

One of the strengths of the Lithuanian T&C industry is the presence of companies along the whole value chain. An important aspect of the Lithuanian T&C industry is that there is a strong informal network[57] among the companies. This has been a competitive advantage for the Lithuanian T&C sector as a response to the global changes in the industry.

The following responses/business models were identified:

- *New and more important role in value chain*
- *Specialisation and increase in efficiency*
- *Co-contractors and hybrids.*

17.3.1. CHANGING ROLE IN THE VALUE CHAIN

The previous section highlighted that one of the significant drivers of change in the European T&C industry is the change in customer (retailer) demand from large orders and long delivery times, to small orders and just-in-time deliveries. This change in demand structure has trickled down the value chain and has provided an opportunity for some of the Lithuanian T&C companies to redefine their role in the value chain.

This opportunity came about because the Lithuanian T&C companies are in a much better position than their competitors in the Far East to comply with the just-in-time demand. In Europe, the Lithuanian T&C industry offers lower costs than subcontractors in the old member states. According to the interviewees, the financial crisis has resulted in a quest for increased cost savings in especially Scandinavian branding companies and this has resulted in increased outsourcing activities along the value chain. This provides new opportunities for Lithuanian companies. Many of the interviewed companies used to be 'only' cut-and-make companies, but have now moved from traditional processing or sewing to offering advanced services covering the whole value chain, including logistics, supply management, and also design. The companies surviving the financial crisis in Lithuania have thus since 2009 benefitted from restructuring of the T&C sector in other EU member states. This is one of the explanations for the rise in production volume and employment since 2009 in the apparel sector.

[57] It was identified by the interviewees as an informal network as no legal organization exists.

Box13: First Priority - Proactive approach taking advantage of restructuring processes elsewhere

First Priority, has benefitted from the trend of increased outsourcing to the Baltic region and the fact that the whole value chain is present in Lithuania. First Priority, established in 2005, is a good example of how a quick response to market needs can lead to an increased market share. In 2005, the company started as an agent for especially Scandinavian companies offering mainly lower value added services around processing with focus on quality cut make trim (CMT). However, during the 2008-2009 financial crisis the company decided to change its business model and expand its services and focus on the whole value chain except design and branding/marketing. The change in the sector towards increased emphasis on cost savings for the branding companies was an opportunity for the First Priority to offer cheaper solutions (compared to their clients) and more flexible and quality-oriented solutions than competitors in the Far East. In order to offer these services, the company has increased its interaction with the branding companies, created a strong network of mainly Lithuanian suppliers, and ensured that they have the latest up to date knowledge on different aspects of the value chain by attending key fairs and meetings. This proactive approach has paid off. The current services include full sourcing services, taking care of all technical documentation/pattern development sketches delivered from the branding company, all procurement of fabrics/accessories, delivering the produced and finished garments, taking care of logistics/warehousing, final quality control, etc. The company is still very proactive and is looking for niche areas, especially environmentally oriented brands.

The companies have combined different approaches because of the restructuring of the European T&C sector. The company Omniteksas has increasingly become involved in several steps of the value chain, from increased focus on logistics to being able to deliver small and large orders as quickly as possible, and has bought a dying company which they previously used as a sub-contractor. This has provided them with more control over the value chain.

Box 14: Omniteksas – Specialisation and increased focus on the value chain

Omniteksas has 362 employees and has experienced continued growth in the past 10 years. The company has three subsidiaries all situated in Lithuania. It started as a sewing company back in 1929, but in 2001 (when it was renamed Omniteksas) it became a production company offering a full product line.

An example of how the company has reacted to changes is when they lost a very large army contract and decided to use their experience and knowledge base from the army to start their own company label, called 'dressed in green'. This label is based on organic, sustainable products. This is a niche product, and according to the company, this is a key to its success. However, Omniteksas has also reacted to and used the different changes in the industry to gain increased market shares. In addition, they highlighted that increased efficiency combined with JIT-delivery is very important. In 2004, Omniteksas bought new knitting equipment from a company in Sweden. The Swedish company was forced to sell out, so Omniteksas got the equipment at a very low price. This made their production quicker and more flexible.

Finally, the company focuses on combining production with logistics, making them ready for both small and large orders. Also, they continue to develop new products. Here they collaborate with Kaunas Technical University (KTU)*, but this is mainly for test and market research.*

Currently the company does not have major problems with availability of staff, but they foresee that it might happen in the near future. A possible solution may be to subcontract to countries such as Uzbekistan, but not China, due to culture, language and distance barriers. [58]

[58] *http://www.omniteksas.eu*

17.3.2. SPECIALISATION

A relevant business model for the companies in the Lithuanian case is specialisation combined with investments in modernisation to increase efficiency and flexibility. Particularly the subcontractors have developed specialised sewing methods and capabilities within specialised/complex garments. This has been a competitive factor as they can offer complex products compared to the less specialised skills in China and other low-cost producing countries. The interviewed companies mentioned that they have little competition from, for example, China, as they focus on low volume and complex methods where China focuses on volume. For both the production companies JSC Kauno Baltija and Gija, this specialisation strategy has been the key to their success.

Box 15: Kauno Baltija – Specialisation and specialised skills as a competitive advantage

Kauno Baltija has specialised in construction garments and this has provided them with an opportunity to work in a niche area that is less attractive to the companies in the Far East, especially because of the complexity, the high quality, low volume, and the fact they work with wool whereas Chinese producers tend to focus on cotton. The company used to have more than 800 employees, but they are now down to approximately 460 employees. However, due to large investments in machinery and increased efficiency the turnover has remained more or less the same. They have also restructured the working processes and this has required a change in staff from low-skilled workers to workers with technical skills. Finally, the company has started to create their own label and see this as important for the future.

Box 16: Gija: specialization without branding

The company Gija has also specialised in complex garments and sewing methods (linking), but unlike Kauno Baltija, they do not have their own brand. Gija is the one of the largest Lithuanian knitwear manufacturers producing knitwear for men, women and children. They have also invested in innovative electronic knitting machines and this has increased their flexibility and efficiency and enabled them to increase the complexity of their products. They have combined this with a number of difficult sewing skills (linking). The company used to have a contract with the large Spanish company Zara, but because Zara decided to outsource to Asia, they lost the contract. The company was extremely dependent on Zara and therefore had to find new customers quickly. The Zara client reference was however extremely beneficial and Gija quickly gained access to markets in Spain, Great Britain, France, Germany, Sweden, Norway, and Denmark. The company also sells on the local market. However, access to skills remains an issue for the company, and they have had to pass on orders to other companies as they were unable to get the necessary staff . Interestingly, the company has decided to pass on orders to other local companies on several occasions, indicating that there is a strong network among the Lithuanian textile companies.

The two examples above are rather typical of many of the companies in Lithuania. Both companies mentioned that the 2008-2009 financial crisis had both negative and positive effects -negative as they saw a small drop in orders and positive as more employees became available due to other companies' misfortune.

The specialised skills are vital and the interviewed companies worried about access to labour with these skills in the future. Investment in modernisation of the production has been necessary for the companies to stay competitive

and become more flexible. The example below shows that Audejas suffered during the financial crisis, but at the same time managed to modernise and this is, according to the company, what has carried them through the recent downturn.

Box 17: Audejas – Investments in modernisation

Audejas produces upholstery fabrics. Prior to Lithuanian independence, it had 1400 employees, but in 2011 this has dropped to 180. The 2008-2009 financial crisis hit the company extremely hard as it is highly dependent on the situation in the real estate market, and the company had to lay off around 80 employees. This figure could have been higher, but the owner decided to invest in several initiatives[59]. The company has focused on modernisation of the production and in 2007 it received EU support through EU Structural Funds (ERDF) for a large-scale modernisation project, but the support was very small compared to the overall cost of the project (about € 1,4 Mln). On top of the new equipment, the company also invested in training during the financial crisis.

According to the company owner, the investment has resulted in quicker production through new technology and higher quality and this was of key importance for bringing the company successfully through the financial crisis. This resulted in easier access to new markets as the marketing material (and products) became much better. The project also resulted in energy cost savings. It was highlighted that little or no incentives were provided at national level. Thus, unlike many of their competitors, Audejas have managed to remain in the market, even though competition is extremely hard and, according to the owner of the company, also unfair: Turkey is a new competitor and the Turkish companies receive very large subsidies from their government making it very difficult to compete.

The above examples highlight that investment in efficiency and specialisation has been of key importance to the success of the companies.

Another company, Barker Textiles, a producer of high-quality woollen blankets, focuses on environmentally friendly products. The interesting story behind the company is that it is originally from Turku in Finland.

Box 18: Barker Textiles – example a foreign company relocating to Lithuania

In 2000, Barker Textiles decided to move the entire company to Lithuania to stay competitive. The decision was based on the opportunity to save costs and the proximity to their main market Scandinavia. In 2007-2008 the company experienced what they called the 'China effect' – explained as cheaper products from China entering the markets where Barker Textiles operate. However, they decided to focus on high quality products, and the consumer trend is now, according to the company, starting to turn to higher quality products and the retailers are again looking towards Europe. The company has therefore decided to concentrate on a niche area with high quality blankets with Scandinavian traditional designs and a high level of environmental awareness in the products. [60]

17.3.3. CO-CONTRACTORS, HYBRIDS AND NEW DISTRIBUTION CHANNELS

There was a mixed perception among the companies whether becoming a co-contractor or hybrid was the right response to increased competition. The companies working as co-contractors saw it as a type of risk mitigation

[59] http://site.audejas.lt/en/es_support/

[60] See Task 5 Training

strategy as they were diversifying from being dependent on the role as sub-contractor, often with only one or two customers. One example is LTM Garments, which is a production house with 27 employees.

Box 19: LTM Garments – example of co-contracting

LTM Garments has produced high quality garments for clients in the UK and Sweden, but they are now starting to diversify by starting their own ladies wear label. This was seen as a way not only to diversify the business base to grow the business, but also to have more options to combat future changes in industry.

Several companies had the same strategy as it was considered too risky to depend on a limited number of customers, while others mentioned that specialising and expanding the number of customers while remaining a sub-contractor was a better strategy. A reason for the latter view was the difficulties with introducing new labels to the international market, which is necessary due to the limited size of the home market. Branding and export of their own labels were seen as difficult because of the reputation of the Lithuanian T&C industry as 'cut and make' companies and not fashion. Many of the companies mentioned that in order to export to countries outside the EU, it was necessary to make a name for themselves in Europe first.

Box 20: Klasikine Tekstile – successful customer alliances

Klasikine Tekstile was established in 1991 as a new company with just two persons. The founders had a professional track record in the linen sector. Today it is private company with 250 employees, manufacturing various articles from linen from fabrics, bed and table linen and apparel. Products from Klasikine often involve complex designs and embroidery. In 1991 the company owners saw the industrial potential of large Lithuanian textile enterprises, but at the same time they lacked the knowledge of the market needs outside the former Soviet Union. They started primary as agents visiting international fairs aiming to understand the needs of the market. Through these contacts they got acquainted with large department stores and mail order firms in Scandinavia and France such as Lindex, Linvosges, Carre Blanc and Magasin du Nord.

A sewing unit was soon built up for making small orders while larger orders were subcontracted. Fabrics were bought from the large linen companies in Lithuania like Audiniai in Plunge (now closed), Siulas and Linas. However, the factories manufacturing larger orders could not offer flexibility and many were increasingly facing economic difficulties, which made it difficult fulfilling the orders of clients. In 1994 Klasikine rented a weaving plant together with additional equipment and they started weaving broad woven fabrics, as required for bedlinen, while the finishing was still done by other textile companies.

In 2002 when the finishing activities could no longer be outsourced due the companies going bankrupt, the owners took out a bank loan to buy the premises they were renting and further bought equipment from bankrupt textile enterprises. Finally, in 2004, they launched their own finishing operations, which allowed for more flexibility towards their clients in terms of design, service and order size. The entry into the EU in 2004 provided further benefits such as allowing more flexibility in delivery and better payment conditions.

While Klasikine was step by step forced to integrate backwards in order to cope with the gradual decline of the Lithuanian flax cluster, it provided the benefit of control over the value chain and a better service to clients as a true co-contractors. The vertical integration also deepened its specialization and enabled Klasikine to offer more product variety to its clients. The strategy of Klasikine is thus a combination of co-contracting, specialization and vertical integration, combined with an active export policy inside the European Union.

However the decline of the Lithuanian production cluster forced Klasikine to review its buying policy. The Lithuanian flax agriculture declined from 28000 hectares of flax cultivated in 1990 while in 2011 there were only around 200 hectares. The reform of the CAP made flax agriculture not competitive and the EU water directive made water retting no longer possible. This also led to the decline of the spinning industry, mainly due to the lack of a financial base to do investments in waste water treatment. There are only two linen spinners remaining in Lithuania: Kaunas based Lietlinen owned by Linificio e Canapificio Nazionale (I), whose yarns are partly used at Klasikine Tekstile, and

UAB Siulas based in Birzai. With the demise of the Lithuanian spinners, Klasikine compensated for this with a combination of French and Belgian yarns as well as lower quality/price yarns from Belarus and Ukraine. As the flax production also dwindled in the latter countries, Klasikine now has only three suppliers left, Lietlinen for a broad range of yarns, Vaneste (B) for coarser yarns and Safilin for finer yarns.

Currently Klasikine Tekstile is exporting 87% of its production to 27 countries, of which mostly EU countries, but also the US, Canada and Japan. Klasikine is active in export promotion, mainly by going to fairs in the target countries. Klasikine's owner is a member of the board of the industry association Latia, but the company does not depend on collective actions to carry out its strategy. The owners noted that investments are made each year in equipment in order to stay cost efficient, but also to have a flexible production and to be able to take on customized order.. Klasikine has no relations with the textile research centre and university in Lithuania that no longer have competences in natural fibres.

Financially Klasikine shows a pattern of growth since its foundation with a dip during the 2008/09 crisis and a recovery in recent years; the company's turnover grew from €6 million in 2010 to €8.5 million in 2011. In the context of the new member states Klasikine is a clear good practice as the fruit of 20 years of step-by-step strategy and careful execution. The successful alliance with customers, which is also the fruit of the charismatic personality of the owner, is an intangible asset which is not always reproducible.

The companies main strategy as co-contractors was to introduce their labels in Lithuania and the Baltic States first and then hopefully expand to other countries. For most of the interviewed companies, their label was still in its early stages. All interviewees mentioned that access to design, marketing skills and labour were starting to become a problem, and are expected to become a major one in the near future.

17.4. STRATEGIC RESPONSES BY POLICY MAKERS, BUSINESS ASSOCIATIONS AND EDUCATIONAL INSTITUTIONS

It would clearly benefit the companies and the sector as a whole to agree on a long-term strategy taking into account the whole value chain. This strategy should originate from the companies, but it must be strongly supported by organisations, such as LATIA (the Lithuanian apparel and textile industry association), national/regional governments, and educational institutions. A clear mapping of current and future skills needs and current offers along with a more positive branding campaign across the above-mentioned actors might also benefit the sector.

This following section will show how the support institutions (policy, research/educational) have followed the overall restructuring of the sector and addressed the needs of the industry. At the end of this section, one of the major challenges, the skills issue, will be discussed from the point of view of the companies.

17.4.1. POLICY SUPPORT

Public financial support is available for companies, but this is extremely hard to obtain according to the interviewed companies. One barrier is the reputation of the sector as a declining sector and the lack of willingness to invest in the sector as it is not a strategic sector for the government. Another reason is that there is a lack of opportunities to get match funding to cover the total cost of EU supported projects from various lenders (project sponsors),

especially in recent years. According to both the companies and LATIA, the companies that have survived the changes in the past couple of decades and new companies which have emerged due to new opportunities in the sector, are suffering from an image which is not always fair. Most of the interviewed companies have all seen a positive trend in their companies and the sector in general, but the long-term negative image is still what is in the minds of policy makers and financial institutions.

European support

Some companies have received support through financial instruments set up in the Lithuanian Operational Programme of the European Regional Development Fund. The programme used by the company Audejas (see box 10) was the Economic Growth Operational Programme[61] under Objective 1, "increase the share of high value added businesses". The grant was used to modernize the equipment and production process and has been an important factor in reducing the impact of the financial crisis and increased the competitiveness of the company due to more effective production methods and better products. However, although very useful, a key issue is that support is only given for new equipment purchased from within the EU. This is more expensive for the companies than buying used equipment or equipment from outside the EU, even taking the funding received into consideration. Often the companies do not need new state-of-the-art equipment, but used equipment that suits their other machinery and processes better.

The companies have used the 'New Opportunities' grants[62] funded by EU Structural Funds. These grants, ranging from €7,000 to €58,000, provide financial assistance for developing export activities, including export strategy development; activities related to market research on foreign markets; development of advertising and marketing materials; participation in international exhibitions and fairs; and salaries of the export specialists working in the enterprise. The interviewed companies have mainly used the programme support for participation in international exhibitions and fairs and market research on foreign markets. European Globalization Fund was used in the case of the closure of the company Alytaus (see box 21).

However, there were clearly large frustrations about the administrative burden, but even more so with the length of the time it takes to review the applications. One company mentioned that after 6 months they received a message to provide more information and at this point, it was already pointless to continue as the opportunity had passed. Several similar comments were made by other companies.

There seems to be a need for a strategy for the sector along with incentives for investing in technology and skills, based on increased dialogue between the different stakeholders in the textile industry, including the government. Two attempts by the industry to develop a technology road map and management training courses on technical textiles and to gain support for clustering activities were implement but failed due to administrative problems.

61

http://ec.europa.eu/regional_policy/country/prordn/details_new.cfm?gv_PAY=LT&gv_reg=ALL&gv_PGM=1169&gv_defL=4&LAN=7

62

http://www.liaa.gov.lv/uploaded_files/00JAUNIE00/Semin/EVN/Lietuva/7_EU%20stuctural%20funds%20in%20Lithuania.pdf (see slide 7)

Box21: European Globalisation Fund in Lithuania

This box is based on public information[63] available since Alytaus was not included in the company cases for Lithuania. Since the closure of Alytaus was in 2007, while the case study was conducted in 2011, we could not trace management of the firm for further interviews.

The workers of Alytaus Tekstile based in the city Alytus benefitted from support co-funded by the European Globalisation Fund (EGF). The application was initiated by the Alytus Labour Exchange after the bankruptcy and closure of Alytaus Tekstile in 2007. It was submitted by the Lithuanian government for funding under the EGF. The bankruptcy of Alytaus caused 1089 job losses. Alytaus was a company making interior fabrics in the lower quality range, selling to large EU retailers. It was re-nationalized in 2004 and quickly privatized in 2007 to a consortium mainly interested, according to press clippings[64], in the real estate of Alytaus Tekstile.

Funding of the EGF supported re-insertion into the labour market of 619 workers. The other 470 workers had found employment before the proposal was submitted or had reached retirement age. The total proposal was budgeted at 598.000 Euros, of which 50% was funded by the EGF, and the entire budget has been used. The main actions implemented promoted training for employment in other industries and supported entrepreneurship to start new companies. Indeed 53% of the targeted workers benefitted from the interventions supported by the EGF. Of the total number of targeted workers 12% were reported as still being unemployed in 2011. 35% chose for (early) retirement under existing pre-pension systems. The intervention fostered the creation of 13 new firms (out of 66 targeted workers). The evaluation of GHK consultants[65] shows that the initial re-employment performance of the intervention was above the average of the EGF results. GHK also points to the fact that despite the funding arrived 12 months after the bankruptcy, support activities had already started prior to receive funding hence, this delay had no influence on the effectiveness of the intervention. However over a longer period of time, re-employment declined since other companies in Alytus went bankrupt and closed. Nevertheless the intervention of the EGF in Alytus is considered, by GHK, as one of the most successful interventions.

17.4.2. BUSINESS ASSOCIATIONS

The textile companies are represented by LATIA, one of the first associations created after the fall of the Soviet Union. In 2011 approximately 70% of all textile companies were members and strategic partners include related sectors such as banks and the logistics sector.

Box 22: LATIA – Including strategic partners in business association

The Lithuanian trade association LATIA has decided to include service companies (for example banks, energy companies) in the association. This has provided the service companies with first-hand information on the industry. This helps to combat the negative image of the sector and the approach has provided better prices and better

[63] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52008PC0547:EN:HTML

[64] http://www.lrinka.lt/index.php/meniu/ziniasklaidai/straipsniai_ir_komentarai/ka_pakarti_del_alytaus_tekstiles_baigties/4381;from_topic_id:61

[65] To be found: http://www.lex.unict.it/eurolabor/documentazione/altridoc/ricerche_rapporti/EGF_mid-rev_Jan12pdf.pdf

access to loans for the member companies.

The organisation has two strategic priorities: trading/branding and lobbying/image. Creating a good image for the Lithuanian textile sector both nationally and internationally is extremely important for LATIA. At the interview with LATIA it was mentioned that a positive image of the sector is needed in order to gain more support from the government and attract workers to the industry, the latter being a barrier to growth. Therefore, LATIA is trying to change this image through different initiatives such as arranging events in Lithuania, so that foreign customers in particular have a chance to see what the industry has to offer, which is difficult at the largest fairs. Some of the projects of LATIA are mentioned in the text box below.

Box 23: LATIA – examples of initiatives

1. Online tool that help European, Baltic and Russian companies to gain easier access to each other and post their business proposals online free of charge. This helps to save some marketing costs especially for small companies [66]

2. Organising fairs and matchmaking events in Vilnius like "Baltic textile + leather", "Baltic fashion & textile. Sales mission day Europe-Russia" where Baltic producers close major contracts with the buyers from Europe and CIS countries

3. LATIA has made partnership agreements with the main European and CIS apparel & textile associations and other business organisations and this allows Lithuanian companies to gain easier and safer access to those markets. [67]

Reducing cost and increasing flexibility in the Lithuanian T&C companies is a new LATIA strategy. This has resulted in a group of companies joining an efficiency project. As part of this project, a "lean" toolbox has been created and made available to all members.

Innovation Vouchers[68] were mentioned as very positive, as they helped small companies with management and innovation issues, skills lacking in some of the companies.

17.4.3. RESEARCH AND EDUCATIONAL INITIATIVES

The skills issue in Lithuania is extremely important in relation to the restructuring of the textile sector. The present skills provide a competitive advantage to distinguish itself from competition from the Far East and Northern Africa, but also to differentiate Lithuania from the old member states through possessing the types of skills which have been lost for example in Scandinavia in the recent decades. As the above business models showed, specialised skills are often key to the current success, but access to the right skills and labour will be one of the main future

[66] http://www.latia.lt/component/option,com_adsmanager/Itemid,20/page,show_all/

[67] http://www.latia.lt/

[68] An Innovation voucher is a small credit that entitles SMEs to buy R&D expertise or knowledge from research and educational institutions, introduced by the Ministry of Economy in Lithuania

challenges for the industry. Although the skills issue is covered in depth in Task 5, we found it important to highlight the issue for this particular case as it was mentioned in all companies and business associations.

Universities – research vs. basic skills

Cooperation with universities used to be widespread, but now there seems to be a gap between the technical knowledge available at the universities and the need for more basic or specialised skills in the companies. According to both Kaunas Technical University and the companies, the universities are mainly used for testing of textiles and clothing and only a small fraction of the companies used the universities for product development and R&D. KTU is particularly strong in nano-fibres, which can be used for intelligent clothing, but very few companies are working in this area.

One of the issues is that the universities are working on technical textiles and few companies have the innovation capacity to work in this field. This naturally creates a gap. KTU is aware of this issue and has therefore used the innovation vouchers to engage with the companies. An innovation voucher is a small credit that entitles SMEs to buy R&D expertise or knowledge from research and educational institutions. It was introduced by the Ministry of Economy in Lithuania. This initiative has worked well, but only for a few companies. The focus of the companies tends to be on new business models, branding and testing products rather than technical innovation.

According to KTU, the universities need to have a long-term view. They want to ensure that Lithuania will have the technological knowledge needed to work with technical textiles in the future. If they focus on the current needs of the companies (testing, market research and management) and do not continue R&D within technical textiles, they will not be able to keep up with the rest of Europe if or when the Lithuanian companies start to work with technical textiles. KTU is expecting a new restructuring process in the industry where it will be necessary to work with state-of-the-art technologies to stay competitive and they see potential opportunities in this market for the Lithuanian companies. This is an example of how trends and changes in the sector have created a gap through different responses to these changes, with increased technological focus at the university and a service business model approach at the companies.

Future lack of skills

Universities

The companies mentioned the importance of university students to handle the automatic machinery needed to increase efficiency. However, there is a worrying trend that already in the next couple of years could have a negative impact on the production companies in the Lithuanian T&C sector: the number of students has decreased dramatically in the past 3-4 years and this will obviously create a problem for the companies as many of them are demanding technical and specialist skills that they can only get from the universities. The graduates often need to be retrained internally in the companies to be able to use the systems, and, according to the companies, the colleges cannot provide these skills at present.

KTU provided a good example of the lack of interest in the T&C sector. In 2011 a total of 130 students (100 in clothing and 30 in textiles) graduated and only 24 (16 in clothing and 8 in textiles) started in 2011. With a normal drop-out rate of approximately 50% only about 12 students are expected to graduate from those starting in 2011.

If this trend continues, it could potentially create problems for the companies to keep all the functions of the value chain in Lithuania. This will then impact on the overall competitiveness of the sector as having the whole value chain is necessary to keep high flexibility and efficiency.

Design schools and technical colleges

Several design schools and technical colleges provide education and training to students relevant for the industry. However, there seems to be a lack of communication between the educational institutes and the companies on what type of skills that are needed and what is and should be offered. This lack of communication has resulted in a mismatch between companies' needs and what is offered. It was mentioned several times in the interviews that the technical colleges do not provide the level of skills needed in the companies. As a consequence most designers and technical workers are recruited from universities, and the specialised skills pertaining to e.g. specialised sewing methods are not taught. The latter is mainly because the students are not interested. This again is related to the fact that the interest in working in the sector as a sewing worker is very limited. However, the example in Box 14 below shows a good practice example through a pro-active approach from the college.

The companies mentioned that the designers mainly come from the University Art Academies rather than the design schools. However, it also seems that the companies are not fully aware of how best to use the existing opportunities, an issue which was mentioned at both KTU and the colleges.

Although there seems to be a gap, there are good examples of proactive approaches from the design colleges. One is the Vilnius College of Design, where the student work with textiles goes far beyond the clothing industry. Also, the management and teachers of the college are extremely aware of the changes in the industry, but find it hard to convince the companies that their students can actually provide added value to the companies through, for example, internships.

Box 24: Vilnius College of Design – Close contact to companies

Vilnius College of Design, which is a privately run college, focuses on integration with the regional businesses. The college often invites leading companies and researchers to teach the academic staff about the latest news (trends and technologies, methods, etc.) in the industry. This is used as input to the different courses. All teachers have a practical background from the industry and are therefore able to relate to the practical, technical and business issues that companies are facing in their day-to-day activities. This helps to ensure that what is taught can be used in the companies after the studies. The college carries out an annual company survey in order to get information on relevant developments, trends and issues in the regional companies. The college also works actively to get the students practical work experience and internships in the companies. Overall, a lot is done to make the studies relevant to both businesses and students.

Vilnius College of Design is successful in working with the companies, but they are still struggling to find enough companies for practical training experience during the studies. During the interview with the college, it was highlighted that national financial incentives or information campaigns are needed to promote this aspect as it will benefit both students and companies and therefore also the textile sector. One option could be closer cooperation with the sector organisations, such as LATIA, but the issue here is that these organisations have very limited resources.

Need for basic skills

Another challenge for the Lithuanian textile/clothing manufacturers is to gain access to workers with basic and technical skills as described above. All the manufacturing companies mentioned that sewing skills are very important, but also that the local training centres are not training unemployed people according to the needs of

the companies. In the opinion of several of the companies, this should be easy to remedy. It was suggested that the training centres need to have a dialogue with the companies and train the unemployed according to the companies' needs. In this way, the companies can offer employment. Several companies require specialised skills, such as linking, and these skills are disappearing. Almost all companies, from production to agencies, mentioned that they have had to refuse orders as they were unable to get the necessary workers to handle the large orders. Again, the companies mentioned that the government somehow needs to make it attractive to work in the industry. The unemployment rate is relatively high, but according to the companies, there are not really any incentives for the unemployed to work in a low-paid industry.

17.5. KEY FINDINGS

As response to the specific drivers of restructuring that emerged in the Lithuania case the following business models have been analyzed*:*

New and more important role in the value chain – traditional cut-and-make companies moving from basic processing and sewing towards offering to Western European textile companies that want to outsource manufacturing operations a larger range of activities along the value chain, including logistics, supplier management, design, etc. Several companies have managed to increase order volumes and market shares by commanding a larger part of the value chain in this way. There has also been a rise of sourcing agencies taking advantage of the Lithuanian production capacity and ability to satisfy just-in-time demand. This is facilitated by the existence of strong informal linkages between the Lithuanian companies, which enables the sourcing agencies to identify suppliers in all parts of the value chain.

Specialisation and increase in efficiency – Lithuanian companies distinguishing themselves from their Far East (especially Chinese) competitors by offering specialised sewing methods, more complex products, and smaller volumes, while investing in modernisation to increase efficiency and flexibility. They thus come at the receiving end, taking advantage of the two-string strategies of Western European companies-

Co-contractors and hybrids – diversifying activities from being pure subcontractors depending on one or a few customers to introducing own labels alongside subcontractor activities. This requires building up new skills in marketing and exporting, and this strategy is not for all. Some companies see the home market as too limited for such a strategy and felt it to be a significant barrier that the companies have little expertise in exporting and marketing their own labels, and also that Lithuanian textile producers are not known for fashion in European markets (rather the contrary).

Key findings with respect to the challenges and the companies responses to these challenges include:

Image: The T&C sector in Lithuania has experienced a decline in both number of companies, turnover and employees over the past two decades. One of the impacts of the decline in the sector is the poor reputation of the sector, which has made it difficult to gain access to skilled workers. Many companies closed down, but the surviving companies are performing well. This positive trend should be highlighted through a coordinated campaign between key actors in the sector, including the regional/national governments in order to attract more workers and create a better image to get funding. The poor image is a problem both for the educational institutions, the companies and the sector organisations.

Closely related to the image issue is the lack of access to labour and people with the right skills. There appears to be room for better use of what the educational institutions have to offer and at the same time there is a gap between what is offered at training centres, colleges and universities and what the companies need. The labour/skills issue is extremely important in order to secure the positive factors mentioned above and the outlook is relatively negative. The low wages in the T&C sector is also a barrier. A mapping of skills/labour gaps could be an important step along with a forward-looking strategy with involvement of all relevant stakeholders.

Flexibility/specialisation: Flexibility is the key to the success of many of the interviewed companies. The companies are unable to compete with the Far East on price, but through investments in efficiency in production (technology and lean production) they have managed to respond to the just-in-time need of major branding companies outside Lithuania. Another reason for the flexibility is the strong network between Lithuanian T&C companies and easy access to all parts of the value chain. Many of the companies have specialised in either complex sewing methods not used in the Far East or products for niche areas.

Efficiency: Investment in more advanced machines leading to increased automation of the production has increased the efficiency of the production and thereby made the companies more competitive – but in terms of value added the T&C sector still lags behind the manufacturing sector. However, it has also reduced the number of employees and increased demand for workers with more technical skills. Implementation of lean procedures through involvement in projects through LATIA or other private projects has made the sewing companies more effective and therefore more competitive.

Informal network: There is no official, organised T&C cluster in Lithuania, but Because of the limited size of the country the knowledge of and communication between companies and institutions is very good. However, the important point is not that they are located close to each other, but the fact that the companies have a close working relationship. The interviews revealed that the companies shared orders with the competitors if they were unable to ensure the delivery themselves. Also, the companies mentioned that they 'borrow' workers from each other if necessary. At international trade fairs, they normally share stands in order to promote Lithuania as a whole. As this collaboration is the companies' own initiative it can best be described as an informal network, which increases the flexibility of the companies and is one of the main reasons why the companies can offer services along the whole value chain. This seems to be the one of the drivers of success of the surviving T&C companies in Lithuania.

The strong network between the companies should be used to design a strategy for the T&C sectors in Lithuania. There appears to be opportunities to improve the communication between the companies and the intermediaries, which could solve some of the issues mentioned by both the companies and the education institutes.

18. CASE STUDY: HERNING, DENMARK

18.1. INTRODUCTION

The Danish Textile industry has traditionally been concentrated in three centres: the area around the provincial city Herning in the west; the Copenhagen region; and the "triangle region" with the cities Vejle, Kolding, and Fredericia in the southeast of Jutland. The cluster around Herning contributes with the highest shares of production and exports of Danish textile products.

Denmark has a population of approximately 5.5 million of which the majority lives in the capital area around Copenhagen. The country had an annual GDP growth of 1.7% in 2011.[69] Unemployment increased during the years of financial crisis, from its lowest point at 3.4% in 2008 and reaching 7.6% in 2011, but remains well below the EU27 average of 9.7%.[70]

18.1.1. THE TEXTILE SECTOR IN THE HERNING DISTRICT

Since precise data about the Herning cluster are not available we present here a description of the Danish textile sector; however the majority of the Danish textile and clothing companies are located in the Herning area. The total turnover of the Danish textile industry in 2010 was DKK 8,048 million (approximately €1,080 million), which represents a decrease of 4.1% since 2009. As figure below shows, there has been influential significant drop in turnover since 2000 in the textile industry with a minor increase in 2006-2007, whereas the clothing industry has seen an increase of turnover over the last 10 years, with a minor drop in 2008.

[70] Eurostat: Unemployment rate, annual average, by sex and age groups (%), http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_rt_a&lang=en

[70] Eurostat: Unemployment rate, annual average, by sex and age groups (%), http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_rt_a&lang=en

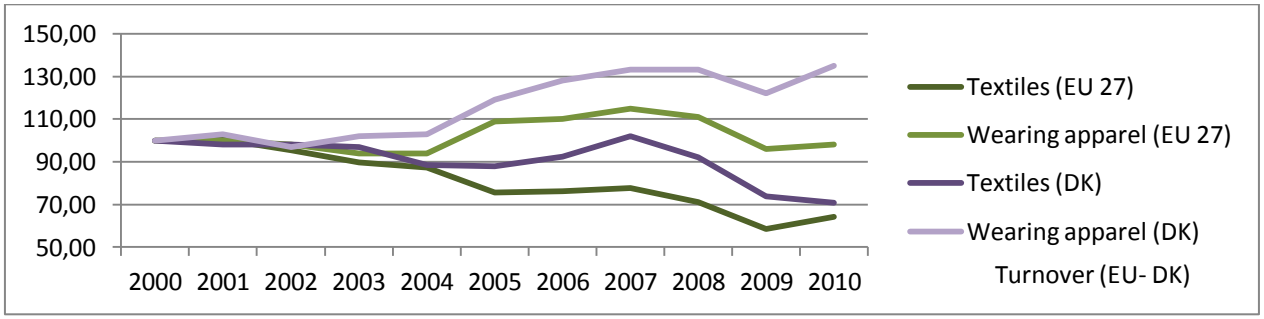

Figure 7: Turnover in the textile (NACE DB17) and clothing (NACE DB18) sub-sectors 2000-2010, Denmark and EU27 (Index 2000=100)

Source: Euratex (Eurostat)

As the figure indicates, the turnover in the Danish textile industry has fallen more than the EU average, and the increased turnover between 2009 and 2010 in EU27 is not visible in Denmark – on the contrary, the turnover fell even faster than during the previous years. However; turnover in the Danish clothing industry has increased more than the EU average. The number of firms in the textile industry is falling which could explain the falling turnover. However, in clothing there is an even bigger decrease in the number of firms which could indicate a concentration in the clothing industry, with fewer firms producing larger turnover (cf. also section 6.3 on consolidation).

The development in Denmark in 2009 can be explained by failing exports in the textile industry. The diagram below shows that the Danish export of textiles has fallen steadily since 2001 with only a brief recovery in 2005-06, while the situation in the apparel sub-sector was somewhat different: A drop in exports from 2001- 2003 was followed by slow growth up until 2008, then a drop followed by partial recovery in 2009-2010.

Overall, the export of textiles and textile products is now at a level which is approximately 80% of that in 2000. However, it increased by 4% from 2009 to 2010.[71]

[71] Dansk Mode og Textil. 2010. Udvikling for den danske tekstilbranche 2006- 2010 (Danish Fashion and Textiles 2010)

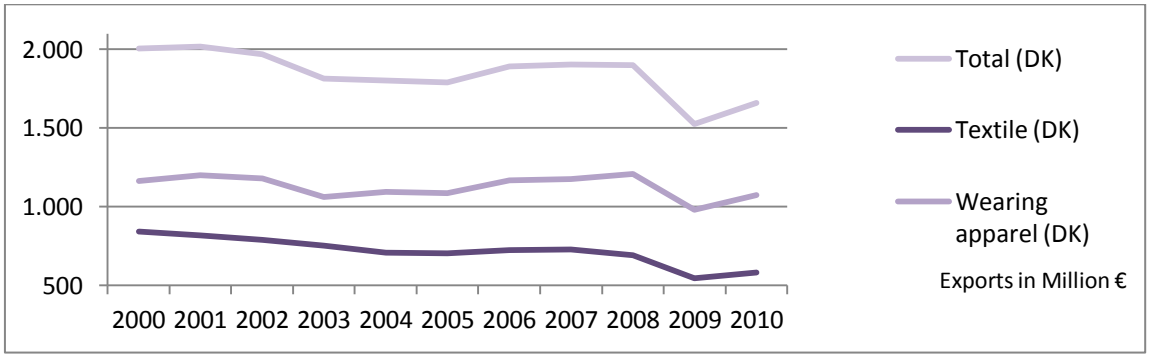

Figure 8: Danish Textile exports 2000-2010, real figures

Source: Euratex (Eurostat)

The main export markets are Germany, Sweden, Norway, Finland and the Netherlands for final products. On the supply side, China is still the largest supplier country, but Vietnam, Bangladesh, India and Thailand also have significant shares. [72]

The volume of domestic production, especially in the clothing segment, decreased even before the economic and financial crisis. The same is true for the development at EU level, where production value in clothing went down by one third from 2000-2010, while in Denmark domestic production volumes halved during the same period. This difference reflects an outsourcing and relocation strategy of Danish textile companies following EU enlargement in 2004 which was more aggressive than the EU average.

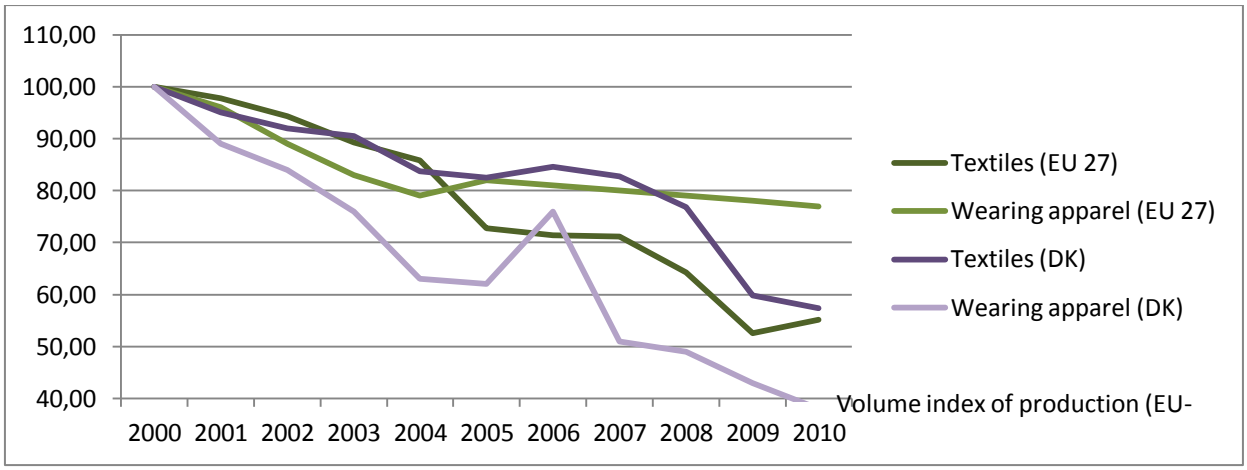

Figure 9: Volume of production 2000-2010 (Index 100=2000)

Source: Euratex (Eurostat)

[72] Deloitte: Passion for fashion - Analyse af modebranchen. January 2011

Reflecting the development in production volumes, the number of enterprises in the Danish T&C industry has decreased since 2000 and by 2008, only approximately 70% of the number of enterprises in 2000 was left; the reduction in the number of enterprises was quite steady, with only a very slight increase from 2007 to 2008.

Employment in the textile and clothing industry has been decreasing as the numbers of enterprises have fallen over the past 10 years. However, the clothing industry has actually seen an increase of employees from 2005-2008 followed by a drop, most likely due to the financial crisis as seen in the figure below. In 2010 there were altogether 16,638 people employed in the Danish T&C industry. The clothing industry employed the most people, 10,504, whereas the textile industry employed 6,134.[73]

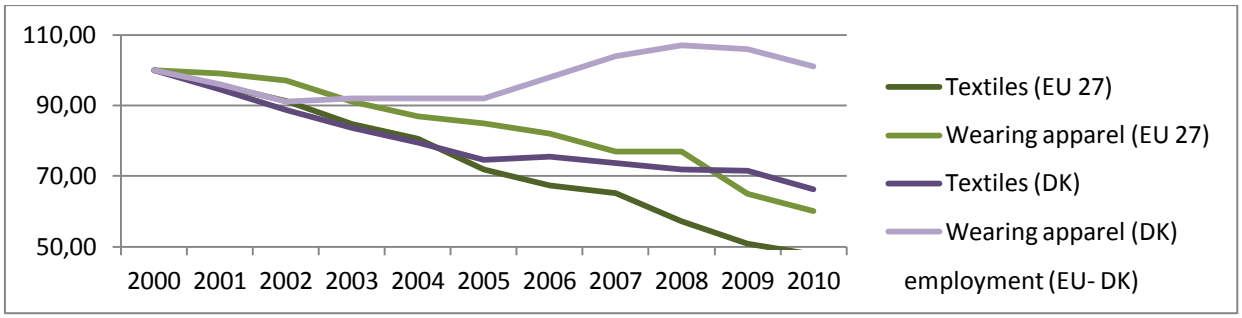

Figure 10: Employment of the sector 2000-2010 (Index 100=2000)

Source: Euratex (Eurostat)

The indication that European T&C industries are starting to recruit again following the 2008-2009 crisis are clearly visible in Denmark: 26% of the members of the trade organisation Dansk Mode & Textil (DM&T) expected to start hiring again during 2010 whereas only 8% expected to fire more employees. Nonetheless, the majority expected to keep status quo.[74] Currently, only few companies are in a process of reducing their workforce. This can be interpreted as a reflection of positive expectations for the immediate future and, indeed, in 2011, 81% of Danish textile companies expected growth rather than stagnation or decline. [75]

18.1.2. THE HERNING CLUSTER

[73] Eurostat data 2011

[74] Dansk Mode og textil, 2010, *Dansk Mode & Textils prognose og barometer for Modebranchen August 2010*

[75] Dansk Mode og Textil, 2011. *Konjunkturbarometer*

This report focuses on the T&C cluster located in and around the town of Herning in Jutland[76]. The textile industry in this area can be traced back to the poor heathland in the 18th century where the main resource was sheep grazing on the heath, forming the basis for a cottage industry (knitting) that was transformed with the industrial revolution into the main Danish centre for the textile industry. The towns of Herning and Ikast were founded with the arrival of the railway. The Herning cluster dominated the Danish T&C industry throughout the 20th century, and was strengthened through the establishment of a number of education institutions in the Herning area which includes the design college TEKO (cf. section 6.4.1).

However, a process of geographic deconcentration is taking place, and since the 1990s the relative dominance of the Herning cluster in terms of number of companies and number of employees has been gradually declining. In the mid-1980s the Herning area contained more than 20% of all Danish T&C companies, whereas this had dropped to 13% in 2006. The number of T&C companies in the cluster area fell from 417 in 1993 to 116 in 2006, equal to a decline from 7% to 2.2% of the total number of companies in the same geographical area. During the same period, the importance of the industry in the Copenhagen region has increased. The share of employment in the T&C industry in the region containing the Herning cluster (Ringkøbing)[77] compared to the Copenhagen region has shifted from 43% in Ringkøbing County and 4% in the Greater Copenhagen Region in 1994 to 30% in Ringkøbing County and 6% in Copenhagen in 2006. [78]

This is consistent with the shift from manufacturing activities to other activities such as management and design, which means that company headquarters are now increasingly being located in Copenhagen rather than in the Herning area. However, recent economic data indicate that the companies located in Herning remain competitive. An analysis by Deloitte Consulting from January 2012 showed that T&C companies return on investment was highest among companies in the Central Denmark Region (the region containing the Herning cluster), at 19%, whereas companies located in the Copenhagen Region showed a return on investment of 11% (about average for the country as a whole). Turnover per employee followed a similar pattern, with the Central Denmark Region scoring highest among the five Danish regions and the Copenhagen Region at just over 50% of the level in the Central Denmark Region.[79]

Our financial analysis for Southern Denmark is based on 31 firms in the textile and clothing industry. Between 2006 and 2011 (the last available year) the turnover of these firms grew from 268 Mln Euro to 277 Mln Euro, with a growth in 2008 to 320 Mln Euro and a drop to 235 Mln Euro in 2009 followed by a recovery. Hence turnover show a small grow and profits recover after 2009. Employment in the 31 firms declined in four years from 2486 people to 2241 people (-10%). If we characterize the patterns of the companies 16 firms have resisted through the crisis and have had small reductions in employment (between 5 and 15%) over the four years. In 8 companies employment grew over the period, so we can speak of a recovery pattern. Only seven companies have downsized, of which two

[76] It should be noted that the use of the name ”Herning” or ”Herning area” in this report is shorthand for Herning and the neighboring towns of Ikast and Brande, plus their surroundings. The cluster is concentrated in the two municipalities Herning and Ikast-Brande.

[77] The former Ringkøbing County is now part of the Central Denmark Region.

[78] Thorsen: Tekstil- og beklædningsklyngen Herning Ikast Brandes udvikling fra 90erne til i dag, Aarhus University 2008. Newer figures for the cluster area are not available.

[79] Passion for fashion - Analyse af modebranchen, Deloitte Consulting, January 2012

with a stable turnover which points to a change in business model. The set of firms is financially solid since 18 firms (58%) have a solvency ratio over 40% and only 7 companies (23%) are in a weak position with a solvency ratio below 20%. Overall the dominant pattern is one of resistance with recovery as second pattern.

18.2. DRIVERS AND CHALLENGES OF RESTRUCTURING IN HERNING

This section identifies the drivers of change that have resulted in restructuring in companies in the Herning textile district. We review the current and future strategic challenges for companies presented by those drivers and give examples of the responses to those challenges. We have identified the following drivers of change:

- *Globalization*
- *The financial crisis*
- *Consumer demand and distribution channels*
- *Technology*

18.2.1. GLOBALISATION

The Danish textile industry has undergone major changes since the 1950s. In the 1950s, customers became increasingly influenced by international fashion trends and started to require the fashionable items at home.. The demand for fashion clothing grew at a rate that local producers could not keep up with. The liberalization of trade from the 1990s made it easier for foreign companies to enter the Danish market and the industry was increasingly challenged to stay competitive. High labour costs in Denmark have since the 1970s been a driver of delocalisation but also of productivity increases.

Over the last decades, improved transport infrastructure and information systems have made it easier to communicate and to transport goods over long distances. This has led to globalization of the value chains: industrial companies in developed countries have massively disinvested from manufacturing, delocalized manufacturing operations, or resorted to sourcing and subcontracting.

Inn general in Herning, the consequences of globalization for textile production have been highly visible: since the late 1970's it has been difficult to achieve profitability in domestic manufacturing of textiles and clothing, mainly due to a high level of wage costs. Many companies have therefore adopted strategies based on relocation or outsourcing of their production. Frequently, production facilities were moved to low-wage countries, while the focus was changed to design and sales at home. [80]

This process happened in stages: in the late 1970s, several Danish textile companies started moving production to other European countries, mainly Portugal and Spain, as these countries could provide cheap labour with relevant skills. By the early 1990s, first Poland, and shortly after the Baltic countries become popular venues for outsourcing, due to their cheap labour, flexibility and proximity to Denmark both in terms of geography and – in the case of the Baltic countries – culture. Soon after 2000, however, increasing labour costs in the Baltic countries made

[80] Phd.-afhandling 2011: Da beklædningsindustri blev modeindustri. Syddansk Universitet

companies move production to East Asia with China as the main location. There are still, however, several companies that have retained production in the Baltic countries.

Gradually, more and more functions have been outsourced or offshored, often leading to the value chain being split into a large number of separate entities. In the first wave of delocalisation/outsourcing, only the functions of 'cut and make' were either outsourced to companies in other countries or relocated. Since then, however, other functions such as sub-processes in product development have followed. Still, design and R&D processes are generally retained in Herning. Following the globalisation trends, the sector associations have followed suit: according to several of the interviewed companies the sector associations have had to improve their capacity to support and advise companies in questions concerning exports, customs, labour market regulation, international environmental regulations etc.

By splitting functions geographically, energy intensive processes have remained in Denmark while labour intensive processes have been delocalised. However, the increased energy prices have also led to increasing transportation costs. This presents a major challenge for textile companies. However, the rising transport prices are also a driver for implementing further cost reduction and increased focus on optimising the business process.

In addition, the increased energy prices remain a challenge for the subsector of highly technological companies such as *Ege, Fletco, Tytex* and *Fibertex*. These companies have modernised and automated their production in order to produce the best products in an environmentally responsible way while significantly reducing staff. However, this has increased their need for energy, making the companies more vulnerable to increases in energy prices.

Other reasons for pulling back production to Europe or Denmark include increased labour costs and reduced access to capacity in China. According to the representative from *Brandtex*[81], a women's clothing company, today's Chinese citizens do not want to work in the textile industry because they have options that are more attractive in the labour market. A danish Fashion & Textile report on increasing wage pressure experienced by Danish companies with production facilities in China, with wage increases of up to 30% annually in Eastern China. At the same time, staff turnover is extremely high because workers constantly seek work with higher remuneration, making it difficult for the companies to build up competences among their staff[82].

According to the stakeholders that we have interviewed, globalization is by far the most important driver for the sector, insofar as globalization of trade and value chains presents companies with very real challenges:

- Outsourcing has made the sector more vulnerable to competition: Knowledge about production, fabric, materials etc. has moved away from Denmark along with the production facilities and the product development.
- Over the last 40 years, Denmark has been a leading player in design, but the emerging economies are also starting to foster designers.

[81] Brandtex is a manufacturer of womenswear. It has factories in Poland and Bulgaria and until 2005 in Greece. It developed its turnover by diversifying from trousers into a total ladieswear collection and by promoting its own brand instead of supplying for private labels of retailers.

[82] Danish Fashion & Textile: Lønfølsomme kinesere, June 2012, http://dmogt.dk/da-DK/Nyheder/LoenfoelsommeKinesere.aspx

- As job profiles change in the Danish companies, education providers are required to change their programmes according to new demands.
- Danish textile companies have been successful in outsourcing; nonetheless, it has become more difficult to keep finding cheaper and cheaper locations for manufacturing.

Very recently, there are according to the interviewed companies indications of a counter-trend: a few companies are pulling back production to Denmark, or at least back to the EU. This is particularly evident of manufacturers of high-end products, where companies want to increase flexibility or protect a luxury brand. The position of the T&C industry in the Danish economy has thus changed. Previously the sector was important due to the large number of jobs it provided – now it is important due to its high share of exports – this changed role requires adaptation by all involved stakeholders.

18.2.2. CONSUMER DEMAND AND DISTRIBUTION CHANNELS

The companies and associations that we interviewed did not see past or current changes in consumer preferences as having been a very important driver for restructuring. However, they do expect future changes in consumer preferences and behaviour that may have important implications. Several of the interviewees pointed to increased consumer focus on the environment and sustainability as an important future driver of change.

According to the companies' recent experience, private consumers are becoming increasingly critical, especially in the area of children's clothing, while business customers and public sector customers are increasingly focused on quality assurance of technical specifications. This is confirmed by the textile research centre at the Danish Technological Institute that expects that consumer demands and customer requirements will gain increased importance over the next decades.

Another aspect of the significance of consumer preferences is a widening of the focus. At the same time as there is increased customer focus on technical product properties; there is also increased attention by customers to the social and environmental impact of production processes. Depending on the type of business and subsector, CSR (Corporate social Responsibility) is seen as a competitive factor, especially by the high-end part of the textile and clothing industry. Even though CSR is currently not at the centre of attention of companies upstream in the value chain, a survey among textile companies carried out by *TEKO* in 2009 indicates that the increasing customer focus on CSR will affect the companies throughout the sector in the longer run.[83]

Box 25: Importance of CSR

For Tytex, providing medical care, CSR is both a competitive factor and a necessity, as the company is a supplier to the public health care sector, which requires certification against national standards.

For Ege, the carpet manufacturer, CSR is also an important issue. The environment has been in the focus of customers, and is on Ege's agenda for a long time. Both the life-cycles and certification of the products are key to success according to Ege.

[83] What's coming? TEKO-analysen 2009, TEKO

18.2.3. THE FINANCIAL CRISIS

The Herning textile district is mainly characterized by small companies, which account for more than one third of the industry. Retailers (717 out of 1151) furthermore dominate the sector.[84] The financial crisis has had a major impact on the companies. A study conducted by Deloitte in early 2011 showed that 40% of the companies in the textile industry incurred losses in 2009/10, up from 24% in 2007. The study also showed that small companies, employing 2-9 people, are struggling most to survive. One reason may be the fact that these smaller companies are largely dependent on local buyers and that consumption still has not fully recovered after the crisis. Nonetheless, 25% of the big wholesale companies are also facing challenges to survive, as they have not been able to reduce costs corresponding to the decrease in demand. In retail, however, large companies are very competitive which may cause further challenges for small retailers.[85]

18.2.4. TECHNOLOGY

With reference to the general framework also technology shall me mentioned. The high cost of labour and energy in Herning is a driver for technological modernization. This has led to productivity growth and better use of energy. The modernization has mainly be in replacement of existing technology not in the development of new technologies. It is unlikely that lack of modernization may have led to restructuring. Companies in Herning have been active in taking up ICT in order to improve customer response. Thus this supported policies of co-contracting.

18.3. COMPANY RESPONSES AND BUSINESS MODELS

The impact of the financial crisis coupled with the effects of globalization has led the Herning T&C companies to increasingly shift their focus from production processes, be it manufacturing of textiles or production of clothing to value chain management, logistics, product development (including user driven innovation), and customer services.

In fact in response to the drivers and challenges companies in the Herning cluster reshaped their business models and consequently adapted their strategies. The pressure to optimise the business processes has been increased by the financial crisis as important economic and financial parameters for the sector have changed (see section 21.1 financial analysis). Moreover, quality and supply security are now coupled with a greater focus on price competitiveness. As a result, most Danish textile manufacturing companies have a constant focus on minimizing the costs of operation, in particular through lean production.

Textile companies that survived in the Herning area are generally highly specialised compared to 20 years ago. Most companies have increased their turnover, or if the turnover has fallen, they have increased their revenue, as is the case for e.g. Brandtex, a women's clothing company that has outsourced all production abroad.

[84] Deloitte: Passion for fashion- Analyse af modebranchen. January 2011

[85] Deloitte: Passion for fashion- Analyse af modebranchen. January 2011

However, a few companies have decided to maintain parts of their production in Denmark alongside off-shoring other parts, while others kept producing in Denmark. These two different business models point to the same objective: enabling Danish companies to maintain control over the production and quality.

An example of the first business model is *Martin P.*, a socks and tights company. They are now changing their strategy; however according to the CEO, the company is in the process of gradually closing down all remaining manufacturing in the Herning region, leaving only test manufacturing. The pace of the process is determined by the time it takes to build up a satisfactory level of production competences in Latvia.

An example of a company that kept manufacturing in Denmark is *Ege*, a manufacturer of carpets. This model is justified by the high transportation costs, as *Ege's* main customers are in the domestic market. Nevertheless, in order to maintain competitiveness with a production unit in Denmark other complementary actions are needed.

Box 26: Ege Carpets – manufacturing in Denmark

Ege has continually invested in keeping their production equipment up to date. This has enabled the company to stay on the forefront in the carpet industry. They have furthermore decided to focus on designer wall-to-wall carpets, which is a niche market. They offer to customers the possibility of custom-made designs. Ege has 15 designers in-house and according to the spokesperson, it is important that they are close to the production as they carry out tests designs every day. Furthermore, customers are invited to take part of the design process, which requires a close collaboration between the customer and the designer.

From sector skills to management skills

Most Herning textile companies have been founded, owned, and run by successive generations of a single family. However, since the early 1990s, the management of these family-run businesses has gradually been handed over to professional managers. So far, it appears that this strategy has been extremely fruitful in terms of making positive changes within the companies: The professionalization of management precipitated the changes in business models with outsourcing and offshoring as the main characteristics. Another effect of the change away from family-driven businesses, according to Danish Fashion and Textile has been a geographical redistribution of the industry away from the Herning cluster so that now the industry is more dispersed than prior to 1990.This section deals in more detail with the different types of restructuring paths that the companies have chosen to address the challenges that were outlined in the preceding sections.

The main business models identified in the Herning cluster are:

- Changing role in the value chain. In particular outsourcing and off-shoring (including the "two string strategy").
- Specialization and niche products. In particular focus on quality and high-end products.
- Consolidation

A change in the business model is often a prerequisite that enables companies to enter new markets. However only a few of the companies interviewed attempted to enter new geographical markets. Instead, most companies have increased the focus strengthening their positions. The reason for this may be found in the uncertainty of the outcome of the financial crisis. Nevertheless, some companies have entered new markets, especially China, which is associated with some challenges:

Box 27: Tytex – Entering the Chinese market

Tytex *has gone very intensively into China and have established an office with one European employee and two locals. Tytex's business in China is mainly in the area of diapers. The challenge is the culture and language; the spokesperson from Tytex stresses the need to involve local people in management in order to overcome these barriers.*

In the establishment process of their business in China, Tytex consulted the DM&T (Danish Fashion & Textiles, a trade association) and the Danish Consulates General in China. Back in 2003 Tytex and Thygesen Textile group participated in a visit to China with DM&T and since then, they have used DM&T for questions in regards to customs barriers when trading with China. In terms of custom barriers, according to Tytex China has almost copied the US' FDA handbook[86] *, which makes it easier to understand the system.*

In addition to using advisors to obtain a comprehensive preliminary picture of the market situation and of administrative requirements related to trade, there have been two main enablers for Tytex' successful entrance on the Chinese market, according to the spokesperson:

1. *In order to be physically closer to the Chinese market, Tytex has located production facilities in Thailand*
2. *A decision to be a 'first mover' and entering the market with a lower pricing structure to ensure competitiveness of Tytex products in the Chinese market.*

18.3.1. CHANGING ROLE IN THE VALUE CHAIN

Outsourcing and off-shoring have been the main response in terms of change of the business model to the challenges described above. The Herning area companies have implement this business model in many different ways: some have outsourced their entire production, others only parts of it, as well as some service functions such as sourcing and logistics.

A possible adaptation of the business model is the combination between modern technology and low wage costs, which is possible as production facilities in Eastern Europe, for example the Czech Republic, are becoming more and more technologically advanced. *Fibertex*, a company that offers nonwoven textiles, stresses the necessity of combining innovation with efficient and lean low-cost manufacturing as a path to success.

A second adaptation is the so-called two-string production strategy with production facilities in both Europe and Asia, which allows for a high degree of flexibility and a wider range of sourcing possibilities. Generally, the large volumes are being produced in Asia with longer delivery time and the small to medium volumes in new member states with shorter delivery time. In other cases some products are started off in Asia and finished in Europe as the complexity of the finish makes it necessary to keep the finishing processes as close to the design unit in Denmark as possible. Thus, one can say that the more technologically advanced products are also produced mainly in Europe.

[86] The US Food & Drug Administration, http://fda.com/

Box 28: Spectre – Two-string strategy

Spectre *is a company that offers an extensive programme of functional garments for the sports and outdoor industry. Their two-string production strategy entails having production facilities in two locations: Vietnam and Latvia.*

Spectre's goal is to offer, on the one hand, exclusive garments, flexibility, small to medium order volumes and short lead times. On the other hand, Spectre also wants to offer competitively priced products, for example Basic series with low to medium technical level and medium to large volumes.

According to Spectre the two production platforms allow increased flexibility for their customers as initial orders and 'Early Bird' orders can be placed at the production platform in Vietnam, where production and transportation time is longer (the transportation time from Vietnam to Europe is approx. five weeks by boat) and the technical requirements subordinate. The majority of these competitively priced readymade garments are based on raw materials of a good standard sourced mainly from suppliers in Asia (China, Taiwan, Thailand, Japan and Indonesia).

Later orders and repeat orders, smaller volumes and orders of more exclusive garments can be placed with the production platform in Latvia as production and transportation time is shorter, making smaller volumes sensible. In addition, the technical level is higher as this European production is increasingly based on the latest developments in the fabric industry in the EU and USA, allowing for production of more exclusive garments. Further, flexibility and cost reduction is gained from the fact that the garments for the European market can be produced in Latvia and garments for the Asian market can be produced in Vietnam, which again caters for flexibility and price reduction.

At a time when several western companies experience increasing challenges in China where the costs of labour are rising, Spectre has managed to grow by virtue of using alternative locations. They themselves see this as the main explanation for their recent success.

For some companies, outsourcing the entire production is perceived as a way to release capital from assets such as machines and buildings to more lucrative projects in order to diversify the investments of the company. The text box below provides an example.

Box 29: Gabriel – outsourcing and diversifying investments

Gabriel*, manufacturer of upholstery and furnishing fabrics for the home, transport and contract markets, has invested in a 'Business Park' in Aalborg. The income on this investment is from tenants' rents, i.e. unrelated to the textile sector. Such a radical diversification requires rethinking of business models and requires a different set of competences than the traditional textile company.*

These days, Gabriel considers itself a virtual manufacturing company and the spokesperson from Gabriel expressed that they have not yet seen the full consequences of not having in-house production, as they still have employees who remember the production process etc. They expect the challenge to grow when these employees retire and will need to be replaced. In order to maintain insight into production processes, Gabriel expects that they will hire new staff from all over the world, not just Denmark.

Recent Changes in the value chain

Outsourcing has led to some Herning companies to withdraw completely from parts of the value chain, while other companies chose to offshore instead. This has led to a refocus of the Danish T&C companies' role in the value

chain, with increasing focus on design, marketing and in some cases niche areas (mainly high-end products). For some of the companies logistics is still an integrated and important part of the company, for instance *Gabriel*, while others have outsourced the logistics part to suppliers or agents in other countries (such as Lithuania) in order to save costs. Outsourcing of services, such as logistics and supply-chain management was seen during the 2008-2009 financial crisis.

Other aspects that the interviewed companies highlight are changes in the balance of power between suppliers/manufacturers and subcontractors the last five years. Traditionally, according to *Spectre,* manufacturers have been the weakest part of the value chain as manufacturing capacity was not an issue. This has however changed dramatically as capacity has become more limited, providing manufacturers more power of negotiation due to these changes in supply and demand of capacity. Subcontractors will therefore increasingly need to focus on establishing more loyal relationships with the suppliers as they have become more dependent on these suppliers due to the limited manufacturing capacity.

A third aspect mentioned by *Gabriel* is the identification of missing parts in the value chain as shifts are taking place in customers value chain. For example, in the furniture industry some manufacturers have recently decided not to do the upholstering themselves as they have done previously. This provides new business opportunities for suppliers – in this case there is room for *Gabriel* as a textile supplier to step in and fill this demand, i.e. taking up new business activities.

18.3.2. SPECIALIZATION AND NICHE PRODUCTS

This business model emerged in Denmark as an increased focus on quality and higher-end products. Several of the companies indicate that it is important to choose the potential market for the company in terms of quality versus quantity; there is a need to find something unique to differentiate from the competitors. Denmark is associated with great design and technological advantage – two aspects which are generally used in the promotion of Danish products.

Box 30: Martin P – Focus on quality and high-end products

Martin P. *has focused on retailers and private label customers who require a high level of quality in all aspects of the process: yarn, manufacturing, services, distribution, customer service and logistics that it is not possible to obtain from the Far East suppliers according to Martin P. Martin P. has the perception that several of their competitors are pulling back their production from the Far East, as they are not able to control their production and the quality, and that keeping production in Denmark has thus given Martin P. a competitive edge.*

Around 40% of Martin P.'s business is for private label customers, who buy the production and services from Martin P. and sell them under their own brand. In order to strengthen its own brand, Martin P. has acquired companies with different product portfolios such as children's clothes and woollen hats.

Finally, Martin P. entered the US market in the 1980's, and this has given them a unique position and possibility to be on the forefront of the market, as US consumers are seen as more demanding in regards to for instance certification and the use of organic cotton than European consumers.

18.3.3. CONSOLIDATION

The 2008-2009 financial crisis and the subsequent recession have had serious impacts on the T&C industry. Several companies have been forced into restructuring their operations, including laying off employees and increasing the pace of outsourcing. Access to finance has been difficult, and bankruptcies have occurred, but overall, the sector appears to have adapted quickly, and in 2011 positive signs of recovery and growth were visible.

Box 31: Martin P – Turning the credit crunch into a competitive advantage

Martin P. *took strategic advantage of the credit crunch. Cash flow has been a big issue for many companies – suppliers want their payment faster, whereas customers (retailers) take longer to pay. Martin P., who has its own production facilities in the Baltics, could use the credit crunch to their advantage by offering potential customers (companies further down the value chain) production on favourable payment terms as opposed to subcontractors in the Far East who always require prepayment.*

In addition, the shortage of liquidity resulted in cutting down of stocks in all parts of the value chain as companies took precautions not to tie up too much of their working capital in stocks. The representative from *Spectre,* for instance, reported that fairly basic commodities such as zippers and wire suddenly had very long delivery times, which caused problems for starting up *Spectre's* production on time. This affected significantly the production capacity.

In addition, the crisis led to changes in relationships between suppliers and customers according to *Tytex*, a company producing niche medical textile products. Before the financial crisis, the management of *Tytex* found that their customer relations were based more on loyalty and mutual trust. Since the advent of the crisis and the increased pace of consolidation among larger players, customers tend to change their suppliers more frequently in the attempt to minimise their own costs.

Also, the crisis has put significant pressure on the price bargaining in the outsourcing process. During the decade preceding the crisis, consumers have been used to clothing becoming cheaper and cheaper, not the opposite, so increasing the prices has not been an option. At the same time, retailers are having a hard time, which creates a huge challenge for the suppliers. For example, the spokesperson from *Brandtex* expresses that the company now focuses strongly on minimising the prices in the sourcing process in response to this challenge.

The crisis has led to consolidation in the Danish textile sector as a whole, and not least in the Herning area. Successful textile and clothing companies have acquired companies in distress. The consolidation strategies of successful Herning textile companies most frequently involve acquiring smaller players in order to increase market shares and diversify product portfolios, rather than acquiring suppliers or distribution channels. In most cases, becoming bigger provides a competitive advantage and the possibility to be able to keep up with the big customers.

In addition, mergers and acquisitions have taken place downstream in the value chain among the customers/distributors. A few companies mentioned that the consolidation of the distribution channels puts pressure on the textile and clothing companies to be able to deliver a wider product range of products to satisfy the distributors' wish for 'one-stop-shopping'.

Box 32: Tytex and Martin P – increased requirements from distributors

Tytex is required by customers to provide a full programme of products, not just stand-alone items. This has led to the development of new products and take-over of a few small companies and concepts in order to become 'the complete provider'.

*In order to offer a concept, not just one type of item, Martin P**.,** has developed from a children's sock producer to a*

company supplying a full range of children's clothes and hats. They have achieved this by acquiring products to be sold under the Martin P. brand from two companies that still produce for their own brands as well.

Still, the degree of consolidation has not yet been as high as expected by Danish Fashion & Textile, and the association expects that the future will most likely see further mergers and acquisitions in the sector.

18.4. STRATEGIC RESPONSES BY POLICY MAKERS, BUSINESS ASSOCIATIONS AND EDUCATIONAL INSTITUTIONS

Danish Fashion & Textile (DM&T) as well as TEKO (Danish design and business school) are supporting the restructuring of the sector; the first by working with the industry as a whole on large-scale initiatives and projects; the second, being the Scandinavia's largest design and management college within the fashion and lifestyle industry, provide vocational or a higher education courses within the areas clothing and textiles in close collaboration with the industry. Moreover TEKO provides expertise to companies through its knowledge centre in the area of innovation and development within smart and functional textile materials and textile processes. These support services are described further in the following section

18.4.1. BUSINESS ASSOCIATIONS

'Dansk Mode & Textil' (DM&T, Danish Fashion & Textile) is the largest Danish trade association whose members come exclusively from the textile and clothing industry. Its objectives are: To build networks, to develop new projects, and to promote education in the sector. The biggest association however is *'Dansk Detail'* (Danish Retail) with more than 2,700 members, but in addition to retailers (and some manufacturing companies as well) in textile and clothing, this association also includes members from other lifestyle-related industries such as furniture shops and paint dealers. A third association is *'Textil & Tøj'* (Textile & Clothing), a trade organisation for exporters and importers operating internationally only represented by the Danish Chamber of Commerce. This trade association focuses on customs and trade policy matters, including information on quotas, tariff quotas, anti-dumping, GSP[87] and similar matters affecting Danish textile companies trading globally. In addition, there are several small associations representing producers of niche products, for example: '*the Association for Oriental Rugs*'.

The restructuring of the Danish textile and clothing industry has led to the need for the readjustment and renewal of DM&T. The association has changed it activities from being a social partner mainly focusing on employer aspects in the social dialogue to becoming more of a counselling and networking organisation focusing on the framework conditions. Areas of activity include advice to member companies about e.g. customs barriers in different markets or about energy agreements.

The fact that 90% of the production of Danish textile and clothing companies is located outside of Denmark has resulted in a need for DM&T to form alliances with sister organisations around the world as well as, for example,

[87] Generalized System of Preferences, or GSP, is a formal system of exemption from the more general rules of the World Trade Organization (WTO).

legal advisors in China and other countries. DM&T has developed advisory services in the areas of CSR, Law, Export, Customs and International Business, Technology and Environment, HR, and Trends and Design, and aims to be able to deliver consultancy services when demand arises in the companies. For example, DM&T developed a 'crisis package' to help companies review their business plans in order to survive the crisis. DM&T has developed opportunities for further education in collaboration with the design college TEKO (cf. below).

The most recent initiative of DM&T is the creation of an innovation centre in Copenhagen in collaboration with Kopenhagen Fur and Guldsmedebranchens Leverandørforening (a retail association within jewellery) with the support from Copenhagen Business Task Force. Together, they service companies with a combined export value of approximately €6.7 million. The aim of the collaboration is to become stronger and more competitive by providing mutual assistance and exchange of know-how for instance in the area of new markets. For example, the Danish fur industry is strong in China, and may therefore be able to help Danish companies in the related sectors of clothing/fashion and jewellery enter the Chinese market through a collaborative effort.

According to DM&T, their services are in high demand and they mention the establishment of an office in China as way to support the restructuring processes of Danish textile companies. Nevertheless, this office is now closed due to lack of demand for its services from DM&T's member companies. From the perspective of the companies, not all the companies that we interviewed had used the services of DM&T and those that did only used a very limited number of such services. Instead, the companies express that they have to manage on their own, without external support, in the restructuring process; this could perhaps indicate that the services offered by DM&T do not in all cases match the needs of their members.

18.4.2. EDUCATIONAL INSTITUTIONS

The Danish textile industry has since its origins grown in very few locations, of which Herning is by far the most important. However, with restructuring the location pattern of the industry is also changing, with corporate headquarters and design enterprises moving towards the capital region of Copenhagen.

The changing structure and location patterns of the industry are clearly reflected in the location of education and training offers targeted at the textile industry. Several vocational education and training institutions, including dedicated textile colleges, located in Copenhagen as well as in Herning, offer textile programmes. Until recently, Bachelor degrees and specializations in design were mainly offered in Copenhagen, while schools in the Herning area and the rest of Jutland have focused more on the craft and technical skills involved in producing and developing clothes. However, this is currently changing as a result of the restructuring of the sector.

TEKO is the largest design and business school in Scandinavia for the fashion and lifestyle industry. It is situated in Herning and has approximately 1100 students specialising in clothes, textiles, furniture, and interiors. The school houses a research centre for intelligent textiles (wearable technology), which was created in 2005 in order to support companies with cutting-edge knowledge in this area.

TEKO continuously aims at being at the forefront of the need for competences in the textile sector, and a recurring employer survey to Danish textile companies was introduced in 2003. This has meant a gradual change of the college's educational tracks where focus is now more on design, marketing and business and less on technical skills. However, as already mentioned, a major skills-related challenge for Herning and other Danish textile companies is the disappearance of knowledge and skills in the area of manufacturing/production/materials. Outsourcing has resulted in far fewer textile engineers being employed in Denmark, and those that remain and have hands-on

experience from in-house production are close to retirement age. This had led to demand for a new qualification at bachelor level in textiles and materials. This qualification was first introduced in September 2011 and TEKO expects that when the course is up and running, it will provide the companies in the sector with competencies that will allow them to make much more efficient use of the services of the innovation system.

For the future, TEKO believes that their qualifications will have a broader scope focusing on wider creative subjects, not just the textile industry. TEKO in particular intends to integrate graphics and visual design into their qualifications, as an increasing number of operations and activities in the companies are digitalised. TEKO also expects that CSR will become a larger part of the foundation in the qualifications. By broadening the qualifications, TEKO may risk producing potential employees for other sectors than the T&C sector, but *TEKO* considers this a risk worth taking.

TEKO also provides consultancy services through e.g. the Knowledge Centre for Smart Textiles which works with companies in various sub-sectors: fashion, male fashion, sports and accessories. They carry out about 50-100 consultancy assignments a year and have contacts with more than 100 companies through their newsletter and conferences. Recent activities include a three week event, 'Future Textiles', encompassing competitions, exhibitions, master classes, workshops, seminars etc. In the future, TEKO hopes that the Knowledge Centre will become a producer of knowledge and provider of services to the textile industry to an even larger extent than at present, for instance through PhD students collaborating with companies.

According to TEKO, there are obvious (and well-known) barriers to enterprises' use of their services depending on the enterprises' activity level: If companies are busy doing their everyday work, they have little need for help, and if they do not have enough to do, they cannot afford to get help.

Over the last five years, however, it seems that the textile companies have become more open to the fact that they need to seek knowledge from other actors and collaborate with each other and with other actors in the innovation system. However, TEKO has observed that the enterprises often lack R&D departments or even individual employees with the competences that would enable them to take up and implement new knowledge or technologies from providers such as for instance the Knowledge Centre for Smart Textiles.

18.4.3. POLICY INITATIVES

Below, we describe the responses of Danish stakeholders in the textile sector to the challenges identified in the previous sections and the extent to which the interviewed companies found these responses useful and relevant to their restructuring processes.

Overall, the companies that we interviewed showed little awareness of policy initiatives as well as of stakeholder initiatives, especially on the European level. The companies also had limited information about the opportunities provided to them by such initiatives.

European level initiatives

With regard to the European level, several of the interviewees observed that from their point of view, it appears as if available EU programmes mainly accommodate the southern European textile and clothing sector, whereas companies in Northern Europe consider to have limited access and limited yield from such programmes. It should be emphasized that this is the of these companies which is not necessarily based on actual facts.

Another issue mentioned by several of the interviewees is the slow, time-consuming and bureaucratic process of these programmes and projects. Subsidy programmes, for instance, in regards to optimising manufacturing can be

a valid help, however, the companies operate in the private market where things happen quickly, which is not the case for the European programmes.

National level

At national policy level, there is little or no support aimed specifically at the T&C sector, although the sector is of course eligible for general national support measures aimed at growth, innovation, restructuring, etc., on an equal footing with other industry sectors. The sector received a fair amount of attention at the policy level around the year 2000, where several cluster studies and cluster initiatives were carried out, identifying the Herning T&C cluster as one of the significant industrial clusters in Denmark[88]. However, since then, policy attention has drifted towards other (mainly hi-tech) sectors that are seen as more future-oriented.

18.5. KEY FINDINGS

Globalization has taken a significant toll on the number of textile companies in the Herning area and overall in Denmark, and the decline has been aggravated by the advent of the 2008-2009 financial crisis. However, the remaining companies within the Herning textile and clothing industry have been relatively successful in restructuring their businesses to cope with the challenges of the last 10 to 15 years. The key to the success of the Danish companies should be found in their adaptability and international vision for production and export. The companies that did not manage to readjust effectively are not present in the sector anymore, leaving only the most competitive companies in the sector to survive.

Restructuring started already in the 1970s when companies outsourced or off-shored their production to Southern Europe, by the 1990s to Eastern Europe, and by the 2000s to East Asia. The high level of labour costs in Denmark is the primary reason for restructuring of the Herning companies; in fact as a consequence most Danish companies have made changes in their business models, focussing less on the production processes, be it manufacturing of textiles or production of clothing. Instead, they focused increasingly on value chain management, logistics, product development (including user driven innovation), and customer services. As a result, employment in the sector has fallen, and the composition of staff in the companies has changed significantly, reflecting the increased focus on functions not directly related to production.

Globalization and the financial crisis are thus the two main drivers behind restructuring of the Herning T&C companies. Changes in consumer demand is seen by companies as a driver that will be more important in the future than it is now. The key business models identified as responses to these challenges are:

Outsourcing and off-shoring (including the "two string strategy") has meant that many companies have become virtual production companies with little or no production in-house. This has increased focus on design, logistics, supply-chain management and marketing/sales. However, during the 2008-2009 financial crisis the companies have also outsourced service activities in order to save costs, especially to countries near Scandinavia, such as Lithuania

[88] Cf. e.g. Erhvervsfremmestyrelsen: Kompetenceklynger i dansk erhvervsliv – en ny brik i erhvervspolitikken, 2001 (Danish Agency for Trade and Industry: Competence clusters as a new element in industrial policy)

Focus on quality and high-end products – Denmark is known for design and quality and cannot compete on low costs; for that reason, aiming at the high end of the market is a logical step for many Danish T&C companies

Consolidation - Successful textile and clothing companies have acquired companies hit by the credit crunch, mostly small competing companies in order to increase market shares and diversify product portfolios, rather than vertical integration through acquisition of suppliers or distribution channels.

Public funding and other support to company restructuring processes do not play a significant role in the Herning cluster. The T&C companies in the Herning area have, at least historically, tended not to be aware of funding opportunities open to them due to EU or national innovation policies or support to restructuring, and to perceive such opportunities as fraught with bureaucracy. Likewise, they tend not to make extensive use of services offered by stakeholders such as trade associations, research institutes, and education providers. This situation may be changing – but there is no solid evidence to underpin that this is really the case. Therefore, the most recent initiative of DM&T, an innovation house, will be interesting to follow in the future.

The interviews with Herning T&C companies pointed to a number of significant preconditions for successful restructuring:

- Professionalization of management: Many of the companies that have succeeded are family-run businesses that have gradually adopted a more professional management structure and employed professional managers. This is unequivocally seen as having been extremely fruitful in terms of making positive changes in the companies' business models;
- Well-planned outsourcing and off-shoring strategies such for example the two-string strategy of having production facilities both in Eastern Europe and East Asia, thereby providing flexibility and effectiveness;
- Focus on the combination of modern technology and low cost production;
- Well-planned and well-researched entrance into new markets: Going into for instance China as a first mover with prices that match those already in the market and aided by local employees that understand the language and culture;
- Focus on CSR as a competitive parameter;
- Focus on the brand value of high-end products, high quality, and Danish Design.

19. CASE STUDY: NORTHERN GREECE

19.1. INTRODUCTION

19.1.1. NORTHERN GREECE

Northern Greece, or Voreia Ellada, is an administrative division of Greece created for statistical purposes; in fact it includes four Greek administrative regions: East Macedonia and Thrace, central Macedonia, West Macedonia and Thessaly. The population of the area is 4 million and unemployment rate in 2011 was at 17,3 %, higher than in the country as a whole (15,8%).

Gross domestic product of the region is €58 billion (25% of the total Greek GDP). The product per capita is €16,400, substantially lower than the total Greek average (€20,500), and reaching 64% of the European average.

In terms of employment, manufacturing is the leading sector, while clothing and textiles manufacturing represents 13% of total manufacturing employment. Overall, Northern Greece represents the majority of employment in this industry in Greece.

19.1.2. TEXTILES AND CLOTHING IN NORTHERN GREECE

The textile and clothing sector developed mainly around cotton cultivation and ginning, which in the 1980s became one of the most important national products, with cotton representing almost 10% of the Greek agricultural production. In fact most of the textile companies in Northern Greece are active in cotton spinning, weaving and knitting, especially for the clothing market, while other segments are almost absent such as technical or home textiles (with the exception of sun awnings). This connection can also be seen from the geographical concentration of the textile industry around the city of Naoussa in northern Greece, where also the cotton production is located. Naousa is also known as the “Manchester of the Balkans” since the first textile factory in the Balkans was built there in 1874.

Textiles in Northern Greece presented important rhythms of growth in the 1960s and 1970s, a period during which it maintained a powerful place in the domestic industry. Vertical integration was an important strategy, using the cotton supply base to engage in spinning and then in other activities. Knitting had a more favourable growth over weaving since it is less capital intensive, and requires less invested capital. The expansion of manufacturing in the 1970s and later was enabled first by preferential trade agreements with the European Economic Community and after 1981 because of accession to the EU. The growth of the textile industry was partly empowered by foreign investments such as for example the establishment of Hellenic Fabrics between a cotton ginning group (Accas) and a Dutch textile group. However, Hellenic is now entirely Greek owned. Klonatex emerged in the 1990 as a leading group taking over independent spinners in a national consolidation of the industry.

Precise figures about the weight of cotton in the textile and clothing industry in Northern Greece are not available, however, as an indication cotton yarn accounts for about 75-80% of the total yarns production in overall Greece. Sometimes former cotton spinners diversified their production towards other fibers (see company case Varvaressos in this task). However there is no wool industry in Greece nor a sizeable sector based on synthetic yarns. Most textile industry is oriented towards clothing whereas home textiles sector is small and the technical textile sector is marginal.

Textile and clothing in Northern Greece entered a phase of restructuring already from the end of the 90s, pushed by a lack on competitiveness in the common European market where the majority of companies positioned themselves at a standard level of quality and added value.

Most of the companies were not prepared for global competition in an open market, so the end of the Multifibre agreement was seen as "catastrophic". Weavers were the first ones to be hit and they either delocalized in the neighbouring countries or closed their plants and became importers/traders of textile products. Clothing and knitting companies also followed the trend and delocalized as analysed in the specific regional case in the report on SME (Task 3).

In 2012 the spinning industry relies on four spinners left in Northern Greece, of which two are integrated with the ginning phase (Hellenic Textiles and Selected Textiles), while Varvaressos and Nafpaktos are independent spinners.

According to the regional statistics in Eurostat in 2009, 755 textile companies were present in Northern Greece (33% of the total in Greece) and 3208 clothing companies (29% of the total in Greece). In terms of employment 6545 people were employed in textiles while 11 147 in clothing. Since 2003, 28 700 workers already lost their job due to the crisis of the textile and clothing sector. According to Eurostat, in 2009 alone employment dropped by 17,3% for textiles and by 40,9% for clothing in the region.

Our financial analysis for Greece is based on 98 firms in the textile and clothing industry. Between 2006 and 2011 (the last available year) the aggregated turnover of these firms declined from €532 million to €391 million, with a strong decline, explained by the collapse of Klonatex, a small recovery in 2008 and 2009 and a strong decline over 2010 and 2011. In 2011, over one third of firms made a loss of more than 10% of turnover. Employment in the 98 firms declined in 2008-2011 from 8274 people to 6021 people (-27%).

If we characterize the patterns of the 43 firms that have resisted through the crisis and have had small reductions in employment (between 5 and 15%) over the four years (2008-2011), employment grew in only 7 companies over the period, for which we can speak of a recovery pattern. However 46 firms downsized, of which only 6 with a stable or growing turnover which points to a possible change in business model. The set of firms is financially still rather solid since 49 firms (50%) have a solvency ratio over 40% but 23 companies (23%) are in a weak position with a solvency ratio below 20%. However amongst the firms with a strong solvency ratio, 15 firms (30%) made a loss of more than 20% of turnover and have a rapidly weakening financial position. Overall, the dominant pattern is one of downsizing with resistance as second pattern, but many of the surviving firms cannot endure a much longer lasting crisis.

The drastic restructuring that started with the 2005 liberalization of trade in textiles was also exacerbated by a lack of strategic repositioning of the industry as a whole in higher added value segments (by for example adapting their business models to specialization and niche products) despite modernization in the period 1995-2005. This could be explained by the fact that Greek industry was heavily oriented to the most vulnerable part of the textiles sector in the face of liberalization of textile trade: clothing and textiles for the clothing industry.

The industry is mainly composed by subcontractors and co-makers while few firms have established brands with an export base or an export potential. In most products Northern Greek firms cater for the needs of the middle of the market segments and are thus squeezed between price leaders (Asia) and quality leaders (Italy). The only potential long term advantage is local fibre supply basis, but that one can be best capitalized by a quality strategy. The cases of Hellenic Fabrics and Varvaressos, which are described later in this task, are rather exceptions in adopting a specialization business model focusing on quality strategy.

Since the 1990s the sector entered into a period of restructuring, with an important reduction of domestic production and investment activities. A specific reason to maintain production in the EU till 1995 was to keep preferential access to the EFTA[89] countries. Inside the EU the Portuguese industry was more (price) competitive than the Greek industry and offered buyers a wider scope of products. The Portuguese industry, motivated by a leading client such as Zara, was also more swift in taking up quick response strategies. The Greek industry was less swift in maintaining this advantage than the Portuguese industry. After 1995 Northern Greece also suffered from competition from Turkey and was confronted with shifts in production towards Eastern Europe.

The trade liberalization from 2005 led to a faster decline and a lot of textile manufacturing units suspended their work completely. The most dramatic example is the Klonatex group, a diversified holding with major interest in spinning through the subsidiary United Textiles, which now has 19 manufacturing units being idle and awaiting a restart, disposal or definitive closure. The auction to sell the machinery of Klonatex is now only postponed because of the depressed market for productive equipment.

In 2012 a handful of relatively healthier companies have survived in the industry. The same companies are now facing the biggest economic and financial crisis in the modern history of Greece.

19.1.3. THE COTTON PRODUCTION IN NORTHERN GREECE

Greece is among the first 10 raw cotton producers in the world and almost the only one in Europe: Spain still has a small production that is decreasing after the new subsidy regime while cultivation in Bulgaria and Portugal is negligible. Greece accounts for 80% of the cultivated area and almost 90% of the production in the European Union. Greece is with France (for linen) the major producers of natural fibres in the EU and has a raw material basis for a local industry.

Greece accounts for 79,700 farmers involved in cotton farming, the majority of farmers grow between 2 and 5 hectares of cotton. Cotton is cultivated on some of the best agricultural land and the main competing crops are cereals, particularly durum wheat and maize. Over 99% of Greek cotton production is grown using irrigation[90].

Greek production is dominated by four regions located in the North and Center (Central Macedonia, East Macedonia, Thessalia and Sterea Ellada); these areas account for 96% of the total cotton area. Cotton accounts for 9.1% of final Greek agricultural output.

[89] European Free Trade Area

[90] LMC International, Study on the Cotton Sector in the European Union, prepared for European Commission, DG AGRI, July 2007

The economics and the profitability of the cultivation of cotton have been influenced by the Common Agricultural Policy (CAP) reform. The change on profitability also had consequences on the quality of the fiber. Greece is the biggest (and almost only) producer of cotton inside the European Union. The cultivation is done by around 1000 farmers that cultivate cotton in around 300.000 hectares. In the year 2011 production was 293 000 tons[91].

Ginners collect raw cotton lint from farmers in the period between October and December. In the ginning mill the lint is separated from the seed itself and the staple is cleaned from foreign particles. The cotton fiber is then pressed in bales of around 200kg and then supplied to the spinning mills. Moreover ginning companies commercialize side-products, such as cottonseed and oil used mainly for animal food. Because of transportation costs and constraints, ginning mills are distributed over the entire cultivating region

Greek production of cotton represents around 1% of the global production; cotton being a commodity, Greece is considered a price taker in the market. Unlike Egypt or the USA, Greece has not specialized in qualities of cotton that provide a long fibre length or fibre fineness that can command premium prices. Cotton prices are quoted in the market and the most important references for the formation of the prices are New York, Liverpool and Bremen. Vertically integrated companies are less vulnerable to price fluctuations in the world market.

Looking at the whole cotton supply chain it must be noticed that the cotton cultivation and ginning followed a different dynamic with respect to textiles and clothing; while in the past most of the cotton fiber production was sold in Greece for spinning and weaving, now exports of fiber account for more than 70% of the production. From being a net textile exporter Greece became an importer because of the delocalization and collapse of the local textile industry. In fact the figure below shows that while before 2005 the difference between the cotton produced and exported was quite substantial, the difference being used for local manufacturing, after 2005 the majority of the cotton production is exported for textile manufacture outside Greece (Turkey).

[91] Source: Eurostat and OPEKEPE payment and control agency for the Common agricultural policy in Greece

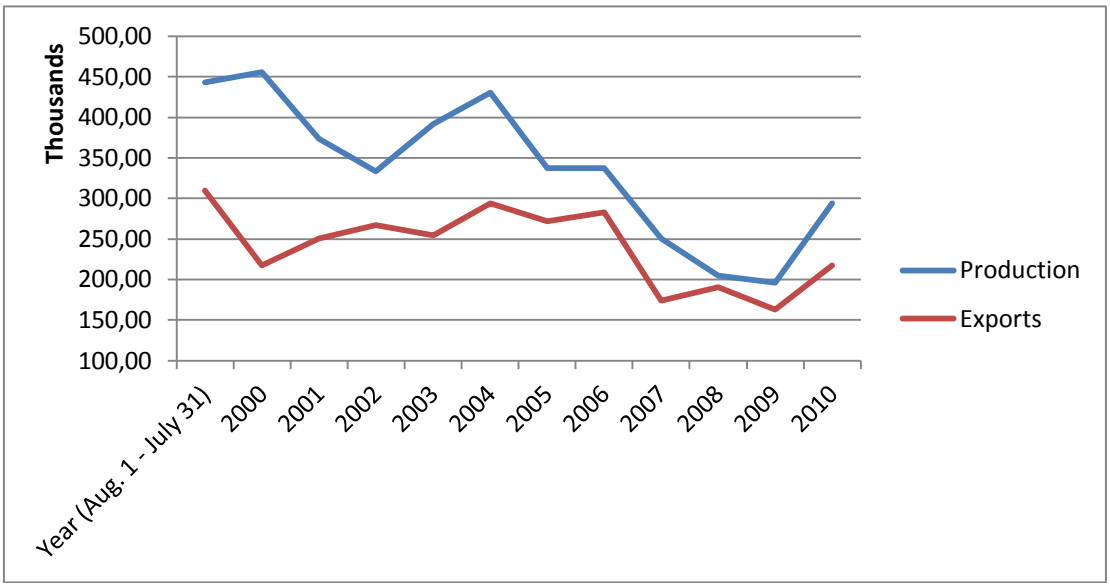

Figure 11: Greek cotton production and exports 2000-2010 in metric Tons

Source: International Cotton Advisory Committee

19.2. DRIVERS AND CHALLENGES OF RESTRUCTURING IN NORTHERN GREECE

The northern Greece case is oriented on a limited and rather upstream production stage, the most relevant drivers of change are globalization and the financial crisis, complemented with specific aspects of technology as well as policy and regulations regarding cotton cultivation. Changes in consumer demand and distribution channels have a very indirect impact and are not addressed here.

19.2.1. GLOBALIZATION

The Greek industry has been, since its accession to the EU, gradually confronted with an increased international competition and an erosion of the advantage of being in the EU. The accession of Portugal with a more competitive cotton spinning and weaving sector to the EU in 1986 created a level playing field in terms of market access into the EU between Greece and Portugal. The custom union with Turkey, enlargement of the EFTA, the liberalization of trade with Central Eastern European Countries and then the EU enlargement of 2004 and the development of a Pan-European cumulation zone, all contributed to an erosion of the Greek position.

With the opening up of neighbouring countries' markets, production was gradually relocated to Bulgaria, Macedonia, Albania and Romania, where the cost of labour may be as little as a tenth of that in Greece. As presented in Task 3 (SMEs), this process was particularly noticeable in Southern Bulgaria where Greek entrepreneurs and managers could easily commute from Thessaloniki, Naoussa and other T&C centres. Within few years a sort of T&C specialised area with a strong presence of Greek entrepreneurs developed between the border and the region south of Sofia in Bulgaria. Initially, Greek garment producers continued to use Greek-made fabrics for the delocalized clothing units, with a tendency over time to replace them at least partially with imports from Turkey or sourced locally. Delocalization affected mainly the last phases of the supply chain, namely garment makers.

The delocalization process was necessary to maintain cost competitiveness especially after the signing of the EU-Turkey Customs Union in 1995. At that time the Retex Programme was implemented with a budget the equivalent of €85 million for the Greek textile sector. The main components of the programme entailed funding for R&D and innovation; modernisation of equipment; health, safety and environment at the work place; vocational training and support measures for access to finance and to exports. All measures were well taken up by the industry, especially the cotton sector when it came to modernisation and to environmental protection. The export promotion instruments were rather adopted by the clothing industry. The Retex programme was taken over in a horizontal context in the Greek Operational Programme for the ERDF after 2000. The ESF Programme as well as the Orientation fund of the CAP was also applied for the cotton farming and processing industry.

The end of the Multifibre Agreement in 2005 was seen as catastrophic by the textile industry. When import quotas from developing countries were abolished, the market was overrun by low priced textile goods such as yarns, fabrics and garments. The Greek textile industry was not prepared and, although an effort of more gradual opening of the market was made, the effect was devastating. Weavers delocalized or became traders of goods from Asia. Spinners that were not able to relocate sold their equipment to Asia or have been bought off by industrial groups.

Global Competitiveness of the Northern Greece textile sector has also been hampered by increasing labour costs. Since the 1990s Greece has initiated a series of social and economic reforms that aimed at increasing wages, improving welfare conditions and labour protection. These reforms fit into a national development strategy aimed at increasing the weight of services (tourism, shipping, financial services) in the economy. This strategy was conducted without taking proper (transition) measures to support manufacturing and especially labour intensive sectors like textiles which faced increased international competition.

For the textile industry, increased labour costs exacerbated the lack of competitiveness of the industry in non-cost factors and eroded the relative cost advantage it still had in the 1980s. Interviews report that the textile industry in Greece is no longer competitive compared to neighbouring countries, but has also lost competitive edge compared to Portugal. It also narrowed the gap with the new member states, hence accelerated delocalization of production to Bulgaria.

A high tax wedge is one of the main causes of the high cost of labour. Insurances and social security cost represent more than 50% of the employer cost however the higher cost level could not be translated into a higher level of quality or service as compared to competition. Portugal for example was better able to ally increased labour costs with increase in quality and productivity.

Beside the cost of labour the companies interviewed also claimed higher cost for production, such as electricity: in fact the Greek government subsidises household electricity bills rather than industry while in other European countries there is an opposite trend. Electricity prices for households have been stable over the last 10 years. In 2006, the average household price was 60% of the European averages and the third lowest among all member states. However for industrial users, prices have been increasing steadily since 2001. In 2010 alone, electrical energy prices increased on average by 20% and thermal energy by 50%.

Therefore the northern Greek textile industry entered the financial crisis in an already weakened position.

19.2.2. THE FINANCIAL CRISIS

The financial crisis of 2008 in Greece had a specific impact by triggering the so called Greek public debt crisis in 2010, that affected the whole Greek economy and made very difficult and expensive for all industries to access bank credit to finance working capital. In the case of the ginning industry the effect can be reduced by shortening the yearly selling cycle of cotton. However, since ginners have to pay farmers immediately when the production is delivered (October-December), the financial constraints on them are substantial. But an additional problem for a business oriented towards export in Greece is the delayed payments from the public administration: exporting companies are required to advance the amount of the Value-Added Tax, which in Greece is at 23% in 2012. Delays in VAT reimbursement increase the liquidity problem of Greek companies.

For textile companies, as reported in the interviews, one of the main concerns is the risk of insolvency for internal market accounts since also credit insurances stopped covering these. Some companies are trying to reduce the weight of Greek customers and increase exports also for this reason (see company case Varvaressos). Companies also reported problems with foreign existing or potential customers that, due to the high instability of the Greek economy and doubts about permanence in the euro area, preferred other suppliers.

The financial crisis hit the textile and clothing industry which had already been restructuring for over 20 years. Thus, the balance sheet of most companies was already weakened in 2007, and even consolidation before 2007 led to a weak financial position. Most of the consolidation (and increase in debts) assumed that the period 2008-2012 would have been one of growth and that rationalisation would lead to increased profits. It was not to be so, hence the 2008-09 crisis and the following years deepened the problem of the industry. This is very much comparable to earlier restructurings in countries with overcapacity, predominance of cost factors in competitiveness, little differentiation and adverse macro-economic conditions (e.g. Netherlands in the 1970s or France in the 1980s).

19.2.3. COTTON CULTIVATION AND CAP REFORM

The specific aspects of the cotton agricultural sector is particular to the Northern-Greek case and combine aspects of globalization, technology and regulation.

The cultivation and ginning of cotton influenced the development of the textile and clothing industry but also its decline and restructuring. Greek cotton, in the global market, is considered of average quality and the majority of textile companies positioned their products in a low added value segment, very much exposed to competition. The cultivation of long staple fiber, suitable for high-end fabrics, depends on a number of factors such as variety of cotton, fertilisation, irrigation and especially weather but also entails more expensive growing procedures that include defoliating and slower not mechanized picking systems.

The cultivation of cotton, as other crops, is subsidized under the European Common Agricultural Policy (CAP). The economics and the profitability of the cultivation of cotton has been influenced by the subsidy system. The change in profitability also had consequences on the quality of the fiber.

The old cotton regime (1981-2005) was based on a per tonne payment for unginned cotton which encouraged a high input-high output system with high agricultural yields. Under this regime, cotton had the highest gross margins and returns per day of family labour of the major crops competing for potential cotton farming land. This price comprised an unginned cotton price derived from the world market price plus a payment from the EC. The level of payment from the EC was based on the difference between a “guide” price that was fixed by the Council and the world market price.

The minimum payment was based on a standard quality unginned cotton which was defined on the basis of its impurity and moisture contents, length and grade of fibres. But there was no incentive to produce cleaner cotton.

The payment from the EC was made to the ginners, who then paid the growers. Growers received a minimum price, which was computed as the guide price minus a permitted administrative cost which was claimed by the ginners. The guide price protected growers from fluctuations in the world price, but allowed the ginners to sell cotton fibre at prevailing world market prices. The aid system also included a stabilizer mechanism that automatically reduced the guide and minimum prices when production exceeded a certain level, with the aim of avoiding overproduction. The aid system was also a source of profit for the ginners that could keep a part of the aid for the remuneration of administrative costs, but substantially higher than the real cost[92].

The old system was in force between 1981 and 2005 with this general structure. In 2003 the EU started a far-reaching general reform of the Common Agricultural Policy. The basic principle was to move away from price and production support for specific crops to one of direct support for farmers' income. Regulation No 1782/2003 implemented the CAP reform and most aid to farmers became 'decoupled': that is, farmers receive a single payment not linked to the production of a specific crop.

However, for cotton, tobacco, olive oil and hops, a proportion of the aid remained coupled (i.e. linked to the production of the crop). For cotton this decision was made on the basis of the assumption that the adoption of a completely integrated single payment would bring significant risk of production disruption of cotton producing regions; consequently the payment to cotton farmers was split between 65% uncoupled to production and 35% coupled to production.

The regime change has also made a difference is in terms of quality. The quality of unginned cotton from the 2006 crop was poor. Some diminution of quality was the result of bad weather in Greece, but the greatest impact came as a result of poorer farm management. Lower fertiliser and irrigation application rates resulted in shorter fibre length; also many farmers did not defoliate before harvesting, which increased the amount of leaf impurities reported in the unginned cotton. Another factor that has contributed to reducing the quality of cotton in recent years, but which is not related to the new regime, is the increasing use of stripper harvesters instead of spindle harvesters. The spindle harvester is gentler than stripper harvesters in handling the plant and the bolls, so that few impurities are incorporated into the unginned cotton. However, spindle harvesters are slow and very expensive, and are being replaced by stripper harvesters, which are faster and more affordable, but, because they literally beat the entire plant in the process of harvesting, far more plant matter – sticks, leaves, etc. - are brought into the gin along with the unginned cotton.

The reduced quality of Greek cotton has affected the potential export market for ginned cotton to countries that require a higher grade of cotton, such as Italy. Differentiation and a higher price for cotton can be obtained by specializing in longer fibre cotton, genetically modified cotton or organic cotton.

The positioning of Greece as a cotton commodity supplier locked the majority of the textile sector in a low-price segment. This contrasts with the need of the textile industry to shift upmarket. Longer and finer qualities are being imported, while the majority of production is being exported to Turkey. The main high-quality cotton spinners in the world, based in Italy, are mainly importing finer qualities from Egypt and the USA. From this point of view the Greek cotton sector is not allied to the European spinners to develop a European supply chain oriented to high quality fibres. The current system, including the reform of the CAP does indeed not provide an incentive to produce cotton with less impurities and with a long staple, hence dedicated to high end segments of the market; on the

[92] LMC International, Study on the Cotton Sector in the European Union, prepared for European Commission, DG AGRI, July 2007

contrary studies show that cotton cultivation is still profitable only thanks to additional agro environmental payments, and low cost low output cultivations such as wheat are becoming more profitable compared to cotton increasing the incentives for a shift[93].

An EU quality strategy would imply an investment in seed development, in agricultural and industrial processing, a research policy, and a common marketing strategy. It would not only need a dialogue within Greece but also between the Northern Greece cotton sector and quality spinners in other EU countries. In other terms the support system should be oriented towards the incentives for cotton farmers to deliver high quality fibres[94].

The reform also provided funds (€4 million of payments) to create inter-branch organisations. These organisations were to be established between growers and at least one ginner with a view to improving the quality of cotton delivered to the ginner. However during the interviews none mentioned inter-branch organizations that delivered effective actions to improve the quality of cotton.

Genetically modified (GM) cotton diffusion outside the EU also put the competitiveness of Greek cotton production at risk; in fact GM cotton has become widespread, covering a total of 15 million hectares in 2007, or 43 per cent of the world's cotton. Most GM cotton is grown in India and the US, but it can also be found in China, Argentina, South Africa, Australia, Mexico, and Colombia; more than half of Chinese cotton is genetically modified. The main advantage is that GM cultivars grown are resistant to herbicides or insect pests[95]. Europe presents a strict regulation and approval system for genetically modified organisms. The cultivation of GM cotton has not yet been approved in the EU although applications have been filed and decision is pending; however several lines of GM cotton have been approved, but only for use as food and feed, hence only cultivated in other countries. Seeds, fertilizers and phytosanitary products for cotton are concentrated in a few multinational companies that are putting their interest in those volume countries that are going into the direction of GM cotton.

The benefit of using GM cotton is to lower the cost of cultivation and it could give the Greek cotton sector a price advantage or reduce its current price disadvantage in the world market. Interviews report that development in non-genetically modified cotton is absent and the seeds used are the same as 15 years ago. Moreover, some interviewees alleged that there is a non-transparent pricing policy for products (seeds pesticides) from the same multinational companies in different neighbouring countries. This model contributes to make cotton cultivation in Greece less remunerative, hence withdrawing resources that could be invested in specialising also in finer fiber qualities.

Another direction of differentiation is the development of organic cotton. While most of the cotton production is sold abroad, organic cotton production (regulated by EC regulation 834/2007) is sold to a Greek spinner and the market evaluates positively textile products made of organic cotton, and is willing to pay above market price for it. This strategy could be an example of “specialization and niche products strategy” with a focus on products with an added value. The development of organic cotton encounters two kind of difficulties: firstly organic certification is

[93] LMC International, Study on the Cotton Sector in the European Union, prepared for European Commission, DG AGRI, July 2007

[94] Such a system exists for the French linen sector where farmers are remunerated at the end of the fibre extraction process based on the proportion of fibres measured in fibre length and fineness.

[95] Source: GMO Compass

not a standard and there are reports of Indian genetically modified cotton sold as organic. Secondly organic cotton may lose its eco-friendly material features during the manufacturing of the textile products because of the chemicals used; an important breakthrough would be the improvement and industrialization of organic dyes and the development of eco-friendly cotton desizing, scouring and bleaching methods, examined in the Lombardia case in the report on Innovation (Task 2).

19.2.4. TECHNOLOGY

Technology is a negative driver in Greece. Advances in technology have not been take up, be it in the cultivation and processing of cotton, ecologically friendly processes, or new materials such as biopolymers. In spinning the trend from open-end spinning to state of the art ring spinning has not been adopted by major players. In denim Hellenic has been active in developing new finishes but on existing equipment. Modernization of equipment, in order to absorb labour cost increases has been limited. The lack of uptake of new technology has worsened the competitive position of the Northern Greek textile industry.

19.3. COMPANY RESPONSES AND BUSINESS MODELS

Textile and clothing industry in Greece represent a case of an industry still in a descending phase that needs to activate a restructuring process before the human and production capital is definitely lost

All the people interviewed for this study converged to the fact that Greece must redevelop its manufacturing sector, textiles in particular, due to the unique competitive advantage of a locally integrated supply chain. Indeed the cotton production sector remained substantially stable during the years, maintaining the remuneration levels for farmers despite changes in the CAP and volatility in the market prices. The textile industry could not fully benefit from the presence of a local supply basis, Hellenic Fabrics being the only company benefitting from a synergy between cultivation and processing of cotton (see Hellenic Fabrics case).

During the interviews no clear vision emerged, amongst economic operators, on the strategy needed for companies to create the conditions for development of the industry. The high cost of labour, as an external factor due to the social reforms, was seen as the main cause of the industry collapse, hence, the only solution is then the reduction of the costs to make the industry competitive again. In general there was a consensus about the measure recently taken by Greek authorities to reduce the public debt that caused the financial crisis. Those measures, likely expected to deeply reform the labour market by cutting many benefits introduced during the social reforms mentioned before, have been necessary for many years, but so far left undone because of the need for maintaining the popularity of the politicians. Those measures are also likely to reduce the labour cost in Greece.

Despite the lack of an overall strategy, it was possible to highlight some virtuous business models. However during our interviews it was hard to find companies that changed their business models in response to restructuring patterns. The two examples of virtuous application of business models, Varvaressos and Hellenic Fabric are a result the combination of a process that started before restructuring and individual factors.

In fact elements of “changing role in the value chain” emerged in the path of vertical integration followed by Hellenic Fabrics, while “specialization and niche products” emerged from the differentiation obtained by Varvaressos through spinning of blending. A trend that was mentioned, but still far from becoming a possible Business models for companies is the development of organic cotton possibly associated with a “Greek Cotton Label”.

In addition, beside the business model analysis it interesting to highlight a trend that gives importance to a complementary activity such as production of electricity. Taking into consideration the increasing cost of energy for the textile industry (20% for electrical and 50% for thermal) since 2010, the production of energy from biomass is gaining importance in the cotton industry. (See box 33)

Box 33: Energy from biomass

Diversified investments in renewable sources of energy was a recurring trend during the interviews. Especially Selected Textiles and Hellenic Textile diversified into energy production. While photovoltaic installations are only linked to availability of large surfaces (such as roofs of production mills), the production of energy from biomass can benefit from the use of material derived from the cotton cultivation and refinery. Integrated cotton companies and ginning mills operate in a closed-cycle system, burning waste from the ginning process. The energy produced is used to dry the cotton before it enters the ginning process. All major ginning plants in Greece are equipped with such a system, which is manufactured locally.

This system contributed to reducing the cost of thermal energy (steam) by as much as 50%. Cotton production consumes high quantities of energy, therefore internal energy production for consumption and placing only the remaining on the market can give a strategic advantage in terms of cost.

However it should be noted that in Greece, production of energy from renewable resources has so far been incentivised by relatively high subsidies[96] that are going to be severely cut as a consequence of the drastic deficit reduction necessitated by the financial crisis. With reduced subsidies, especially on large photovoltaic installations, the growing trend is likely to stop in the next years, although in cases like the cotton ginning industry, where a close efficient circle is in place, the trend is likely to remain stable.

During the interviews also emerged the idea of a Greek cotton label to develop the synergies between the cotton production and the textile industry. The website of the European Commission DG AGRI[97] explicitly mentions the creation of a Greek Cotton Label of origin. During the interviews the company Varvaressos mentioned some efforts taken only at industry level to start a strategy in the same direction but the process somehow stopped for lack of commitment.

19.3.1. CHANGING ROLE IN THE VALUE CHAIN

Hellenic Fabrics represents and example of successful changing role in the value chain by vertical integration with some elements of specialization into high quality products.

[96] For more information : http://www.cres.gr/kape/epixeiriseis_ependites_uk.htm

[97] http://ec.europa.eu/agriculture/markets/cotton/index_en.htm

Box 34:Hellenic Fabrics

Hellenic Fabrics was initially set up as a joint venture between the Accas family business active in cotton cultivation and ginning and the Dutch textile group TenCate that in 1974 was looking to invest in a lower cost production location for cotton fabrics for its workwear fabrics division. In view of the growing jeans demand in Europe in the 1970s the company rapidly shifted to the production of yarns and fabrics for denim. This involved spinning, weaving and dyeing. The Accas family business brought cotton cultivation and ginning activities. TenCate brought the technology and market as TenCate also had denim activities in Ireland in the joint venture (Atlantic Mills) between TenCate and Burlington Fabrics (USA). Hellenic Fabrics was further integrated into TenCate in the 1990s, but was rapidly disposed of in 2001 when the entire denim division of TenCate made substantial losses. The disposal of Hellenic was necessary to cover the losses of closing Atlantic Mills.

Hellenic fabrics had pursued from 1990 onwards a consolidation of its production by acquiring Ilios-TenCate, a production unit making ring-spun yarns that were increasingly in demand in the 1990s for giving denim a more vintage look and for enabling dyeing and finishing effects. The establishment of Kilkis Spinning Mills in 2001 also supported the expansion of production ring spun yarns, slub yarns and compact yarns. In 2002 the spinning units were rationalized and consolidated in one location. Hellenic is now vertically integrated with a production of 35,000 Tons of raw cotton (10% of the Greek production), which covers 75% of the group needs. The spinning capacity is 10,000 Tons which almost entirely covers the annual 20 million meters denim production. Employment is around 120 people in spinning and just under 400 for weaving ad finishing. Besides the quantitative aspect, the internal supply chain is organized in terms of processes and quality to fulfil the quality needs needed for denim.

Hellenic has successfully positioned itself after 2000 in the production of denim for the premium segment. It works closely in product development with the leading jeans brands (e.g. G-Star and Diesel) and develops products in which yarn spinning and fabric dyeing deliver differentiation after jeans washing. Hellenic works closely together with the leading denim washers Martelli in Italy. Hellenic has thus followed one of the most used strategies in the denim industry. While the larger players have focused on volume and cost leadership, the smaller ones have focused on quality and differentiation. Of the European weavers, only Tavex (Spain) has followed a volume strategy as they combined with the Brazilian group Vicunha. UCO followed a two string strategy, however it closed its historical location in Gent and moved production into a joint venture in Romania with the Indian Raymond group. By 2012 only two large denim weavers are still in Europe: Candiani in Italy and Hellenic in Greece, each with more than 20 million meters production. Five weavers have a smaller volume. This compares with the world leader like Tavex (ES, BR), Arvind (IN), Orta and Isko (TK) each with a production over 50 million meters.

However even Hellenic is vulnerable to the crisis. Before 2008 Hellenic was able to maintain its production volume but it also experienced a decline in sales of around 30% in 2008/2009. The recovery in 2010 did not bring the company back to its pre-2008 level. Verticalization makes it less dependent on outside financing but also brings about rigidities in terms of production capacity. Hellenic made a substantial loss in 2008/09, achieved a moderate recovery in 2010 and still has a healthy capital base. It had a solvency ratio of 51,49% in 2007, which went down to 27,78% in 2010, hence going towards a risky level.

19.3.2. SPECIALIZATION AND NICHE PRODUCTS

The spinning company Varvaressos was successfully able to specialize their production offer into cellulosic fiber and special blends of fibers.

Box 35: Varvaressos

Varvaressos spinning is a family company started in 1964 now managed by the 4th generation. They started as a cotton yarn spinning operation in Naoussa.

Around 30 years ago they started a collaboration with Lenzing for the spinning of cellulosic fibers and special blended yarns. This specialty is now their major product. The main markets for those specialty yarns are clothing, sportswear and sports underwear.

They are now a relatively small specialized spinner whose strength is flexibility. Their market is 70% in Europe (mainly Germany) and 30% in Greece but the Greek market is shrinking due to the crisis.

The early shift to high added value fiber was the key strategic move that enabled the company to mitigate the consequences of the 2005 end of quota system for fibers. Most of the spinners that in 2005 were spinning standard cotton yarn did not have the time or the resources to shift to a more value added products like Varvaressos did 20 years before. A protected position in comparison to Asian competitors has been built on two factors: the first is that they can be competitive in the smaller batches required by specialty fibers, while big spinners prefer to concentrate on larger lots. The second, and more important, is the fact that when Lenzing supply their fibers to Asian spinners there are often clauses in the contract that prevent them to reexport the yarn back in Europe.

The restructuring strategy followed by Varvaressos was to focus their effort and concentrate resources on higher added value products. In fact the production of cotton yarn is now a niche and they only spin specialties also in this case: organic cotton, long staple fiber and with environmental certification. This process led to the closing of one plant of the three and a reduction of 40% of the workforce from 2005. The strategy of the company is also to innovate their production process in order to able to supply to technical textiles applications

***Financial crisis**: As many companies in Northern Greece Varvaressos has a big export market but still a considerable share in the domestic market. The financial crisis entailed two types of consequences:*

Domestic market: it is very risky to sell to Greek customers. Credit insurances don't cover this kind of credit anymore. Moreover, as for the whole industry, there is a lack of working capital because the banks are unwilling to finance deteriorating short and medium term cash flow. The strategy of the company is to gradually withdraw from accounts in Greece and increase the share of exports in order to mitigate the risk of insolvencies.

Export markets: Varvaressos reported several cases in which the instability of the economic and political situation led foreign customers or potential customers to withdraw their orders because they were afraid of possible discontinuity in the production.

Quality of the cotton: While they source their cotton mainly in Greece, they state that Greek cotton is in general of standard quality compared for example to long staple Egyptian quality. This is due to the fact that the traditional subsidizing system to the farmers incentivized quantity over quality of the fiber. The 2006 reform did not affect the system and, on the contrary, led some farmers to abandon the production of cotton because it was unprofitable. Varvaressos tried to establish a collaboration with ginners and farmers in order to improve the quality of the cotton but, due to bad weather conditions of the last years and the higher costs that a high quality production requires, it did not give much result. They produce also 100% organic cotton yarn which they have to source in Turkey.

19.3.3. CONSOLIDATION

The case of Klonatex/United Textiles can be an example of a "consolidation" strategy that failed because of a very weak equity basis, overvalued assets and a heavy burden of loans. Klonatex indeed acquired a number of spinning mills and groups, hoping to be able to achieve economies of scale and set the price in the market. Instead, the case of Hellenic Fabrics represents a positive example of a company that was able to consolidate its business by vertically integrating before the beginning of the recession of the sector.

Box 36: Klonatex/United Textiles: consolidation in the 90s and disengagement

Klonatex is a relevant but difficult case. It is relevant since it is an example of consolidation that even had an impact at European level, since it was in 2002 vying for the position of the largest spinning group in the European Union. Klonatex also invested in downstream activities as well as diversifying into shipping, hotels, insurance and telecommunications. Thereby it was at the time an example of a conglomerate that by 2002 no longer existed in the textile industry in Western Europe. It is also a difficult case since the legal successor of Klonatex is in a state of bankruptcy proceedings. The difficulty also arises since interviews with management were not possible. There is extensive literature on Klonatex and we could conduct some interviews with privileged observers of Klonatex. However all information point to the high complexity of the architecture of the group as well as changes in the architecture, partly as a result of the difficulties it faced from 2002 onwards, that year being the last one with an operational profit.

Klonatex is the holding company that formed around Naoussa Spinning Mills S.A. (renamed United Textiles since 2007). The Yarn Division of Klonatex grew by adding major spinning companies that complemented the range of its yarn product offer. The group's expansion was realized either through the establishment of new units (Maroneia Spinning Mills) or the acquisition of existing ones (K. Doudos, which was merged with Naoussa Spinning Mills). The Company invested significant amounts in integrating its textile operations vertically, having interests in Fanco S.A., a clothing maker in sportswear that worked for international brands such as Nike or Reebok, retail and distribution. Strong investments were also made in telecommunications, shipping and the hospitality sector.

At the peak of the consolidation of yarn activities, Klonatex had a production of around 60.000 tons of yarns and possibly absorbed more than 30% of Greek cotton production. The capacities were however fragmented over a large number of mills. Taking into account that Klonatex mainly produced rather commodity yarns, they achieved no significant economies of scale, while not reaping the process paid in the market for higher quality yarns. Indeed most capacities were based on open end spinning and focused on coarser titles. Ring spinning was limited and Klonatex did not shift substantially to compact spinning. With the qualities offered Klonatex was mainly oriented to yarns for clothing and within clothing mainly to knitting. Besides loss of competiveness in terms of price compared to Turkey and Asia, it also lost its local client base because of increased competition from outside the EU.

The structural position of Klonatex was thus already vulnerable by 2002. What follows is a period of restructuring, but mainly characterized by financial engineering. Subsidiaries are recombined and some capacities are closed or regrouped. However a real rationalisation in which the capacities are combined into a limited number of units did not occur. The company's situation has constantly deteriorated at least since 2004, with gradually decreasing sales, negative earnings and cash flow and negative own equity since 2008.

19.4. STRATEGIC RESPONSES BY POLICY MAKERS, BUSINESS ASSOCIATIONS AND EDUCATIONAL INSTITUTIONS

There is no evidence of an integrated strategy for the textile and clothing industry by policy makers. Greece is in fact undergoing severe austerity measures in order to avoid default of the public debt.

Between 2011 and 2012 Greece has committed to one of the toughest austerity programs in modern history. Hefty tax hikes, pension and wage cuts have reduced the primary budget deficit from €24.7 billion to €5.2 billion in just two years, but with a dramatic impact on the life of every Greek. Those measures drain resources also from actions aiming at developing and improving of the competitiveness of the manufacturing sector.

However, taking into account recent structural reform, in most of the interviews there was explicit approval of reforms that will drastically contribute to lower the cost of labour with benefit to the manufacturing sector. Greece is entering the fifth year of recession, making exports more competitive could be a feasible escape from the current situation.

19.4.1. BUSINESS ASSOCIATIONS

There are two industry associations. The Greek textile association called SEVK was founded in 1919 and part of the national Hellenic Enterprise Federation (SEV). It represents spinners, weavers and finishers. Despite falling memberships due to company closures, it still plays an important lobbying role for the industry. Its main function consists of directly lobbying the government on all matters affecting the textile sector, as well as disseminating its views to the press. It is also involved in the collective negotiations with trade unions, although this is losing importance lately due to the new legislation governing labour issues, going towards single company contracts. It is also a member of Eurocoton, the European Cotton Industry Organisation.

Greek Fashion (SEPEE) represents the garment sector. It is based in Thessaloniki (Northern Greece) and is an active member of Euratex. It deals with lobbying at national and regional level, disseminates trade information to its members, supports training programs, promotes exports, introduces industry 'best practices', issues trade statistics. As this case focuses on the cotton industry, we shall not deal further with the fashion associations.

SEVK lacks the means to be a force of action in the current restructuring, mainly because of its traditional role of lobbying and collective bargaining assigned to it by its members. Project development or individual services was not seen as a domain for the association. The collective bargaining activity has become redundant because of the new legislation. That makes the employer association less relevant in dealing with the labour unions (hence making a social dialogue less legitimate). It also makes it difficult to charge levies on the employers for social affairs (e.g. to fund training programmes). Finally, not having a strong service activity or project activity, the industry association is hardly capable of developing new directions for the industry.

Notwithstanding the lobbying activities, the interviewees convey the impression that SEVK focuses on the short term needs of the industry, such as access to credit, reduction of labour costs and social burdens, and is not developing a long term action plan for the industry. These needs are very difficult to meet because of the overall crisis in Greece. The government is not in a position to reduce taxes, to block liberalization or to offer credits. Interviewees mentioned that de-regulation, which is an urgent issue for them, seems easy but it confronts vested interests. A long term national vision on growth has yet to emerge. Also SEVK does not seem to have a long term

strategy, although a strategy on organic cotton combined with a long term vision on raw material autonomy would be worthwhile developing.

19.4.2. RESEARCH AND EDUCATION

With regards to research institutions in Greece active in textiles and especially in the cotton domain, a notable example is Clotefi, mentioned in some interviews.

Clotefi operates both as an independent laboratory and testing centre for all the most important textiles certifications (CE, Oekotex, Eco label) as well as an R&D institute. Despite its limited funding and resources, especially during the last three years, the institute has been involved in several research projects at national and European level, most of them featuring the participation of the private industry (local textile manufacturers). Clotefi has dealt with information technology for textile companies (Itex), textile products for disabled people (Easy Tex), flame retardant finishing (Fresh), and naturally coloured cotton (Nagrefiat).

The quality of work of Clotefi is appreciated in Greece, although its work on cotton is only a small part of its overall portfolio of research (below 10% of all project volume). As many other research centres national and European funding has inclined it to move towards more advanced fields such as nanotechnology, technical textiles and mass-customization. These issues are not connected to the Greek textile industry and the priorities of Clotefi have become more distant to the urgent needs of the industry. The dilemma described in task 2 on research appears again: in many cases if research centers try to get closer to the research needs of the industry in their region they have more difficulties in attracting project funding, while if they focus on funding opportunities their work is less relevant for the industry. For these reason the work of Clotefi did not have any appreciable impact in the restructuring of the sector in Northern Greece.

19.5. KEY FINDINGS

The cotton textile industry in Northern Greece is an example of a restructuring of a manufacturing sector characterized by downsizing and disengagement. Klonatex is the most dramatic case of downsizing and closure. Very few firms are able to resist, such as Hellenic and Varvaressos, none has changed its business approach. The Northern Greek cotton sector is absent from growth sectors such as technical textiles and sustainable development is not adopted as a corner stone of a future oriented strategy.

The restructuring has accelerated in the last three years because of the financial crisis; however during the last 20 years Greece transformed from a net exporter to a net importer of textile products because of the effect of delocalization of the local textile industry that flourished around the cotton supply chain. However, the presence of cotton cultivation has been and still is a potential asset for recovery. The cotton farming and ginning is a sector still in relatively good shape that reacted to the textile industry decline by opening their market to Europe and the rest of the world. After a decline in 2003, cotton production is now increasing again. While in the past, most of the raw cotton fibre production was transformed in textile products in Greece, export articles now absorb most of the cotton production. Integrated spinners continue to adsorb instead their cotton production (e.g. in denim by Hellenic Fabrics).

The textile sector is still essential in Greece, especially along the cotton supply chain. Infrastructures and human capital are not yet lost so it would still be possible to restore production facilities. The idle capacities of United Textiles for example can be an important basis for a re-launch, but this will require a policy of writing off of debts and assets and rebuilding of an entrepreneurial basis. Only the re-establishment of these capacities will enable a large scale recovery.

Virtuous examples in business models like Hellenic Fabrics for their vertical integration and Varvaressos for the specialization in specialty products were not implemented as response to restructuring processes and, moreover are difficult to replicate and export because of the unique conditions analysed in the case . It can be considered as an example for the industry in Europe at large, but vertical integration is costly to implement, demanding a strong financial basis and excellent management skills. The trend of diversified investments in developing alternative energy production is a nice-to-have, reducing costs of energy and creating alternative turnover, however without disqualifying them they cannot be considered as an essential part of a restructuring strategy.

In order to re-launch the textile industry some generic conditions should be restored: three conditions are internal to the industry. The first is that the industry is very much oriented on commodity products and on maintaining competitiveness in the short term by control of costs. The second is that the industry, after five years of crisis and more than a decade of decline, has a very limited financial capacity of resistance. Recapitalisation is urgent both from shareholders and with external capital and credits. The third condition is that the industry lacks the institutions to design and implement a comprehensive vision. Project management skills are present but they lack a programmatic approach.

The restructuring action that the government is activating will have the positive effect of reducing the cost of labour in Greece. On the other hand, bureaucracy should be reduced for the manufacturing industry. Enhanced competitiveness by reduction of costs (mainly labour costs) may be a sufficient condition to start up by boosting exports and attract foreign investments; but recovery can only be sustained if profits made are reinvested in a strategy leading to business models aiming at increasing the quality standard of the products. Therefore, a vision based on reforms and investments is needed.

Such a strategy could be developed around a Greek cotton label, a tool that was explicitly mentioned during the interviews. However such a label should be underpinned by a technology strategy. Greek cotton is known for consistent quality and for being spinning friendly. It is produced without using genetically modified seed. There are strict standards in Europe for environment protection and measures of contamination are more detailed than in Asia; farmers are using generally managed cultivation methods with a lower use of water and of chemical products to protect plants. The effect is also less contamination of the freshwater basis and thus a long term sustainable land use. All those elements should be combined in a certification system and a promotion strategy that would leave an added value on the market.

Another element is to foster the synergies between cotton agriculture and cotton spinning in the EU at large e.g. under the umbrella of the raw materials initiative. Currently the Greek cotton harvest does not comply with the quality standards demanded by the Italian spinners. The CAP does not reward cotton growers providing a higher quality of the fiber. Moreover ginners in Greece buy the cotton crop in full at the end of the season and have to pay at delivery without any premium for above-standard quality. In linen, for the sake of comparison, growers are paid fully after the processing of the raw material based on the fibre length. Such a system gives a bonus on quality. Cotton spinning is now a small sector in the EU but it is specialized in high-end yarns in finer counts for luxury clothing and home textiles. Italy is still the main spinning country with a production capacity close to the Greek output. However Italian spinners are sourcing on a global basis.

A condition to be met is to integrate the knowledge on cotton in Europe. While in the USA there is a coherent programme of crop research (genomics) and industrial processing (e.g. enzymatic treatment) of cotton, in Europe this is fragmented. This is also mentioned in task 2 for the linen industry that faces the same challenges as the cotton sector in aligning agricultural and industrial development. The linen sector is also made up of SMEs and supported by small research groups. A better alignment of agriculture to industry is essential in cotton, linen and in future possibly also biopolymers (see task 6). However, this may need a re-assessment of Europe as a strategic source of raw materials. In that framework an industrial policy enabling a minimal critical mass in natural and synthetic fibres may be debated. This is of relevance if leading supplying countries of raw materials develop a policy of export controls and downstream integration. The survival of cotton sector in Greece may then have a strategic priority for Europe as a whole.

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20. CASE STUDY: THE NETHERLANDS

20.1. INTRODUCTION

The Netherlands has a population of 17 million inhabitants. The Netherlands had a period of strong economic growth in the second half of the 1990s continuing after a dip in 2001 until 2008. The financial crisis had a strong impact on the housing sector, since the growth was partly the result of increasing housing prices. Reduced building activities lead to less demand for home textiles (both homes and offices). In terms of clothing consumption it remained stable throughout 2010 and 2011 but is declining in 2012. The statistics for unemployment are also rather stable in 2012 at 5.9% with a slight increase since 2011. The share of textiles in the total industrial workforce is 2.5%. This contrasts with the textiles and clothing employment in 1969 when it represented 160,000 workers, 13% of industrial employment.

The textile and clothing sector employed 20,000 people in 2009. In the year 2000 the sector employed 26,000 people, it had a decline between 2000 and 2005, then stabilized in 2006-2007 and declined again sharply in 2008. Overall the evolution of the employment is worse than the EU trends till 2005, but much better over the period 2006-2009. With regards to textiles and clothing it is assumed, from the production data, that employment increased slightly in 2011. This comes after a strong decline of employment in 2008 (last quarter) for the textile industry and 2009 for the clothing industry.

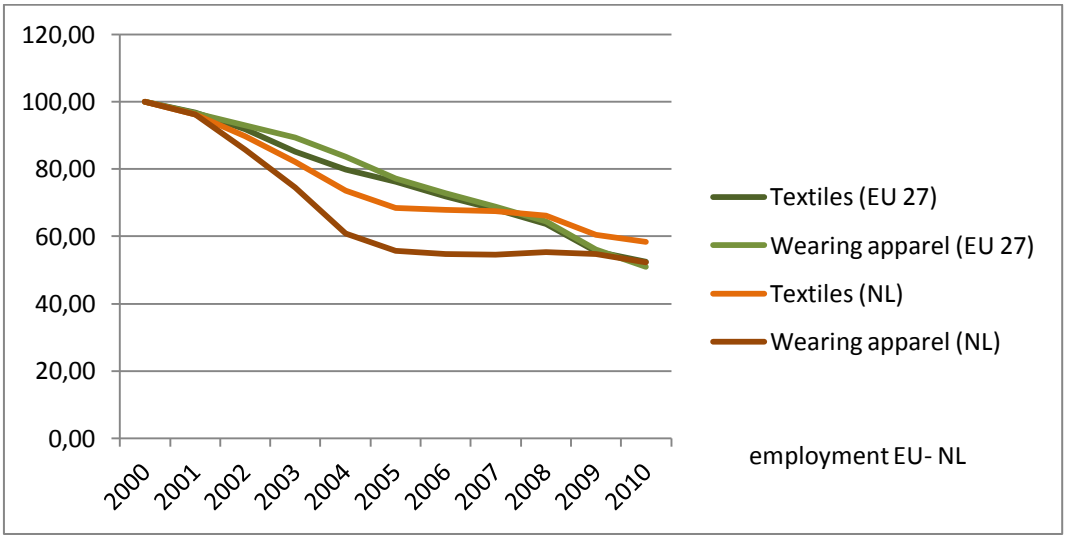

Figure 12: Employment in the textiles and clothing industry Netherlands 2000-2010 (index 100=2000)

Source: Euratex (Eurostat)

The turnover of the sector, according to the industry association Modint was in 2010 €12 billion. While the textile industry followed the EU27 trend, the clothing turnover dropped consistently compared to the EU average.

However there was a strong recovery in turnover in 2010 in the Netherlands, stronger that in the EU as a whole, cf. the figure below.

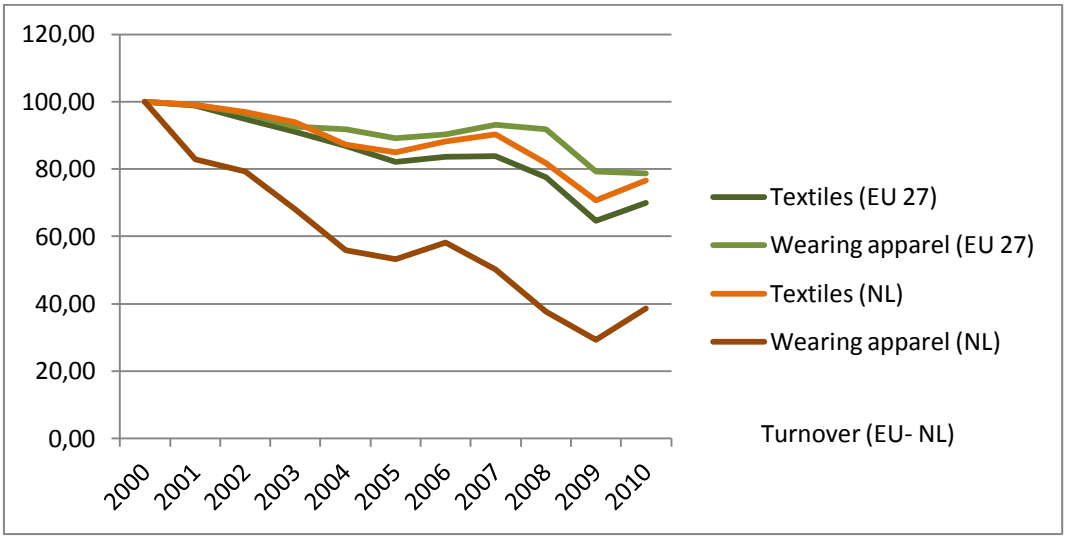

Figure 13: Turnover in the textiles and clothing industry 2000-2010; the Netherlands and EU27

Source: Euratex (Eurostat)

The national production value for textiles and clothing value is around €2.5 billion. Around €9.5 billion of the turnover of the industry is imported. Imports cover close to 95% of the turnover of the clothing industry. For textiles this figure is below 30%. Clothing followed the EU27 pattern until 2007, but with a more consistent drop in 2004 for the clothing industry. After 2007 the clothing industry inverted the tendency in growth. The evolution of the sector over last three years (2009-2011) was positive with growth figures of 3% in 2009, 10% in 2010 and 3.5% in 2011. However this uptake comes after a strong decline in 2008 (-9%) that continued into the first half of 2009. The recession of 2008 came after a period of sustained growth in production of 4% annually between 2005 and 2007. On average the textile sector (NACE 12) performs better than the clothing industry.

Our financial analysis for the Netherlands is based on 128 firms in the textile and clothing industry. The data on turnover only relates to 25 firms and is not comparable to other regions. The trend is one of growth up to 2008, decline in 2009 and recovery in 2010. Employment in the 128 firms remained stable between 2006 and 2011 at a level of 5,700 workers, but with a marked dip in 2009 (5,200 workers). If we characterize the growth patterns of the companies, 67 firms have resisted through the crisis and have had small reductions in employment (between 5 and 15%) over the four years. In 50 companies employment grew over the period, so we can speak of a recovery pattern. Only 11 firms downsized, all but one in the carpet sector and in the majority of the cases as an effect of consolidation. The set of firms is financially solid since 42 firms (38%%) have a solvency ratio over 40%, and 35% between 20% and 40%, but 32 companies (30%) are in a weak position with a solvency ratio below 20%. The Dutch pattern is somehow less conservative than in other countries, but this is a largely the effect of a large share of curtain-making companies - being subcontractors, they have lower capital requirements than the textile industry as a whole. Moreover, the better commercial evolution of firms makes the solvency ratio less of an issue. Overall, the dominant pattern is one of resistance with recovery as second pattern.

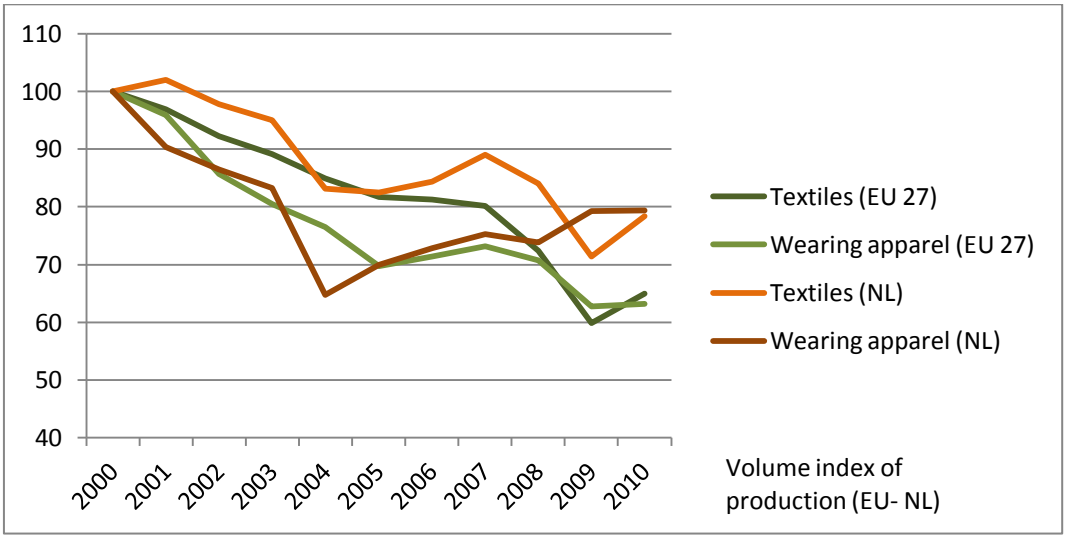

Figure 14: Index volume of production 2000-2010 the Netherlands and EU27 (Index 2000=100)

Source: Euratex (Eurostat)

Over the period 2005-2011, export has evolved more positively than local sales, except in the years 2006 and 2007 when the booming national housing market led to as strong uptake. Traditionally most exports go to the EU, and inside the EU mainly to Germany and the UK. This reflects the strong specialization on carpets and interior textiles. A dramatic decline in 2009 in exports (especially to the UK due to economic recession) has been compensated by growth in Germany and Scandinavia. Since 2007 growth of exports outside Europe is also visible, especially in Brazil, Russia and China and most notably for carpets. Extra EU carpets exports developed from 100 Mln in 2007 to 160 Mln in 2011. The exports to the BRICS grew from 10 to 15 Mln over that period. Most of this growth was after the financial crisis of 2008/2009.

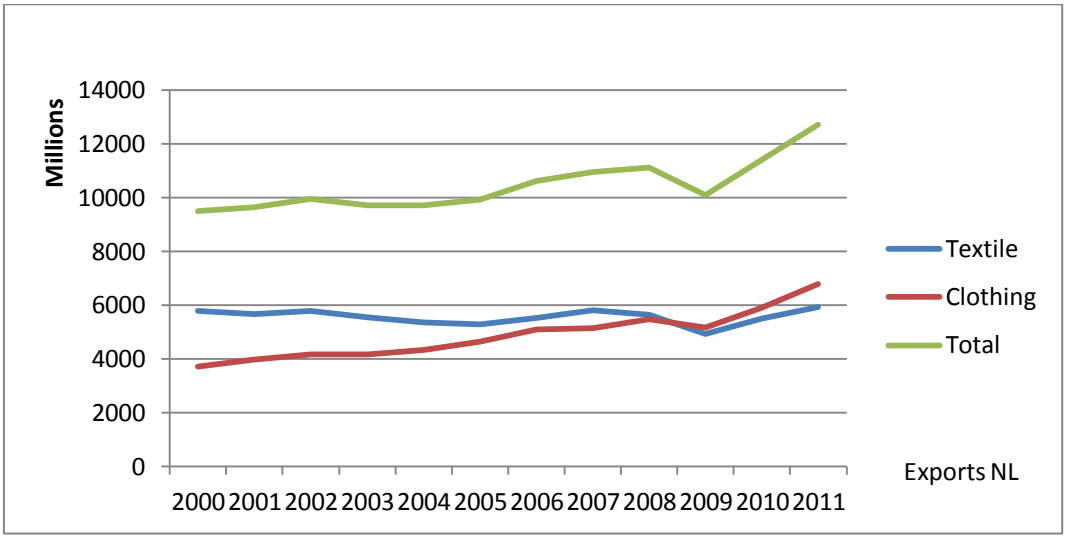

Figure 15: Exports of textiles and clothing 2000-2011 real figures

The Netherlands is a big importer of textiles and clothing. Over 95% of clothing is imported, for branded products mainly from other EU countries. Dutch brands still produce in the Euro-Mediterranean belt (often based on EU made fabrics) while low cost brands and large retailers mainly source in Asia. The textile industry imports large volumes of grey cotton fabrics from Asia to be printed, dyed and finished in the Netherlands. The technical textile sector imports fibres and yarns from Asia. The interior textile sector imports its yarns partly from inside the EU and partly from outside Europe. China is the largest source from Asia, followed at some distance by India and Bangladesh.

20.1.1. MAIN SEGMENTS

The Dutch textile and clothing industry is made up of five segments loosely related in terms of input and output relations but strongly connected in terms of institutional framework. Exact figures on the composition of production by segment are not available: the production in the Netherlands is too small and data is often confidential; this prevents from doing a reliable analysis. Information about the relative weight of segments is based on experts information. In terms of number of companies the industry is made up of 9 carpet manufacturers, 47 textile firms equally split over home textiles and technical textiles with only three companies engaged in textiles for clothing. The clothing industry is composed of more than 700 companies, most of a very small size, but some with over 500 people employed. According to the industry association, Modint, in volume terms the clothing industry and the carpet industry are the two biggest segments followed by technical textiles.

Clothing (knitted and woven). The clothing sector has hardly any industrial production left in the Netherlands. Two large segments are women's wear and workwear. Jeans and casual wear has developed substantially, partly because of European subsidiaries of US groups (Tommy Hilfiger, Nike) but also Dutch controlled groups such as G-Star and the We Group. There are less than 10 knitters established in the Netherlands and there is no clothing factory or production line with more than 20 industrial workers. However, Dutch firms control directly (ownership) or indirectly (joint-ventures) a substantial number of production units in Poland, Romania, Tunisia, Turkey and the Far East. Despite deindustrialisation in the clothing industry some companies are still classified in NACE 13

(industry), even if they no longer manufacture in the Netherlands while others (with a similar structure) are classified in wholesaling of clothing. There is no textile industry making clothing textiles in the Netherlands[98]. Amsterdam is the hub of the clothing sector while the traditional industrial regions Brabant and Twente have a minor role in clothing.

Curtain making (made-up). The curtain making up industry applies the collective wage agreement of the clothing industry, although classified under NACE 1392 of the textile industry. The curtain sector is an original sector as the bespoke making up of curtains is not done in the shop but in specialist factories. All these firms, except one (Vadain) are SMEs. They largely work as subcontractors although some have developed project activities or act as wholesalers in interior fabrics. They represent almost all clothing manufacture in the Netherlands although some have production in Poland. This subsector is the largest industrial employer in the clothing industry. It is spread evenly over the country, with some concentration in the east and south. Many industrial workers originally employed in the clothing industry have re-qualified for the curtain sector.

Interior textiles is the largest segment in the textile industry and is mainly oriented towards woven (not printed) fabrics for furniture and furnishings especially curtain fabrics and upholstery. In addition there are some specialists in mattress ticking, interlinings for mattresses and some technical niche manufacturers. There are no other home (bed/bath/kitchen) textile manufacturers although some former industrial firms operate now as wholesalers. Two groups dominate the industry. Hunter Douglas has a substantial curtain fabric division with Artex (and brands Kendix and de Ploeg). Vescom is a diversified group in interior textiles and wallpaper with one textile firm in the Netherlands. Geographically the interior textile industry is concentrated in the east of the Brabant province, where its forms a kind of cluster.

Carpets is a substantial segment in production volume and in employment. The Netherlands is after Belgium the second producer of carpets in Europe and the third in the world. The Dutch carpet industry is mainly oriented towards projects (offices, hotels and institutions as well as transport). Consumer markets represent a minority of sales volume. The industry has a dominant position also in the synthetic turf niche. There has been considerable consolidation of the industry with now 9 groups forming the industry (compared to 24 in 2000). Foreign ownership has diminished with now only one foreign (Interface) owned group compared to four in 2000. Desso (with production in Belgium), Condor and Interface are the main players. The Dutch carpet industry is concentrated in the village of Genemuiden (Overijssel) where it forms a dense district. There is also some carpet industry in Brabant and in Gelderland.

Technical textiles is a large segment in the Netherlands. It is dominated by Koninklijke TenCate but encompasses also medium size firms (Lankhorst, Autoliv-van Oerle) and many smaller firms all operating in niches. Gamma Holding is also a key player in technical textiles but except conveyor belts the majority of industrial activities are in daughter companies in other EU countries (BE, DE and UK). The technical textile sector is mainly located in the south and east of the country and does not form a cluster or district. Part of the technical textile sector is related to the carpet industry (backing and yarns for synthetic turf). TenCate is notably the main supplier of yarns for synthetic grass. Connected to the technical sector are the manufacturers of advanced fibres DSM and Teijin Aramid.

[98] Vlisco being the notable exception (see Box 34). Vlisco is the world leader in quality wax fabrics for the African market.

The five segments are institutionally combined in the sole industry association Modint. In addition the entire sector is organized in one single collective wage agreement with its associated levies and funds. However while the clothing industry has delocalized more than 95% of its production, the other sectors are still mainly industrially anchored in Europe.

20.1.2. RESTRUCTURING

The textile and clothing industry in the Netherlands was one of the first to enter in restructuring, after 1958 as a result of a poor competitive position in the European Union. This was strengthened by growing imports from Asia at the beginning of the 1970s, decline in local consumption and delocalization of production. The pace of restructuring declined after 1992 and the industry reached a rather stable level from 2002 onwards.

The restructuring process has recently very well been documented by Hesselink[99] and over a longer period of time by Scheffer (1992, , 2009). Especially the period 1958-1980 can be characterized by cognitive lock-ins: the inability to understand and respond adequately to the drivers of change. Restructuring was seen as driven by price competition because of imports. Equally important was the inability to compete with more creative and better products from Germany and Italy. Functional lock-ins were manifest in many vulnerable specializations (e.g. carded wool as demand shifted to combed wool, cotton whereas demand shifted to synthetics). The Dutch industry was less swift to perceive change and react to it. This was compounded till the 1990s by rigid labour practices and relations and an incoherent government policy. The policy combined promotion of trade liberalization, substantial financial support to traditional companies and very limited support for transformation.

The period 1958-1980 is mainly a period of downsizing and delocalization. There have been attempts to rationalize and change, but rationalization failed because of too positive expectations on future demand. Change was not demanded as the Netherlands was at the time not a very challenging market in terms of technical quality and fashion content. The upgrading of demand after 1985 mainly benefitted German and Italian suppliers that were better positioned in terms of quality and fashion content. Textile companies supplying only the clothing industry disappeared entirely between 1958 and 1990. Delocalization was the main trend in clothing as a strategy to serve the middle of the market at a better price. Already by 1980, 60% of clothing production was delocalized.

The period after 1980 is rather a period of rationalization and consolidation (especially in textiles), of technical change in the textile industry and of commercial change in the clothing industry. In the textile industry companies focused on niche segments in home textiles (upholstery fabrics) and technical textiles. In clothing, branding and engagement in retailing became the leading strategies. Delocalization continued in the clothing industry and is now close to 100% of production with only some limited ladieswear and workwear production remaining. The Dutch industry since the 1980s has also become export oriented with around 65% of output exported. The share of intra EU exports is still dominant with around 85% of exports. Russia has since 1995 been the largest non-EU market.

The spinning capacity was already substantially downsized by 1990. The entire carded wool spinning sector of Tilburg had lost competitiveness against the Italian spinners in the 1960s. The cotton spinning in Enschede was squeezed between higher quality and more modern spinning in Germany and Italy and lower cost in Turkey in the

[99] Hesselink, H.J. Strategische Besluitvorming in een Neergaande Bedrijfstak. Proefschrift ter verkrijging van de graad van doctor aan de Universiteit Twente, 2010

1970s. In the 1970s most companies combined their spinning capacities in the Spinnerij Nederland (with state control), which went bankrupt in the 1980s after several rounds of restructuring. Free of their spinning capacities many firms (e.g. TenCate, Blijdestijn, Gaudium) focused on weaving.

Box 37: Textielgroup Twente :[100]

The Dutch textile industry was for a long time dominated by three groups: Gamma, TenCate and Textielgroup Twente. The latter group survived well the restructuring of the 1970's and 1980's mainly by integrating downward and focusing on home textiles rather than clothing. In disinvesting from spinning and shifting to home textiles it was typical of the successful cases of restructuring of the 1960 till 1980. However it made losses in the 1990s, never recovered and went bankrupt in 2003.

Koninklijk Textielgroup Twente (KTG) developed as a diversified conglomerate in the 1970s with the original spinning company as its core and taking over several clients in bed linen, knitted underwear, technical textiles, curtains and garden cushions, however the spinning mill was dismissed in the late 1970s. It was based on traditional Dutch brands with little export potential and relied on traditional retail outlets. From 1990 onwards it lost market share against low cost imports but also against more creative brands from Germany and Italy. Since it was unable to compensate this loss by exports in the internal market, KTG collapsed in 2003, and the Netherlands did still represent 70% of its market. Lack of distinctiveness was the main cause of decline, leading to disinvesting from upwards activities, relocating production and sourcing intermediate materials. The making up departments were moved to Hungary, weaving activities were concentrated on contracting weaving of technical fabrics while volume fabrics were sourced in Asia. Two years before going into bankruptcy, it took over the textile finishing company "Watermolen", as an attempt of forward integration. However also Watermolen was faced with a declining market because of growth of imports of readymade fabrics.

KTG was always a smaller group than the two larger ones in the Netherlands and is an example of a group with lack of critical mass (in each market segment), too narrow focus on the Dutch market and too few exports in the EU. Faced with mounting losses, it restructured (at substantial cost) but never regained a stable footing. The last months of the company were characterized by erratic management and financial engineering to cover the desperate situation.

By 1990 only a handful of specialized spinners survived. They partly supplied the knitting and carpet sector (e.g. de Wijs, Deschamps, Invista Kerkrade) and partly technical textiles applications. Only two spinners of technical yarns survived. One (Artofil) offers very specialized yarn blends (e.g. containing aramides). The other spinner is part of TenCate and provides specialized and patented blends for the group. In the carpet industry some companies have integrated vertically with extrusion and spinning.

The spinners capacity in the Netherlands have suffered from five circumstances: (1) lack of volume and efficiency compared to German spinners; (2) lack of creativity and versatility compared to Italian spinners; (3) lack of specialization compared to technical spinners in the EU; (4) lack of price competitiveness compared to Turkey and Asia (5) too narrow focus on the local market and too little export inside the internal market. Stuck in the middle is a difficult position to maintain.

[100] This case was studied by Scheffer in 2011 in the framework of a court case on the basis of archives and interviews with former employees.

The weaving stage is thus dominant in the Netherlands. Most plain weaving for fashion (e.g. for rainwear) closed down in the 1970s and is now oriented exclusively towards technical textiles. Home textiles is almost entirely based on specialty weaving: jacquard and velvets. The carpet industry has grown since 1970 despite restructuring in the textile industry at large, mainly because of early adoption of broad-tufting. There is hardly any commission finishing sector left in the Netherlands, because of collapse of local demand at the end of the 1990s and lack of technically unique positions. However TenCate and Vlisco have large textile finishing units but are working predominantly with imported grey fabrics. Independent dyers and finishers have largely closed down over the last 15 years, often because of lack of specialisation in technical finishing and because of the cost of compliance with environmental regulation.

The 2008/2009 restructuring is different in nature than the previous rounds - in fact till 2012 the main characteristic is in rationalisation and strategic change. Outright permanent downsizing has not occurred, nor has there been any large bankruptcy in textiles. The 2008/2009 restructuring had a substantial impact in employment and proved also to be a crucial year in the clothing industry. In the clothing sector several companies went bankrupt (Oilily, Interface Fashion) or were dismantled (Secon Group). However from most of these firms spin offs re-emerged. In the textile sector only one smaller company, BW Industrial, closed. The crisis accelerated the consolidation of the carpet sector. Out of 24 companies a rationalization into 9 groups occurred with the closure of at least 6 plants in the east and the south of the Netherlands.

The Netherlands is since the 1970s a country with high labour costs, although it has been able to restrain labour cost increases in the 1980s and 1990s. It has been a major reason of restructuring up to the 1990s. But the industry is now positioned in products for which energy and transport costs are decisive (e.g. carpets), or niche products with high added value. The energy and transport costs are quite acceptable in the Netherlands since the liberalization of energy markets. The presence of Rotterdam (as port of entry for raw materials) and the position as a gateway make the transport offer and costs very competitive.

20.2. DRIVERS AND CHALLENGES OF RESTRUCTURING IN THE NETHERLANDS

20.2.1. GLOBALIZATION

Globalization is a key feature of the Dutch Industry. It experienced very early the shift of retailers to sourcing and importing from developing countries (as early as 1970) and it has also been an active player in off-shoring manufacturing. The former trend started in the low-volume end of the market, while the second started in the medium segment of the market. The top end of the market, especially in clothing, is served by EU imports (mainly Italy and Germany).

The globalization of market and industry led to a downsizing of the textile industry and a retrenchment or redeployment into other sectors. In fact all leading companies in textiles (interior and technical) had their core business in clothing textiles until the 1970s. This was accompanied by severe downsizing (e.g. TenCate from 5000 to 1300 employees in the Netherlands, Raaymakers from 950 to 125). The industry has focused on downstream activities that offer differentiation. These activities are mainly jacquard weaving and dyeing and finishing. Spinning has almost disappeared from the Netherlands while yarns are mainly imported from Germany and Italy, Turkey and China.

In the clothing industry the dominant trend was to delocalize production. This happened first to Northern Africa, later to former Yugoslavia and Hungary as well as to Sri Lanka and Pakistan and later to China. In its sourcing pattern the Dutch industry has followed a two string strategy since 1990. Between 1990 and 1998 the focus was on re-localizing production in Eastern Europe (mainly Poland and Slovakia) and Turkey (from 20% to 40%). From 1999 till 2008 the share of Asia was increasing (from 60% to 75%) while after 2008 the share of Eastern Europe (then mainly Romania) and Turkey increased again to some 30% of sourcing.

However the increased reliance of retailers on imports also led industrial firms to shift from private label to own brands, and in general to be less dependent on large retailers (with substantial buying power) to smaller retailers. The industry has been helped by the resilience of independent retailers that have maintained its market share since 2000 in clothing as well as in interior. Moreover the tight payment discipline of Dutch retailers (reinforced by the credit services of Modint) means that the local market albeit price conscious provides for a low use of working capital. At time of the recession, the rather healthy situation of the retail sector helped to keep working capital in a relatively good condition.

20.2.2. CONSUMER DEMAND AND DISTRIBUTION CHANNELS

Some local factors strengthened the impact of restructuring until the 1990s. The Netherlands was for a long period characterized by a dominance of a large middle market and a small high-end market. Large retailers dominated the retail streets. This enhanced imports in the lower and middle end, while the top end of the market was mainly covered by Italian and German brands. An exception was the interior textiles markets where independent retailers had a larger share of the market. However since 1995 the share of large retailers has been stable and independent retailers have better capitalized on the increased design and quality demands of Dutch consumers.

Several local factors enable to understand the restructuring process. First of relevance is that the period 1997-2001 and 2003-2007 were periods of growth of consumption. This trend was more evident in interior textiles than in fashion, as growth in consumption was fuelled by a booming housing market. The Netherlands also has leading launching customers for technical textiles such as a large demand for geosynthetics, a lead in (football and hockey) transition from natural grass to synthetic grass. The growth of consumption stopped in 2008, but there seems to be a shift towards a replacement market. There has been until the end of 2011 no structural decline in consumption, except six months of serious drop in 2008/2009. Indeed it is only by 2012 that unemployment is generally increasing and that budget policies of the government leads to less consumption.

20.2.3. POLICY AND REGULATION

An important factor is the regulatory and political context. While the Dutch industry has to comply with EU regulation, most firms have taken the opportunity of regulation to foster specializations in niches. It should be stated that many smaller firms had difficulty to comply with environmental regulation (especially dyers and finishers). In the workwear industry some clothing manufacturers were able to adjust to higher demands on protective equipment while others failed to meet those requirements and downsized or specialized in less demanding segments. In one case the costs or difficulties of compliance with REACH was mentioned, with regard to specific colorants. Other mentioned that REACH was very well implementable in a strategy of product stewardship and an ambition of a “cradle to cradle” approach.

The acceptance of regulation in the Netherlands seems, according to the interviewees, to be enabled by a tradition of dialogue and involvement of industry in the development of regulation and a policy to implement regulation through sectoral energy and innovation covenants. Energy covenants are in place since more than 10 years and provide the basis for a long term strategy in which national and local authorities cooperate with industry. This shall be later explained in this case. Of specific relevance is the flexibilisation of the labour market introduced in 1999. In the next section this point shall be elaborated since the structure of regulation in framework laws and policies depend on the uptake by organised employers and employees in a social dialogue.

Flexibility of labour is relevant in the context that the Netherlands has had almost full employment since 1998. This is especially the case for industry and for more skilled work. Regionally the textile industry is based in regions with low demographic growth and full employment. Then restructuring leads rather to a more relaxed labour market than to structural unemployment. In current conditions a slow restructuring or even a company closure is beneficial for the remaining companies to attract workers.

Of importance is are also the regulatory context the enabled also financial flexibility, giving the companies resources for the restructuring processes.

20.2.3.1. LABOUR MARKET FLEXIBILITY

An important feature on the 2008/2009 recession was the way labour market flexibility absorbed the downturn. This was important besides the arrangement offered by the Dutch government, in place in 2008/2009, as an exceptional ruling allowing companies to place a part of their workers in a technical unemployment status. Unlike other EU countries where such a system is a standard feature in employment law (e.g. in Belgium) the Netherlands has resisted adopting such a regulation, but relied on it at the start of the crisis in autumn 2008.

Since 2000 most textile companies had developed a flexible shell of workers employed through temporary contracts provided by employment agencies and in some instances as self-employed contractors. This was made possible through the "flexicurity" labour law effective from 1999. This law made it possible to hire in temporary workers with flexible contracts for the same wages as workers employed under the collective agreement (MITT CAO). The flexicurity[101] law assures high unemployment benefits for the first year of unemployment, but also obliges temporary work agencies to offer fixed contracts for workers having had a combination of contracts for longer than a year. This creates in effect a labour pool for the industry. While this law was also applicable during the previous recession of 2001, it was not yet fully used, as the core employment was still substantial. Besides legal possibilities this process was enabled by the alignment of the textile function classification to the function classification used in general in process industries.

Of importance was also the amalgamation of the training activities of the textile industry after 2002 in the wider used professional course on process technology, called VAPRO[102], used in most of the process industry (food, chemicals, plastics, paper etc.). VAPRO is the training board for the process industry, initially created for the

[101] Flexicurity refers to the combination of labour market flexibility in a dynamic economy and security for workers. For reference: European Foundation for the Improvement of Living and Working Conditions (2007) "Flexicurity", http://www.eurofound.eu.int/areas/industrialrelations/dictionary/definitions/FLEXICURITY.htm

[102] VAPRO stands for Vakopleiding Procestechnologie (professional education for procestechnology). http://vapro-college.nl/vapro-opleidingen/

chemical industry that opened itself to other industries. Ultimately the vocational training of the textile industry was largely absorbed in the VAPRO system in 2007 (in the run-up to the dissolution of the textile training centre in 2008). VAPRO offers a comprehensive set of on- and off-the-job courses for industry. The core system is built on three levels of qualification, each representing a higher degree of understanding and autonomy in process operations. VAPRO is also a modular training system that qualifies process operators for several levels of competence and leadership. This alignment had two benefits: expanding recruitment possibilities to a wider pool of workers, and assuring an alternative training route into the industry.

The textile industry has since 2000 absorbed the labour turnover and cyclical upturns by expanding the flexible shell of workers. The core of workers in companies are mainly those with specific textile skills while process operators are for an increasing part (up to 40% of workers) recruited in a flexible shell on the basis of VAPRO qualifications. VAPRO qualifications are essentially asked when workers are recruited, however the industry has used VAPRO for its core workers as a training system since end of the 1990s. For both core group and flexible shell the geographical flexibility has increased. Within the core group of skilled workers labour mobility is essentially limited to textile firms within the districts of Brabant or Twente. Within the flexible shell mobility is wider but specific patterns exist: for example, companies interviewed in the carpet district of Genemuiden mentioned that process operators are mainly recruited from the fishing town of Urk (45 km away). In other centres an increase of flexibility is provided by seasonal workers from Poland (mentioned by companies in Brabant). In Genemuiden around 30% of workers' temporary contracts were not extended at the end of 2008. In Brabant, with a tenser labour market, the share or flexible contracts is somewhat lower.

The flexible shell has a substantial size for some companies. For TenCate the flexible shell represented almost 35% of its workforce; the entry into recession in 2008 meant that more than 400 flexible contracts were not extended. In the case of TenCate most flexible workers had VAPRO qualifications. However TenCate is increasingly relying for the detail of its products and process knowledge on a small circle of (ageing) staff. In more specialized companies, such as the jacquard weavers in Brabant and Gelderland, the use of a flexible shell was limited to general operatives such as warehousemen. Labour flexibility was mainly internal with more specialized workers also taking up less skilled jobs.

The system of installing a flexible shell has considerable benefits in the short term. The VAPRO route has become more attractive for employers and employees. For employees it gives them access to more industries than a textile specific training. Both unions and employers recognize that a skills gap has emerged for specialist functions. This means that textile specialists can demand good terms in fixed contracts. However also the flexible shell workers can demand better conditions, since they can choose between textiles and better paying sectors such as chemicals and paper. This creates upward pressure on wages also for flexible workers.

With an ageing working population (especially in industry) and a shortage of skilled workers the flexible shell system also has disadvantages. This was described by several companies interviewed, especially those based outside cities with a concentration of firms. In the first place the system has eroded the vocational training system for the industry. The industry has no sectoral training board since 2008 and also no longer a full time professional secondary technical textile school. One industrialist (based 10km from the German border), mentioned recruiting skilled workers from the region of Bocholt, in Nordrhein-Westfalen, where the textile industry is still sizeable and a technical school for the textile industry has been maintained.

The trade unions as well as employers associations are concerned by the long term potential for the industry as the skills gap is widening and a lack of entrants into the industry is at stake. This problem can be partly solved by a good evolution of graduates at university level. The main textile school (Saxion) has increased the number of graduates

from below 20 in 2005 to more than 120 in 2011. However most of these graduates have a curriculum oriented towards design and marketing functions and less to production oriented competences.

20.2.3.2. FINANCIAL FLEXIBILITY

The Dutch industrial compartment developed after the 2001 crisis a financial strategy based on maintaining a high solvency ratio. A leading line was to maintain financial independence of banks. In contrast to other countries, the Dutch companies have not sensed an adverse attitude of banks towards the industry in general. This was different in the 1990s and did also change in 2009. But the more cautious attitude of banks towards the industry had to do more with a general tightening of credit because of the Basel Accords and the recent entry into force of the Basel III agreement[103]. Because of these measures the industry was rather strong at the beginning of the financial crisis. Only one firm, BW Industrial, specialized in weaving lining fabrics, went bankrupt in 2009. The reason was a massive reduction of orders by the automotive clients and a withdrawal by the banks of all the credit facilities.

The restructuring of the 1990s did nevertheless prompt companies to maintain solvency ratios close to 40%. The years 2005-2007 were sufficiently good to enable a strengthening of the financial position. This period is also one of flexibilisation of labour and of consolidation. In interior textiles Hunter Douglas and Vescom were the main actors. In carpets the Condor group and Desso while in. technical textiles TenCate emerged as the clear leader. In the carpet sector the consolidation of 24 to 9 groups enabled a rationalization of production capacities, economies of scale and lower costs. At a time when the Netherlands had full employment this also led companies to be less dependent on a labour market with a shortage of skilled technicians.

The financial crisis has a serious impact even for companies with a strong financial position. The first one is a ceiling on commercial credit in general, which hinders further growth (since there is a relation between turnover and working capital). More specific credit insurance has been curtailed, especially to countries in Southern Europe. This leads a retrenchment from good export positions developed in the period 1998-2007. Companies complain that long term credit is less available for investments in expansion or modernization of plants; this is enhanced by the crisis in real estate that makes buildings less valuable assets to bring in as collateral for loans.

The curtailing of growth in volumes inclines companies to shift to products (in their existing range) with higher value added. It also prompts companies to select its clients in favour of more solvent clients in countries with a low risk profile.

20.2.4. TECHNOLOGY

Technological change has not been an important driver of restructuring in the period of the study. Modernization of equipment has occurred, leading to productivity growth but the displacement of workers is not a visible trend. Increase of productivity is likely to have made the shortages less acute. The regulatory context has promoted the

[103] BASEL III is a global regulatory standard on bank capital adequacy, stress testing and market liquidity risk agreed upon by the members of the Basel Committee on Banking Supervision in 2010-11. It is part of the Basel Accords developed in response to the deficiencies in financial regulation revealed by the late 2000s financial crisis.

uptake of more energy efficient technologies, which has led to better cost efficiency. The Dutch companies have been active is taking up new technologies, such as digital printing and biopolymers but this has not led to new activities or restructuring. It is unlikely that lack of modernization may have led to restructuring.

20.3. COMPANY RESPONSES AND BUSINESS MODELS

The period 2000-2011 did not present dramatically strategic changes in the industry, hence, there is no clear cut break with the past. Companies engaged in technical textiles did in general step up efforts regarding innovation. Carpet manufacturers focused on branding and developing specialized contract markets. Interior textile firms followed similar strategies. In general, all companies maintained the strategies engaged after 2000.

The main event was that Gamma separated its (Dutch wax fabrics) company and was taken over by Actis, a financial holding specialized in firms with potential in emerging markets. The ambition of Actis is to broaden Vlisco's position in Africa, most notably in Nigeria where Actis has a good network of contacts and market conditions are comparable to other African markets where Vlisco is leader. It also speeds up the establishment of Vlisco retail chain in the other African countries where Vlisco is already an established brand.

Technical textiles company TenCate (described in a case in Task 2, report on Innovation) used the crisis to buy companies with an interesting technology portfolio and market position, but with weakened finances because of the crisis. The takeovers were mainly outside the Netherlands and mainly in downstream activities. TenCate took over several manufacturers of anti-ballistic products in Denmark (Perstorp), UK (AML) and USA (YLA and CCS). It also took strategic interest in companies tufting artificial grass mats (both in the Netherlands and outside).

Box 38: Vlisco

Vlisco is an exceptional company in the Netherlands and in Europe. It is the last remaining company supplying exotic fabrics and is thus a remnant of a large group of printers supplying till 1960 colonial markets from Mulhouse or Manchester (co-called Calico printers). Vlisco has only a market share of 3% in exotic fabrics, 97% being produced in China and India. But Vlisco's "Veritable Wax Hollandais" is the quality and design reference from Dakar to Kinshasa and the model to be copied. Whereas a Chinese imitation batik is a commodity, a Vlisco print is an investment, a social and ceremonial symbol.

The survival of Vlisco is due to a range of commercial and technological advances as well as nurturing traditional aspects. The most striking one is the ability to make each lot unique by a clever programming of random differences in production and by the unique look of the product. It is made on narrow woven cotton fabrics (imported from India and Pakistan) with a natural selvage. However, Vlisco hosts a large R&D department (16 full time employees) with a unique knowledge of colour chemistry, process technology and finishing. Vlisco is also experimenting with digital printing, lamination, self-cleaning finishes and anti-bacterial finishes. The commercial invention of Vlisco was that since the 1930s, unlike its competitors, it did set up its own distribution network in Africa. All the competitors worked through trading houses and did not get feedback from the market. Vlisco used first the very fine distribution network of its mother company Unilever, but developed it after it became independent from Unilever. Vlisco has a strong design basis in its headquarter and produces a large number of designs.

Vlisco was from 1958 till 2009 part of the publicly quoted Gamma Group. Gamma was until the rise of TenCate after 2003 the biggest textile group in the Netherlands. Financial problems in 2008 prompted Gamma to sell Vlisco to Actis, an equity fund specialized in companies with strong positions in Africa (e.g. in retailing). Under new

management Vlisco is developing as a life style brand for Africa, expanding the opening of retail stores from Lagos till Dakar and especially opening up the Nigerian market. Vlisco is engaged since 2010 on a plan to double production and to expand employment by 50% (200 workers extra). This comes after a period of low growth since 2000 and even a period of slow decline because of Chinese competition. Expanding purchasing power in Africa clearly favours the design and quality leader.

Vlisco has always invested in an active public profile. It always had board positions in industry associations, promoted research, sponsors the design academy and the fashion biennale of Arnhem. In the region it has a leading role in a network of textile companies. As the oldest industrial firm in Helmond is has active relations with public authorities. It also has an active research and training policy.

In general, the interior textile has evolved closer to technical textiles, where the degree of technology specialization has also increased. The first trend is seen in specifically addressing the contract market with products with advanced technical functionalities. The second trend is seen in more attention to regulated markets (with demanding specifications) and in an increase of patenting. It can be said that the industry aims at specializing in niches with high entry barriers, and is securing its competitive position inside those niches.

The crisis was not seen as a reason to change the business model or strategy. However in the period leading up to the crisis the industry experienced increased difficulties in getting access to raw materials. This led to strategic alliances to secure access to suppliers (e.g. with Aquafil in Italy, with SABIC in Saudi-Arabia), to invest in compounding and extrusion (in carpets) and also to engage in more sustainable products. Desso and Interface are pioneering in cradle to cradle and sustainable design methods. TenCate, Colbond and Lankhorst have been experimenting with the use of biopolymers. The focus on sustainability is also reflected in the technology road map of the association Modint.

A second emerging trend is to engage in mass-customisation and in more direct access to the end-user or customer. Mass customization has been pioneered by Bas Possen in the 1990s but mainly picked up after 2006 by "The Makers" and by "Munro". Since the Netherlands has no factory specialized in suit making since 1992, the mass-customisation model involved delocalized production. Bas Possen used Italian manufacturing first and then production capacities in Eastern Europe. The Makers is a spin-off from Van Gils (the leading suits brand) owning a factory in Tanger (Morocco) while Munro chose to produce in China. In all instances Italian fabrics are being used (Loro Piana, Reda, V.Barberis Canonico). Most developments has been in adequate sizing systems (with TNO); attractive retail presentation and logistics.

This is visible in end-user marketing, in taking out wholesalers and agents and in development of e-commerce. The latter is generally experimental in starting in business to business (e.g. architects with regard to carpet or interior textiles).

20.3.1. CHANGING POSITION IN THE VALUE CHAIN

Changing position in the value chain has been a dominant strategy in the Netherlands. Especially the clothing industry has completed this strategy by 2000 in a double step process. Between 1970 and 1990 the focus was on withdrawal from production and to increase sourcing and offshore production. By 1990 most clothing

manufacturers realized that this strategy enabled them to remain profitable but they remained dependent on buying decisions of large retailers. From 1990 the focus of most firms was on developing own brands and even retail outlets. Many companies succeeded in doing so and the branded firm with outsourced production is now the typical form of the Dutch clothing firm from the largest brands like G-Star with €700 million turnover and 1100 people employed to lingerie designers like Marlies Dekkers.

The textile industry has rarely shifted to outsourcing of production. Some companies did so before the scope of this research, between 1970 and 1990, but most of the industrialists turned into wholesalers do no longer exist as they already went bankrupt before 2000. The added value of trading in fabrics was not sufficient for retailers that increasingly sourced directly in Asia. Most textile firms developed their own brands and engaged in more subtle trends of improving their position either by developing customization or by end-user marketing.

In the carpet industry several companies have developed customization strategies. This goes from web-based configuration services, where consumers can select qualities of carpets, and get a price quotation (e.g. with the company van Besouw). Others like B&C have a web-store and CarpetSign even has a fully bespoke service for rugs. The policy is double, either to offer additional service and to attract consumers to existing distribution channels; or to develop an alternative channel. A barrier for web sales mentioned in interviews is that the investment in carpets is rather high and seen as risky when chosen on-line. New service concepts are mainly developed together with interior retailers.

Sustainability is enshrined in the energy covenants. The shift to sustainability has first been brought one step further by leading firms such as Desso (cradle-to-cradle) and Interface (Mission Zero). The objective of mission zero is to reduce the emission level of their production and to use carpet waste to generate energy. Desso applies the “cradle to cradle” concept developed by Michael Braungart by designing carpets that are recyclable as secondary material. A first product range based on this concept was launched in 2009. Desso aims at being entirely cradle to cradle based for carpet tiles in 2020. The carpet manufacturers have mainly been engaged in a battle for market share against hard surfaces. They have engaged in a research project with the Technical University of Eindhoven to compare the quality of hard vs. soft floors in terms of antiallergenic environments. Research with Philips aims at improving the interaction between the vacuum cleaner and the floor in terms of changing the microbiological biotope of carpets. The roadmap for carpets now aims at bringing carpets to a level suited for hospitals. The airmaster carpet (Desso) is close to being fit for use in medical environments. This product development brings about a dialogue with the end user, bypassing other stages in the supply chain.

20.3.2. SPECIALIZATION AND NICHE PRODUCTS

Specialization is a strong trend in the Dutch textile industry, but goes along with commercial flexibility. Specialization is organised around very specific technical competences. This creates niches in terms of competence and possibilities to protect knowledge. The Dutch textile industry scores rather high in terms of patenting (see report on Research, Task 2).

Commercial flexibility is an important aspect to explain resilience in the recession. The flexibility is organized around key technical competences, but with a high degree of commercial flexibility. This flexibility is in the textile sector expressed by diversification in several market channels and by an active export policy. The two strategies seem to be complementary but they are in fact one strategy. In both carpet and interior textiles the industry has combined selling under its own brands (e.g. Desso, Parade, Ploeg, Schellens) and in the contract market. In both segments most companies have specialized in the upper middle of the market.

The strategy of addressing specific contract markets such as hotels, shipping, and airplanes also leads to a rather global coverage since only a limited number of architects, and contractors address this market. Partly the export is carried out through Dutch based architects that have a global practice. Dutch architects have in the last ten years been active in China and the Middle East. Another vector of exports has been to team up with office furniture companies. Ahrend, Samas, Lensveld and Gispen belong to the larger office furniture producers in Europe.

In technical textiles the same model applies, companies address niches and exploit them on a global scale. TenCate Composites produces for Airbus and Boeing, while van Oerle-Alberton (part of Autoliv) is the largest supplier of safety belting fabrics in the world. For the larger companies it is becoming difficult to serve a global market with only Dutch or European production. Many manufacturers (TenCate, Desso, Hunter Douglas) are developing production near to the market (e.g. in Asia) in order to reduce transport costs and lead times. In products made of olefins, shift of production to the Middle East has been made attractive by the petroleum companies (in Dubai, Abu Dhabi). TenCate and Colbond have taken over a manufacturing plant in the United Arab Emirates.

For the interior sector the shift to technical textiles is mainly carried out by increasing the technical content of the major products: furnishing fabrics and curtain fabrics. Attaining flame retarding properties is sought after. However the innovation is mainly adoptive since flame retardant properties are obtained by buying flame retarding fibres (e.g. Trevira CS) or by applying finishes (e.g. Pyrovatex). The investment of companies is mainly in developing new collections and testing/certifying products. The latter activity is mainly done with Belgian or German test institutes.

Still at exploratory level is the development of materials with lightning properties integrated (led woven in or special coatings). In this field the multinational company Philips is active together with other companies and intermediaries like the Design Academy in Eindhoven and Modint. Philips itself has joined the road map on textiles driven by Modint, contributing to getting closer to the textile domain.

20.3.3. TWO-STRING STRATEGY

The two string strategy is a classic strategy for the clothing industry (and wholesalers) that has delocalized almost all its production from 1970, partly in Asia and partly in the Pan-Euro-Mediterranean zone. In a separate round table seven sourcing managers of different clothing companies were interviewed in 2011. They all reported a shift of subcontracting orders from Asia to the pan-Euro-Mediterranean zone. Motives were partly tactical (quick response, smaller orders, changing fashion styles) and credit conditions. In addition companies mentioned that they had relied too much in China after 2005, which in the meanwhile was getting too expensive; moreover Chinese manufacturers were too much geared towards large volumes and not careful enough in protecting intellectual property rights.

The two string strategy does not apply to the textile industry that is sourcing mainly raw materials and undifferentiated intermediate products (yarns and grey fabrics) in Asia. Only Turkey is a near source of raw materials, besides fibres yarns and grey fabrics also for quick response in ready made products. The textile industry has no manufacturing activities in Eastern Europe and has not engaged in doing so after 2008.

20.3.4. CO-CONTRACTING AND HYBRIDS

This strategy had already fully been implemented before the 2008/09 financial crisis. There is hardly any pure subcontractor left in textiles. There are some hybrids left, but in their business model subcontracting is done to fill spare production capacities. BW Industrial, working mainly as subcontractor, went bankrupt in 2009 but also printers like Lakatex and Hatefa went bankrupt before the crisis. The commission dyer "de Watermolen" stopped activities in 2007. The textile dyer Thijs-deBeer BV moved its factory from the Netherlands to Belgium and was declared bankrupt in 2008. Even in the curtain sector most co-contractors shifted to design, trading and service activities, but did so from 1998 onwards.

Box 39: Vadain Group

The curtain industry (employing about 3000 workers) is an exception to the industry as a whole since subcontractors are the norm. However the larger companies are also developing as co-contractors or hybrids. The curtain making industry is largely made up of SMEs except the Vadain Group. The curtain makers traditionally make bespoke curtains for clients (individuals or projects) through retail outlets. Unlike in France, curtain making is not done in a workshop behind the store but organized in specialized companies. Also large retailers disinvest from making up activities and contract out to specialized entrepreneurs. Vadain is set up in Genemuiden, the carpet city and gains some large contracts for some large retailers.

Vadain developed a structure of four specialized workshops employing over 100 workers. After the opening up of eastern Europe, Vadain set up a second factory in Poland that first specialized in ready made curtains and projects. Accession to the EU also made it possible to shift the production of bespoke curtains to Poland. The main atelier in Genemuiden was downsized to specialities, but also enlarged by setting up a wholesale division and by taking over the logistics of its clients. In addition Vadain started a unit in India to focus on standard ready made curtains and making up of sets for baby rooms. Besides serving the Dutch market it also has contracts with clients in Germany, UK, Scandinavia and Canada.

Vadain plays an active role in the Dutch context: its CEO Harry van Dalfsen was instrumental in federating the curtain makers up, advocated the setting up of training programs for its workers. Politically active as a counsellor, he used his skills when he became President of the Clothing Industry Association and played a key role in the formation of Modint. He was also the architect of the reform of the International Apparel Federation that moved its headquarters to the Netherlands and of which he assumed presidency in 2007.

The absence of subcontractors in the Netherlands is now largely seen as a problem. Textile finishing has often to be carried out in Germany which is at best close by, but often needs up to 400 km transport costs. Starting up clothing and textile designers have to travel at least to Belgium or more often to Italy or Eastern Europe to find production facilities. This quest and the cost and risks associated are often high. A recent trend, often supported by public funding, is to set up sample making facilities or development or fabrication labs. The Arnhem Fashion factory is a joint venture between the fashion schools and the city of Arnhem. The textile museum in Tilburg has a comprehensive weaving plant and the Saxion Hogeschool is developing textile printing facilities. An Interreg IV-C project Organza, led by Arnhem municipality, aims at exchanging best practices in this field.

The Organza[104] project was initiated as a reflection on the findings of the 2007 study on competitiveness in the textile industry (carried out by IFM/Saxion on behalf of DG Enterprise). A reflection in Arnhem, Varese, Treviso, Bremen and Nottingham focused on how to better develop local policies for designers and how to connect designers to manufacturing. The core group was joined by the cities of Presov and Iasi, and got an additional focus on linking designers to subcontractors in new member states. Also Flanders, Navarra joined Organza. A successful application for Interreg IVC funding was made in 2009 and the project started in 2010. It entails an analysis of the creative industry, an identification of challenges and constraints, the exchange of policy experiences and the development of pilot actions. Organza is expected to deliver conclusions at a final conference in Bremen in November 2012. The Organza project has been for Arnhem the basis to set up a masterplan for the fashion industry with a combination of creating incubators and seed funding, support and training of entrepreneurship, and also facilitating commercial and industrial linkages.

20.3.5. CONSOLIDATION

In the interior sector consolidation was already completed before the crisis around Hunter Douglas and Vescom. In the carpet industry the consolidation process started before the crisis and sped up after the crisis. Condor and Desso were the main players. A deeper analysis of dynamics in the carpet industry is given in task 3 (SMEs) of this study regarding the case in Flanders.

Desso is an interesting case regarding consolidation. Desso was owned from 1993 till 2007 by Armstrong, the American world leader in carpets through its German subsidiary DLW. Armstrong filed for protection against creditors (Chapter 11) and as a result Desso was bought out by a consortium led by private equity firm NPM. In 2010 Desso took over ENIA carpets, until then a division of the Swiss flooring group Forbo. Desso is mainly strong in project markets, while Enia is the Dutch leader in consumer carpets. The takeover led to a rationalisation of production with the closure of the Goirle plant and shift of production to the Belgian factories of Desso. While Desso represents a case of consolidation at the level of the Benelux, it is also an example of fragmentation at European level.

Condor is the other example of consolidation in the carpet industry. Condor took over between 2005 and 2010 Ossfloor, VeBe and Ralux. Ralux was a Dutch/Belgian subsidiary of the Italian Radici group. The takeover was followed in 2009 by an integration of Ossfloor and Ralux into the production capacities of Condor, with the effect of closing three factories (of which one in Belgium). As with Desso, Condor is an example of national consolidation.

Two more original examples are the takeover of van Besouw (in Goirle) and MID (in Deventer) by Robusta from Genemuiden. All production was integrated in Genemuiden, and two smaller factories were closed. Robusta is now leading the top of the market in carpets and rugs. TenCate acts as the consolidator in synthetic grass. For all carpet groups, synthetic grass is an important side activity. In fact the Netherlands is the world leader in natural and synthetic grass systems for football and hockey. TenCate has taken a strategic share in Edel Grass. It has done so together with Oranjewoud, a leading engineering company in designing and installing sport systems. TenCate has also entered into strategic alliances with other carpet makers in order to strengthen its access to the market.

[104] See www.organzanetwork.eu for further information

In home textiles the most interesting case of consolidation is Hunter Douglas. Hunter Douglas is the company behind Luxaflex, the world leader in aluminium window blinds. It had in 2011 a turnover of €2.1 billion and employed 21,000 people in 168 companies (of which 66 factories) worldwide. Hunter Douglas had already developed into a vertically integrated company in the 1990s controlling the chain from aluminium shaping to installation. In the next decade it diversified into textile curtains and blinds having taken over Artex, Kendix, Ploeg Stoffen and ADO Benelux. Hunter Douglas also took over textile firms in Australia, USA and France. With the take-over of Mermet (near Lyon) it gained a strong position in glass fibre made sunscreens. However the Dutch factory of Artex near Eindhoven was turned into the world development centre for textiles. Artex still weaves and prints in the Netherlands but also engages in sourcing of grey fabrics and finished fabrics. However, with the acquisition of Ploeg Stoffen its factory in Bergeijk was closed. Kendix operations were also integrated into Artex, at the expense of subcontractors.

Box 40: The Twente printers

The Twente printers are taken as one practice as they were competing which other in the same market and because they were engaged in attempts of consolidation in the years 2000-2007. The three printers are Texoprint, Hatefa and Lakatex. Hatefa took over Lakatex in 2003. Texoprint went bankrupt but KTV took over part of their activities and personnel. When KTV went bankrupt in 2005, Hatefa-Lakatex took over the designs of Texoprint. The combined assets of Hatefa, after it went bankrupt in 2007, were taken over by JB Textiles. JB Textiles also took over the designs and commercial contacts of Swinkels (that went bankrupt as a part of KTG).

The origin of two of these companies is of interest. Texoprint was acquired by Vlisco in 1964 to be less dependent on colonial markets and to strengthen its position in the then recently formed Common Market. The combination of Texoprint and Vlisco was renamed Gamma Holding. When the market of printed ladies wear declined Texoprint shifted successfully to interior textiles in the 1970s. As Gamma moved to technical textiles in the 1990s, Texoprint was disposed of in 2000 to a private investor after several rounds of downsizing after 1992. However Texoprint was part of the successful repositioning of Gamma from the 1960s till the 1990s. Lakatex was part of the vertically integrated Blijdestijn-Willink group between 1963 till 2003. In the 1975-1983 period Blijdestijn Willink disinvested from fashion textiles and household textiles and acquired in 1981 one business in sun awnings which complemented its BW Industrial business (that was sold off in 2003 and went bankrupt in 2009). The sun awning business (Verosol), using a proprietary plasma treatment to metalize textiles, is the sole remained of a group that in its heydays employed 1,400 people. Verosol employs around a 300 people with subsidiaries in Hong Kong, Australia, Spain and Mexico. Despite downsizing and disinvestment Verosol is a good example of transition to technical textiles.

The story of the printers is largely one of declining markets because of competition in the lower cost ranges from Turkey and China but also the inability, because of Italian competition, to cater for the luxury market. However it is also a story of lack of export orientation and thus the restriction to a home market were it services the fashion sector (mainly through wholesalers), home textiles (both directly to retailers and through wholesalers), technical textiles (mainly military prints for TenCate) and the publicity market. The shift in fashion in the interior market from prints to woven patterns from 1998 forced both downsizing and diversification of the three companies. However as the market for printed textiles continued to decline each downsizing was insufficient to reach a realistic capacity. This was a typical pattern in the restructuring of the textile industry in the Netherlands. Diversification was never conducted in forceful way. Much hope was invested in securing a Dutch army order (for the UN mission in Bosnia), but that order and each following order was won by other European bidders.

Attempts to merge Hatefa, Lakatex and Texoprint started in 2000. The main architects were TenCate, the major client of printed fabrics that had a strategic interest in having a reliable printer for its sun awnings business, and the labour unions that desired to secure long-term employment. The hope of achieving profits by disposal of real estate,

the difficulties in setting up a shareholder structure and opportunistic behaviour led to a failure of talks. Texoprint and Lakatex went bankrupt after financial mismanagement in resp. 2002 and 2003. Hatefa recovered most of their assets, but still faced with a declining market and increased competitive pressure closed in 2007. For Texoprint and for the commission dyer KTV working for all printers, urgently needed investments to comply with the EU Water Directive was a corollary element.

JB Textiles, with 27 employees, is the last remaining printer in the east of the Netherlands. By taking over the designs of all the other printers they have a very large scope of designs. In addition they have a niche in the printing industry as they can make up to 24 colour prints. They have complemented printing with dyeing and coating, so they can offer combinations of dyed and printed fabrics and offer coated fabrics. They also added the capability of applying technical finishes (e.g. flame retardant). Their rather unique capability is mainly deployed in the interior textiles. In this market they are competitive in small runs and quick response. JB has developed a strong export position also to the USA, Australia and New Zealand. JB has the advantage of being the last survivor in the printing sector in the region and is thus well placed for quick response demands. However it has also exploited a niche in a global market.

20.4. STRATEGIC RESPONSES BY POLICY MAKERS, BUSINESS ASSOCIATIONS AND EDUCATIONAL INSTITUTIONS

20.4.1. POLICY RESPONSES

There has been no specific support for the textile industry since 1990. This is an outcome of the Dutch well known "RSV affair[105]" and subsequent parliamentary inquiry in 1983- 1984. The RSV inquiry resulted in a profound review of the industrial policy in the shipbuilding sector, but with direct consequences for the whole Dutch industrial sector. In fact there was a specific sectoral policy for textiles from 1968 till 1981, but except for the horizontal measures included in the RSV package, the intervention has been considered as a failure. It had merely the effect of postponing restructuring and protecting existing capital and labour structures. Except for a few companies, the industry is now mainly composed of companies not having benefited from policy support in the 1970s.

The carpet industry did not benefit from any specific assistance and was in the period 1970-1990 a growing sector. The same was true of the companies already established in the technical textile sector. However some companies partly active in technical textiles and partly active in traditional textiles transferred their loss-making "traditional textile" firms into state-sponsored conglomerates so they focused on more promising technical textile firms. Many smaller firms such as Gaudium, Innofa, v.d.Acker did not benefit from state aid. In the city of Tilburg the wool industry benefited from massive aid. No company survived, the only companies surviving the 1970-1990

[105] The shipbuilding company Rhine-Schelde-Verolme (RSV) originated in the late 60's by a fusion under the pressure of the Dutch government. The group received for years strong financial support of around 2.2 billion guilders , but eventually the company went bankrupt in 1983. Immediately thereafter, a parliamentary inquiry was set up to investigate how it was possible that despite the financial support the company went bankrupt anyway.

restructuring were outside the wool industry. In the cotton city Enschede the massive support for this industry helped no single company to adjust. Also in this city the survivors were outside the cotton sector.

The perceived failure created from 1990 onwards an aversion to heavy-handed government intervention. This aversion is true for the Dutch government but extends to state aid in other countries. However some horizontal policies have been appreciated by the industry. A small section of the policy starting in the 1970s was export promotion. This horizontal program has been well used by the fashion (Holland Fashion program) and the textile industry to co-fund collective participation in fairs, targeted actions towards buyers (e.g. in carpets towards hotels), and market information actions. The policy has been expanded with the recognition of creative industries as an export carrier from 2005 onwards (Dutch Design Council and Dutch Design Fashion Architecture – DDFA - actions). Also successful was technical assistance to technological change. Sectoral initiatives were supported till 1990, then extended through horizontal instruments but "privatized" after 2000. The curtain industry was the main beneficiary of these instruments from 1995 onwards.

The policy framework in the Netherlands is still largely based on corporatist models when it comes to the organization of the labour market and social protection. An essential tool is the collective bargaining agreement and the possibility to make this agreement binding by the Ministry of Social affairs for all companies in a sector. The collective agreement for the textile and clothing industry has always been declared binding for all companies since 1945. The reform of the labour market, through the concept of flexicurity, has been implemented in the successive collective bargaining agreements. The practical uptake is addressed in the section on company responses.

The industry has been active in defending its position, by organizing a merger of the then separate textile and clothing agreements. This has enabled critical mass and lower negotiation and implementation costs. Moreover the clothing industry has defended the boundary between the clothing industry and wholesalers. The wholesale agreement is cheaper for employers, and less attractive for workers. However the industry agreement has better training facilities (including a levy) and a pension fund. The labour unions and employers' association have persistently worked to avoid a leakage to the wholesaling agreement. With success as the textile/clothing agreement represents more than 500 companies compared to less than 100 companies in the wholesaling agreement. The collective agreement gives a strong position to employers' associations.

A very important policy instrument in the textile and carpet industry is the energy covenants. This horizontal policy set up by the Ministry of Environment in the 1990s is not an industrial policy, but a policy with a strong effect on industry. The objective of the policy is to foster the reduction of energy use by industry through good housekeeping, process change, supply chain measures and energy efficient industrial parks. The policy is implemented through covenants with sectors and individual contracts with large companies. As none of the textile firms is classified as a large energy user, the sectoral approach prevails. Associations have a task to negotiate the covenants, carry out coordination actions and organize the monitoring process. The supply chain paragraph justifies actions in the realm of technological innovation.

Technological policies have for a long period of time been horizontal, but since 2005 the Dutch government has developed a policy of top sectors, aligned with a regional policy of developing clusters. The industry is represented in two top sectors: creative industry and high-tech materials. Regionally, the creative industry is clustered in Arnhem (Gelderland) while high-tech material is clustered around Twente (Overijssel).

The textile industry has benefitted from European programs with projects co-funded under ERDF and the ESF programs. ESF projects of relevance are dated before 2002 and mainly concerned multi-skilling of workers and increasing flexibility in organization of the shop floor. Interviewees could not give more precise details, since these projects were before their tenure. The ERDF program has mainly been relevant for the eastern provinces. However

projects funded are mainly in the area of technological innovation, such as the setting up of TPRC, the Thermoplastic Research Centre (opened June 2012) at the University of Twente.

The operational plan for the East Netherlands also entailed that the ERDF was used as a financial component in the regional innovation program "Pieken in de Delta". Co-financing from the region was provided through revenues of the sale by the provinces of energy companies. Two projects are of relevance. One is a consortium on the use of biopolymers in geosynthetics. The other deals with interaction between textile materials and the skin and combines dermatology, shaving technology and synthetic turf. Both projects federate firms and knowledge in several industries. TenCate is the main textile partner in all three initiatives. None of these projects has as yet delivered industrial or commercial results. There aim is to develop new markets for the carpet industry, which might advert restructuring.

20.4.2. TECHNOLOGY AND EDUCATION

The research and education system was in a state of crisis in 2000 after ten years of decline. As far as research was concerned the crisis was induced by a change in business model of the leading applied research organization TNO. The focus went to more commercial projects and towards testing; however especially in testing activities TNO was outcompeted on price by the institute Centexbel (BE). In fundamental textile research there is a growing distance between the demand of fibre companies, detergent and laundry companies and the textile industry itself. The research infrastructure has downsized considerably after 2000, with only one group left in Twente employing in 2012 only three researchers. Regarding training and research, the textile industry has become so small that bridges towards other sectors had to be developed to secure and develop key knowledge. Several projects demonstrate that these alliances also create new business opportunities. The new R&D policy of the government since 2011 fosters these bridges.

The industry has developed a technology road map for the sector. The roadmapping started in 2007 as an element of energy covenants with support of the Ministry of Economic Affairs and together with a team from Saxion Hogeschool. However the action plan of the road map requires co-operation with research centres in neighbouring countries for example with institutes in Aachen such as ITA/TFI (covered in Task 2, report on innovation) and the University of Gent. Both centres are already well used by the Dutch industry both for testing and contract research. ITA/TFI and Centexbel are the main partners; however for cluster or collective research no funding instruments exist to work across the border.

The education system experienced a renaissance after 2000 as far as higher education is concerned. The textile and clothing industry has sponsored two schools with a technical and economical curriculum after 1945. They both deliver degrees at level six[106] of the higher education classification in the Netherlands. The first HTS Koetsierschool

[106] Corresponding to a bachelor degree. The Dutch education level does not make a distinction between a degree of a university or a so called 'Hoge School'. The latter is also a form of tertiary education but demands less application requirements than a university.

in Amsterdam was oriented towards the clothing industry, while the HTS de Maere in Enschede was geared toward the textile industry. Both schools were the first technical schools delivering a BSc in engineering with a commercial and management component. In the 1990s both schools were amalgamated in the regional universities of applied sciences (Hogeschool van Amsterdam – HvA - and Amsterdam Fashion Institute AMFI[107]). The growth of education in T&C started around 2002/2004 with a growing student intake in 2002 from below 100 per year in Amsterdam and below 30 per year in Enschede to around respectively 300 per year and 150 per year in 2010.

The success is based on clear attraction of potential students towards fashion and interior textiles. Surveys conducted by the institutes show consistently that fashion is considered one of the most attractive careers by 16-18 year old school leavers (mainly girls); in fact Amsterdam and Enschede have increased the share of fashion content and design courses at the expense of the technical courses. This is somehow contradictory with the classification of textile/fashion engineering as technical degree. This status also leads to financial incentives for schools to expand in order to increase the number of students in technical disciplines. The fashion element is also an important element of branding of the schools.

The two schools are now creating a more differentiated curriculum with a stronger focus on technical competences, as demanded by the industry. Critical mass is however a necessary condition for offering more differentiation in curricula. Both schools also have to accommodate a more international influx of students (more than 35% in each case). In Amsterdam the influx is from the EU in general and in Enschede is almost exclusively from Germany. AMFI in Amsterdam has some influx of students from outside Europe while Saxion does not give a curriculum other than in Dutch and has no extra-EU influx.

A subject of concern is the quality and quantity of technical education. There is no higher secondary offer in textiles. At lower and middle secondary level a number of schools provide an education towards fashion, but this is more oriented to retail skills than to clothing making. Only Enschede offers a curriculum in clothing production at middle and higher secondary level and in textile production at middle secondary level. The latter is oriented towards product development and quality control but no longer towards production processes. VAPRO offers process oriented degrees, but without textile specialization. It is often said that specialized textile workers are no longer trained in the Netherlands. However, the long term restructuring until 2000 and the reliance on a flexible pool of workers after 2000, has eroded the structure of middle education.

The second aspect is the weakening of the research and education structure. Concerning research the industry can only implement its ambitions in cooperation with research centres across the border. Although there is no barrier for testing and contract research, there is no funding and governance scheme for collective (or clustered) research. ERANET projects like Crosstexnet, the active use of Interreg instruments or a specific alliance in research as the DACH[108] countries (see task 2, case Nordrrhein Westfalen) could be relevant for the Benelux and Nordrhein-Westfalen. The renaissance of the technical education system has started when it comes to universities but has not started when it comes to the middle level. The institutional context is favourable for developing technical education but a better structured dialogue between industry and schools is needed.

[107] Both the HvA and the AMFI were so called 'Hoge Scholen' and not officially called universities in the Netherlands. Though they are comparable with the educational quality standards of American universities.

[108] Germany Austria Switzerland

20.4.3. ASSOCIATIONS

The Dutch textile industry has since 2007 one single umbrella association Modint (Mode Interieur en Tapijt). Modint is the result of a succession of mergers starting in 1984 that led nine associations from textile wholesalers to carpet manufacturers. Modint has more than 800 members, and coverage of 80% of the sector. It offers with 70 staff members a wide representation of interests, and a differentiated service package. Modint also hosts the secretariat of the International Apparel Federation, the global organization for the clothing industry.

The amalgamation of the associative system into one association is the result of the restructuring process that started in the 1970s. From 1970 till 1990 the textile industry and the clothing industry merged all sub-sectoral and regional employers clubs in one organization. The establishment of one organization for the entire sector started in 1998 and was completed by 2007.

The clothing organization FENECON is from 1990 onwards the motor of the transformation. In that year the association started the transition from a classic employers' and representative body to a service provider to the industry, from legal assistance to export promotion including trade policy, IPR, market information, technical assistance. The service model enables FENECON to turn around a declining membership base, mainly by reaching out to fashion companies created after 1970. The orientation towards services was accompanied by a new membership fee. The old one was based largely on employment figures; the new one was predominantly based on turnover. This meant that delocalization of production no longer had a downward effect on the association income.

The second step was the merger of FENECON and NKC in 2000. NKC is an organization based in the cartel philosophy of the 1930s (implementing collective buying and payment conditions), but with a stricter competition law from 1994 onwards transforms itself in a credit service body and a consultant to companies in all matters pertaining to commercial conditions. NKC has a wider membership than FENECON also covering textile agents, importers and subsidiaries of other European firms. The merger in 2000 brought about an association (named MODINT) with 700 members and a strong financial position (enabled by a restructuring of the organization).

The credit services of Modint are of relevance for its business model, but also because of its effects on competitiveness. The credit information services give a very rapid view on trends in the market. Growth or decline in sales, financial improvement or worsening of the financial position of retailers can be seen on a daily basis. The credit services also have an effect to enforce strict payment terms in the sector. A strong payment discipline in the home market provides the basis to expand abroad. The tight relation with retailers also leads to close connection with the retailing and a forum for dialogue. Finally the credit services give close relationships to financial service providers such as commercial banks, factoring companies and credit insurers. All are associated members of Modint. This does not provide better credit conditions, but certainly a more realistic appraisal by banks of the sector.

From 2002 onwards Modint associates the carpet industry (with 24 members) and in 2007 the textile industry (then 60 members). Both associations still have a more classic outfit, but they are strong on energy and environmental policy, especially through their coordinating role towards the government in the energy covenants. The textile association also has a stronger interest in research and innovation as it hosts a research fund and is associated to the textile research group at the University of Twente. In the same period the three distinct collective wage agreements (and the three pension funds) were merged into one. The industry still supports a wage based levy system for social security, pension and training.

With the formation of a single association, the governance changed. The board of Modint is mainly responsible for the overall strategy of the association. Matters pertaining to specific parts of the industry are addressed in

groupings. However because of the service structure the strategy is very much guided by the day to day questions and problems that members put forward to Modint members. As a Modint director told us, "we are more governed by the day to day challenges than by political grandstanding in the board". The structure does not accommodate a regional district structure although two informal clubs still exist in Brabant and in Twente. Recommendations of these clubs are often translated by Modint into practical activities.

A next step is the internationalization of Modint. The main factor is the wish of its members to have credit services in the major export markets. However, in conducting an international strategy, it has fostered alliances with associations in neighbouring countries: it has signed agreements with the German, Danish and Austrian associations to offer credit information and negotiations services in these countries; in this context it has established an international office in Kleve (Germany). The secretariat of the International Apparel Federation, IAF, also offers a platform to internationalize.

Although the Netherlands is a medium sized country in the European textile industry, it hosts the largest textile association in scope of services, financial strength and international outlook. Modint is even bigger and more concentrated than the Italian textile and clothing associations combined. The strength is rooted in a Rhineland model with features such as covenants, collective wage agreements and sector levies but complemented with a wide range of commercial service. The weakness has for a long time been a lower orientation on policy and especially research and innovation policy. This is now rapidly changing since fashion has been recognized in 2005 as an important component of creative industries. Technical textiles (mainly because of the influence of TenCate) has been qualified as a major component of high tech materials, first in the east of the Netherlands (2006) then in the national technology policy (2011).

20.5. KEY FINDINGS

The Netherlands case is mainly a case of resilience in reaction to the crisis. Two factors stand out. First, the importance of flexibility of labour in absorbing the shock of recession and secondly, the significance of a strong association in creating a competitive environment but also in fostering collective action and spaces for cooperation. However, the Dutch case also highlights long term weaknesses in terms of lock-ins and in skills shortages.

The resilience of the Netherlands is demonstrated by the stabilization of the sector since 2000, both in turnover and employment. The stabilization is the result of a strong trading logic in the clothing sector and a specialization in niches in textiles. In both sectors exports represent a substantial part of sales, although the local market remains an important basis. This is important in volume but also because the Dutch market is highly disciplined in terms of payment.

The resilience has been enhanced by three factors. In the first place a strong financial position in terms of solvency and a conservative financial policy. In the second place a broad geographical market outlook in niche markets. The third factor has been decisive in explaining the very high rate of survival of textile firms over the financial crisis: the flexibilisation of labour. Indeed an increased reliance on temporary contracts has enabled the industry to absorb the shock of drop in orders in 2008/2009. The strength of the sector was the effect of reforms made in the period 1998/2002.

An important lesson learned is the importance of a strong industry association with an orientation towards services to the members but also an approach of collective agreements. The services are important with respect to credit services that assure a strong payment discipline in the Netherlands and a close relationship with financial service

providers. The collective approach stands out when it comes to collective wage agreements and energy covenants. It is important to stress the long lead times between implementation and effect of a strong industry association: the formation of a strong association started in 1992 and proved to be vital almost twenty years later.

The long term weaknesses are now essential to address. The first aspect is that the cautious behaviour of the industry may lead to lock-ins. Cognitively and functionally companies tend to deepen their specialization, protect their IPR and foster specific skills. The latter element is also a consequence of being a small sector with a small education basis. Skills are mainly learned on the job. Creating new market combinations entering into new technologies is not common. Change is often the result of step by step change and not by revolutions. However the technology road-maps, defined under the leadership of the industry association for textiles and carpets and the connections made to other sectors may create more ambition.

21. CONSEQUENCES OF RESTRUCTURING

After having analyzed the restructuring process from a quantitative and qualitative point of view, this chapter will present a summary of the consequences of restructuring in Europe and in the specific regional cases; the objective is to provide an unitary framework gathering the different levels of analysis used so far in order to model possible best practices to export in other contexts.

The first subsection of this chapter will provide specific concepts introduced as a result of the financial crisis. In the following subsections, we will model the consequences of the restructuring patterns in the industry in the form of changes in the business model in companies and the strategic responses of the following groups of stakeholders: policy makers, sector organisations, and RTOs/universities. These responses have determined the extent to which restructuring in the T&C sector has taken place in a controlled and forward-looking manner or has led to closures and relocation of entire businesses.

Restructuring takes different forms and has different effects depending on the perspective from which it is analysed. Restructuring at company level in response to competitive pressures primarily takes four forms. These forms and their expression at the macro level are described in the table below:

Table 6: Restructuring at company and macro level

Company level	Macro level
Firm closure	Decline in number of firms and decline in employment
Reduction of staff	Decline in employment
Reduction of working capital and turnover. Financial weakening of company	Decline in the total product
Changes in business model, including marketing, technologies, outsourcing etc.	Changes in the structure and structure of employment of the sector

Restructuring patterns and changes in the business model can lead to a survival of firms and often a stable employment at the level of the company but not necessarily at the level of the region. When a company delocalizes, it may lead to the survival of the firm however entails local reduction of employment and. Downsizing delays the demise of the firm but brings substantial reduction of employment. Disengagement leads to an extinction of companies and reduction of employment. Regions in which companies are successful in changing business model and create a pattern of resistance, are able to maintain a critical mass and to keep a biotope for

further development of the industry. When downsizing and disengagement dominates, and companies are not able to adapt their business models, the critical mass is eroded and the biotope is less attractive for start-ups or industrial change.

21.1. SPECIFIC EFFECTS OF THE FINANCIAL CRISIS

Restructuring can be characterized as a number of trends. The most socially relevant is the reduction of employment that is the result of multiple dynamics at the level of companies; the balance between companies closing and opening and indeed the outcome of restructuring patterns within surviving companies such as downsizing, rationalisation technical changes or changes in the product mix.

In Catalonia the decline in the number of companies has had a major impact in terms of restructuring, both on the level of economic activity and on employment, this was also the case in Lithuania and Northern Greece. In Herning, Denmark the decline in number of companies was also substantial, but the impact on the level of employment seems to be less decisive. In the Netherlands the consolidation in the carpet industry had no impact on the number of companies which increased between 2004 and 2009.

We identified a number of cases of decline and closure in the regional cases, most notably the Netherlands, Catalonia, Lithuania and Northern Greece from which several common patterns emerge. The first one is characterized by a position in commodity markets that causes the inability to move into more specialized niches and difficulties in engaging in exports. Klonatex is an example of focus on commodities; Textielgroep Twente is an example of lack of specialization and export. A second pattern is that companies try to respond to trends but fail: Dogi (Catalonia) attempted to offshore production, but this was not successful; Klonatex (Northern Greece) tried unsuccessfully to secure market shares by taking over competitors. In both cases it led to increasing debts and financial vulnerability. Skalmantas (Lithuania) had the right strategy but had no focus on the basics of cost control and credit management which eventually led to bankruptcy.

In the face of bankruptcy or closure, companies find it difficult to adopt forward-looking strategies, leading to changes in business models adapting to challenges and implementing actions aiming at generating liquidity to be used as working capital For example the Dutch printers could not merge because of particular interests and ultimately their assets were taken over by the sole survivor. In the case of Drobe (Lithuania), asset stripping hastened the final demise, also in the case of Textielgroep Twente and Klonatex financial engineering was used to avoid or postpone the demise. In some instances the closure of companies has given breathing space for the survivors, e.g. in the Netherlands for the last remaining printer. However, in the case of Klonatex its demise has weakened the cotton sector as a whole. In the case of Skalmantas and Dogi the failure of a pertinent strategy has withheld an inspiring practice from the region.

Chapter 3 of this report and the Survey Report (Task 1) provide a clear indication of the negative impact of the financial crisis. There is a clear indication that there has been a decline in 2008 in terms of employment and turnover, but some regions registered a positive trend in 2009 and 2010, especially the Netherlands. In Northern Greece and Catalonia decline has continued after 2009. The main responses to the impact of the 2008-2009 financial crisis as a result of downturn in demand and difficulties obtaining credit have been:

Negative:

- Bankruptcies and companies in serious difficulty (especially in Northern Greece)

- Reduction in employees and turnover (all regions)
- More difficulties in financing growth or modernisation (all regions)
- Increased pace of outsourcing (all regions, especially Herning and Catalonia)

Positive:

- Cost savings (mainly in Herning and the Netherlands)
- Changing role in value chain – (generally positive in Lithuania, Netherlands)
- Consolidation processes (mainly Netherlands and Herning)
- Increased market share in home markets as competitors disappear (mainly Catalonia and Lithuania)
- Better access to skilled and specialised workers (mainly Catalonia and Lithuania).

As is highlighted in the bullet points, there are geographical differences and also a large difference between branding companies and subcontractors. Whereas subcontractors in some cases have managed to diversify their business base and offer a broader set of products and services and thereby managed to stay competitive, the branding companies have been more directly affected by the drop in demand. However, there are some main impacts of the financial crisis that can be highlighted.

Negative:

Bankruptcies and closing of companies are one of the most evident impact of restructuring; however the evidences we found in the cases rooted in difficulties that started before restructuring processes. In the case of Klonatex it was caused by an intensive consolidating activity along the supply chain without a strong financial basis. Reduction in employees and turnover has been the major negative impact of the financial crisis. This is mainly due to lower consumer demand, which trickles down the value chain. Increased outsourcing was mentioned by several companies as a negative impact of the financial crisis and the consequent need to save costs. However, some restructuring in the old member states, such as in the Herning case, has led to more outsourcing or offshoring of production. The Lithuanian case study also gives some examples). More difficulty in financing modernization and growth was expressed by difficulties in obtaining credit for new equipment or getting credit or insurance for export.

Positive:

Some of the effects of the financial crisis have been positive for some of the surviving companies. Some of them have invested internally in order to increase efficiency and thereby gain market shares and save costs. In general the financial crisis lead to rationalization of production and overheads, hence to cost savings. Many mentioned the ability to still invest as the reason for survival while many of their competitors, that did not invest, went bankrupt. The financial crisis enabled some companies to enlarge their market shares through consolidation processes. and changing role in the value chain by outsourcing activities. The financial crisis has according to some of the companies made the buy-up of assets of closed companies easier, but this obviously is a result of other companies in need.

In Northern Greece and in Catalonia the financial crisis has strongly affected domestic consumption. In Catalonia many of the T&C companies mainly are producing for the Spanish market, which had a seriously negative impact. However some of the T&C companies interviewed in Catalonia were mainly exporting their products (e.g. Star Textil) or have benefited from competitors going out of business and thereby getting larger market shares in the

home market (see for example Punto Blanco). In Northern Greece the industry had lost price competiveness in export markets and could not compensate for declining domestic sales with exports.

The T&C industry in the Herning area is mainly characterized by small companies that account for more than one third of the industry and the financial crisis had a major impact on them. In general, 40% of the companies in the textile industry are currently experiencing negative bottom line figures. A study conducted by Deloitte in early 2011 shows that small companies, employing 2-9 people, are struggling most to survive. One reason may be the fact that these smaller companies are largely dependent on local buyers and consumption still has not fully recovered after the crisis. Nonetheless, 25% of the big wholesale companies are also facing challenges to survive as they have not been able to reduce costs according to the decrease in demand. In retail, however, large companies are very competitive which may cause further challenges for small retailers.[109]

The financial crisis and the subsequent recession had serious impacts also the structure of the industry. Several companies have been forced to restructure their operations, including laying off employees and increasing the pace of outsourcing. Access to finance has been difficult, and bankruptcies have occurred, but overall, the sector appears to have adapted quickly, and in 2011 positive signs of recovery and growth are visible. In addition, the shortage of liquidity resulted in cutting down of stocks in all parts of value chains as companies took precautions to avoid spending too much on stocks.

According to the representative from 'Spectre' in the Herning case, a company producing functional garments and sportswear quite suddenly found that basic commodities such as zippers and wire had very long delivery time, which caused problems for starting up production on time and, on top, many suppliers of trimmings went bankrupt. Another impact is exemplified by the company 'Tytex' also from the Herning cluster, a company producing niche medical textile products (such as protective and support products). Before the financial crisis, the management of Tytex found that their customer relations were based more on loyalty and mutual trust. Since the advent of the crisis and the increased pace of consolidation among larger players, customers tend to change their suppliers more frequently in the attempt to minimise their own costs.

Only a few of the Danish companies interviewed in the Herning case have decided as part of their strategies to go into new markets, instead, most companies have increased the focus towards strengthening their positions. The reason for this may be found in the uncertainty of the outcome of the financial crisis. Consolidation processes have also taken place in Denmark with larger companies acquiring smaller players to increase market shares and diversify product portfolios.

In general, there has been a negative impact of the financial crisis in Lithuania, however ,many of the companies working as suppliers to branding companies have experienced a positive trend as described in the business model section (changing role in the value chain). In fact, as a result of just-in-time demand, the pressure on the branding companies has increased, and outsourcing is increasingly taking place in the new member states, including Lithuania.

This is not a direct impact of the financial crisis, but in order to save costs during the financial crisis, the European branding companies have outsourced an increasing amount of the activities along the value chain, such as sourcing, supply-chain management, and logistics. The Lithuanian companies are able to deliver quicker and are more flexible than their competitors in the Far East and are cheaper than their competitors in the old member states. The

[109] Deloitte: Passion for fashion- Analyse af modebranchen. January 2011

companies have therefore through marketing and innovative agent companies managed to increase their share of work along the value chain. In order to do so, many companies have invested in lean solutions and modernised the production through new machinery, which have enabled them to provide quicker and more flexible services.

Despite the above mentioned positive trend, many companies went bankrupt in Lithuania while others, for example the upholstery company Audejas, have experienced a large decline in orders and have been forced to lay off many workers despite modernising the production process.

In Northern Greece the financial crisis has led to a dramatic reduction in production in the textile industry. The largest spinning company is out of production since 2008. It is also in bankruptcy proceedings and a re-start is difficult because of the rescheduling of debt and claims on property. Several smaller spinners have also stopped production. The financial crisis also leads to a mobilization of working capital to fund farmers instead of being able to invest in expansion of capacities or in downward integration. The domestic market is in recession leaving export as the only way out.

In *the Netherlands* there has been hardly any reduction in employment or number of companies. The only exception is the carpet industry with a rationalisation process in the number of companies and factories but hardly downsizing in employment. The 2008/2009 downturn has mainly been absorbed by labour market flexibility. Indeed since 2002 companies have followed a strategy of replacing natural labour turnover by engaging more workers on a temporary contract. Moreover, the industry has developed a policy of commercial diversification (more exports and combining consumer and contract markets) and strengthened their balance sheet. Thus the industry was quite healthy at the start of the crisis.

21.2. BUSINESS MODELS

The impact of the trends and drivers for restructuring has varied across Europe, but also across sub-sectors and along the value chain. In the five regions examined the main responses have been the changing position in the value chain, specialization, the two-string strategy, co-contracting and consolidation.

21.2.1. MODEL A: CHANGING ROLE IN THE VALUE CHAIN

Business model

In all five cases several of the interviewed companies have redefined their role in the value chain. However, there are substantial regional differences as a result of the socio-economic conditions and the position of the companies in the value chain.

Obviously, business models of individual companies not only reflect reactions to trends and drivers of change but also company history, regional and national regulatory context etc. Therefore, the 'business models' are exemplary in the sense that they focus on the changes more than on the features of the business models that are not associated with restructuring.

In Herning, outsourcing and offshoring of production has meant that the companies have become virtual production companies. The companies no longer have any production in-house. This has increased focus on design, logistics, supply-chain management and marketing/sales. However, during the 2008-2009 financial crisis the

companies have also outsourced service activities in order to save costs, especially to countries near Scandinavia as a result of the change in customer demand of just-in-time deliveries (see for example Gabriel case in the Danish case study). In the Netherlands most interior textile firms have opted to focus on the production stage giving most differentiation, mainly weaving. Other functions are contracted out or sourced. However carpet manufacturers have mostly followed a strategy of vertical integration.

Many Lithuanian T&C companies reacted upon these trends in two ways. One path was taken by traditional cut-and-make companies that saw an opportunity in offering to Western European textile companies that wanted to outsource manufacturing operations more services in the value chain, including sourcing, supply-chain management, and design. The other path included a rise of sourcing agencies taking advantage of the Lithuanian production capacity and just-in-time demand. Before the financial crisis, these agencies offered services mainly related to sourcing alone, but now the agencies offer several activities along the value chain. These services include design, logistics and quality control. This is facilitated by the existence of a strong informal cluster in Lithuania, which enables the sourcing agencies to identify suppliers in all parts of the value chain. The Lithuanian company First Priority is a good example of a company changing their business model as a result of changes in the market and the strong cluster of companies in Lithuania. The company used their expertise in sourcing and design, plus their extensive network to increase their role in the clients' value chain (please see Lithuanian case study)

In Catalonia, introduction of more flexible production has also been a predominant business pattern, but adapted in order to retain high-quality production and source large volumes of standardised products or materials in the Far East. Unlike Lithuania, there was no cluster and network bringing the companies together and the Catalonian companies have therefore not been able to offer the same type of services as in Lithuania or other new member states. However, some of the companies have nevertheless managed to redefine their role in the value chain. One company interviewed, Filatura Vera, went from being a spinning mill producing cotton thread to specialising in using recycled cotton as a raw material. In Northern Greece the only vertical integrated firm (Hellenic Fabrics) has maintained its market position whereas independent spinners faced declining sales.

In Northern Greece the local garment production was based on subcontracting, while the branding industry was less relevant. The production was gradually relocated to neighbouring countries Bulgaria, Macedonia, Albania and Romania as described also in the Report on SMEs (Task 3). This process indeed affected also companies in the cotton supply chain. Spinners lost clients as these clients closed or shifted to imported yarns.

In the Netherlands textile firms have mainly innovated by reaching a closer embeddedness with the end-user market. Carpet manufacturers have strengthened marketing and service towards end users and key decision makers such as architects. The use of web-based services has also enabled forms of customization and service to consumers. In technical textiles companies have strengthened linkages with downstream users, sometimes by taking minority shareholdings. On the other hand textile firms taken over by Vescom or Hunter Douglas benefited from a broader product portfolio and service available in the acquiring firm. The start of innovation projects with Philips also proved that new alliances create new market opportunities.

Drivers

Outsourcing has changed the geography of the value chain - it has become internationalised. Upstream (basic) operations in the value chain have increasingly been outsourced to the Far East or Northern Africa in order to save costs. However, change in customer demand, especially retailers, has sparked a demand for just-in-time production. This has increased the pressure on suppliers ensuring quick delivery times.

Impact

It is difficult to measure the impact of changing a company's role in the value chain. Outsourcing in general has led to a reduction in production costs and has increased focus on optimizing design, logistics and marketing/sales. This has been a general trend for most branding companies in Europe. Companies like Gabriel (Herning) have managed to increase turnover by changing their internal organization, focusing on individual parts of the value chain, and thereby increasing the number of products/services the company can sell.

In Catalonia, this model has not been frequently used, as companies have to a larger extent chosen instead to focus on their own brands, specialization and distribution channels, as will be highlighted later in this section.

The impact of this business model has been greatest in Lithuania, where the companies have managed to increase order volumes and market shares by commanding a larger part of the value chain. They have been able to do this since there are companies that represent the whole value chain in the country. The Lithuanian companies have managed to offer new services, which make them more attractive subcontractors and marketing partners than companies in the Far East. This is due to large flexibility in the region and collaboration between the existing companies in Lithuania. It is not an organised and well described cluster, but it works well through personal relations. This part is missing in both Herning and Catalonia, where parts of the value chain have disappeared. The impact is simply an increase in orders and market share.

The impact in Northern Greece was, as described by many interviewees the extinction of the local subcontracting small companies to the advantage of the neighbouring low cost countries such as Bulgaria. Greece turned from a net exporter of textiles products to a net importer. The lack of control over the supply chain, partly because of lack of vertical integration of almost all firms and the absence of specific specialization made the Greek textile industry very vulnerable.

The strategy of innovation and consolidation paid off in the Netherlands. Especially in carpets the Dutch companies have gone further in assuring close linkages with end users and this enabled their survival through the crisis. The ability to link to players like Philips also creates the potential for new business models.

Value added

For the branding companies using outsourcing or offshoring as a business strategy, the added value will normally increase, as input costs will be lowered. However, outsourcing can also lead to price competition and price of the product sold will be lower, so the value added depends on the savings from outsourcing and the price of the product. From a national or regional point of view, outsourcing results in job losses in the region. There were examples of service functions being outsourced as well – such as warehousing-, but mainly to new member states. The situation for the subcontractors getting increasingly involved in higher value added activities (sourcing, logistics, and design) is more complex. Although these services should result in higher prices, it is not always the case. In Lithuania, it was mentioned that although the companies are investing in new equipment and getting involved in higher value activities, it is not easy to raise the price of their services. This is a major issue for some of the interviewed companies.

Although the subcontractors are increasing their role along the value-chain, the power is still with the retailers and branding companies. Also, the competition from new member states is keeping the prices down on these services.

Therefore, the majority of the added value is mainly kept for those in control of the value chain, but as the case studies show, some companies have managed to take advantage of the new roles in the value chain (see for example Lithuanian case study).

21.2.2. MODEL B: SPECIALISATION AND NICHE PRODUCTS

Business model

In all five regions we saw different types of specialization as a response to the competition from especially the Far East.

In the Netherlands and Herning a strategic element has been the focus on good quality and high-end products. Several companies indicated the importance to choose the potential market for the company in terms of quality versus quantity and to find something unique to distinguish and differentiate from competitors. In general Denmark is associated with design and technological advantage – two aspects which are generally used in the promotion of Danish products. Some of the companies have decided to maintain parts of their production in Denmark alongside off-shoring other parts instead of outsourcing in order to be able to control the production and quality - or simply keep their entire production in Denmark. The latter is mainly a consequence of the nature of a company's products and market shares. An example is the company Ege that manufactures carpets in Denmark and not abroad because the transportation costs would be higher than the costs of manufacturing the carpets itself.

In Lithuania there was also focus on specialised products based on quality and/or environmentally friendly products. However, an important competitive factor for the sewing companies in Lithuania is that they, amongst other things, use specialised and complex sewing methods. These specialised skills and methods are not used in for example China or India as they are not suitable for large orders. An example of this business model is presented in the Kauno Baltija example in the Lithuanian case study, but many of the companies interviewed had a similar strategy.

Finding a niche area also seemed to be an important strategy in Lithuania. Several companies searched for niche areas where their historical expertise would serve as an advantage. The company *Omniteksas* lost a very large army contract; they decided to use the experience and reference from the army to start their own brand, 'dressed in green', which is based on organic sustainable products. This is a niche product and according to the company a key to success. Klasikine has become a specialist in linen products with special treatments.

In Catalonia, specialization has also been response relevant business model for several companies. In addition to the *Filatura Vera* example above, an example of regional specialization is provided by the region of Olot in Catalonia where companies have specialised in using recycled cotton as a raw material. Although the rest of the world is now increasingly using recycled materials, the Olot companies as first movers still have a competitive edge.

In Northern Greece, the development of organic cotton yarn and fabrics, building on the local cotton production can be seen as a possible niche strategy with a potential development and impact, but has not been exploited yet..

Specialization in niches is a clear feature of the Dutch textile industry. A niche is to be defined in technological terms since the industry exploits its technical specialization in different markets, with a clear advance into technical textile markets. Sometimes, as JB Textiles shows, specialization leads a company to be the last one in its segment, and it can improve its position by taking over assets out from its bankrupt competitors.

A business model whereby high-end products are produced locally combined with outsourcing of low-end products has been adopted by several of the Catalan clothing companies.

Driver

Increased competition from the Far East and regions offering low-cost production by virtue of low labour costs has put pressure for restructuring internal processes in most European textile companies that are normally unable to reduce their costs to Far Eastern level.

Specialization and production of niche products have been relevent business models for European companies across Europe and across sub-sectors. Specialization has taken on different forms that each contribute to competitiveness in different ways: Market specialization (focus on niche products or high-end products); or technical specialization (focus on highly specialised production technologies); or skills specialization happened in many different areas from focus on high-end products, specialised products or specialised skills.

Impact

Specialization strategies companies in the Herning, Netherlands and Catalonia cases tend to focus on specialising in high-end products and design, whereas in Lithuania, where many of the sewing companies compete directly with cheaper labour from non-EU companies, specialised sewing methods combined with niche products based on the use of these methods are important. The impact of this model in Lithuania is that they are able to stay competitive by delivering products that are less interesting for mass-producing companies in the Far East. Although the strategies are slightly different in Herning and Catalonia, the impacts are similar, to stay ahead of competition from outside the EU and to an extent also from some of the new member states, where the wages are lower. In the Varvaressos case in Northern Greece specialization was achieved by spinning specialty fibers together with cotton. The organic cotton niche in Northern Greece is still far from having an impact due to constraints such as lack of uniformity in the certifications.

Value added

Discussing value added for this business model is also complex. Making niche products and selling these at a higher price should increase value added. However, one issue is that some of the specialization is based on skills rather than the products. In Lithuania for example this means that although being specialised, many companies are still not able to increase prices (branding companies are not willing to pay for this), therefore there is little added value.

For many companies in all of the regions, having high-end products creates added value. In Northern Greece indeed organic cotton gives an added value that is paid by customers, although cotton is a commodity.

21.2.3. MODEL C: TWO STRING STRATEGY

Business model

A frequent restructuring strategy in T&C companies is to rely on production facilities in both Asia and Europe – the so-called two-string strategy. Generally, large volumes ('bulk') are produced in Asia with longer delivery time and small to medium volumes in new member states (but also in Northern Africa in some instances) with shorter delivery time. The two string strategy has been predominant in the Dutch clothing sector since 1990, but not

applied in textiles. Two firms are starting to produce in China in order to be close to that growing market, but not for costs reasons.

One example is the sock and underwear producer Punto Blanco in Catalonia which provides 40% of the socks sold in the retail chain El Corte Inglés. The control of stocks has recently been switched from the retailer to the company. Using a vendor managed inventory online system; Punto Blanco controls the stock in all the brand stores in the whole of Spain. The system allows them to follow the amounts sold and the stock, so the stores' stocks can be refilled in time. However, according to the company, the logistics involved in this supply chain strategy requires physical proximity between production facilities and markets. Therefore, and also with a view to maintaining the high quality of the Punto Blanco label, the production of the high quality socks still takes place in Igualada in Catalonia, while the bulk production is produced in Asia. Sedatex also combines production in Catalonia and outsourcing for its clients. Dogi tried to adopt a two-string strategy by setting up factories in Asia but was too late and too slow to do so. The strategy proved costly and the company filed for bankruptcy. It restarted with a smaller size but also without two factories abroad, hence ultimately the strategy failed.

Another example from the Herning case is the combination of modern technology and low cost production. The company *Fibertex*, a producer of nonwoven textiles, stressed that this combination becomes still more feasible as production facilities in many new member states, for them the Czech Republic, are becoming increasingly technologically advanced. Fibertex stressed the necessity of combining innovation with effective and lean low-cost manufacturing as way to success.

Some cut-and-make companies in Lithuania have also adopted this two-string strategy to their advantage. They have offered conditions that enable the brand-led companies to comply with the just-in-time demands of the retailers. This is also why the most innovative cut-and-make companies in Lithuania have managed to get involved in several activities in the value chain. These companies have successfully managed to take advantage of the strong network of T&C companies in the regions. The interviews revealed an example of the strong network amongst the T&C companies – when they were unable to meet the demand they involved other regional companies to help them and thereby keep the orders in the region.

In the Netherlands Vadain shows an interesting example of two strings since it has complemented its Dutch unit focused on complex bespoke sewing of curtains with a factory in Poland with standard bespoke curtains and in India for ready made products (not bespoke).

According to the interviews and examples of this business model, the main difference between what is produced in especially the new member states and Asia is the volume and quality. Many of the companies mentioned that the Asian producers mainly focus on bulk production and cut-and-make products. The main reason for this is that it is the most economically viable strategy for both the producers in Asia and the European companies. Lower volumes will not be beneficial as the transport cost will be too high. Another reason is that the European cut-and-make companies in especially the new member states have focussed on specialised skills and niche products, which is much less attractive to the competitors in Asia.

Finally, some of the reasons for keeping the high quality production in Europe are branding, control over quality and reduction of errors; in fact many companies mentioned that there are more mistakes in the products ordered from Asia compared to European suppliers.

Driver

The main driver behind this model is the change in demand structures from retailers, which have trickled down the value chain. There has been a shift in demand from large volumes towards just-in-time deliveries. This time issue

means that it is very difficult for European suppliers to the retailers to deliver in time if the production is outsourced to a destination far away from Europe. Several companies have benefited from this.

Impact

The long-term impact of this strategy could be that an increasing amount of textile production will take place in Europe. However, it is not clear-cut that Europe will benefit from this, as it depends on whether framework conditions such as access to skills are favourable. If there are no technical skills left in a region and the jobs on offer are not attractive, it will be extremely difficult to reverse the outsourcing/offshoring trend. In countries where production has more or less disappeared, such as Denmark, a return to manufacturing is of little interest to the companies currently operating within the sector. In Catalonia, the situation is similar to the Danish situation, but the region has more manufacturing companies than does Denmark and these companies are less focused on design than in Denmark.

The real benefit of this type of restructuring is for companies in the new member states, where production facilities and manufacturing skills are still available. Also, although the new member states are unable to compete on price with the Far East, they are still cheaper than the old member states.

Value added

Producing high-end products locally and outsourcing low-end products should result in higher value added – taking into account the discussion on outsourcing in model A. In a regional/national aspect, it should create added value if production changes from low-end to high-end products.

21.2.4. MODEL D: CO-CONTRACTORS/HYBRIDS AND NEW DISTRIBUTION CHANNELS

Business model

A rapid diversification in the market with increasing numbers of specialised products and shops emerged from the cases. One good example is children's clothing, where quality in terms of durability, non-toxic materials and ease of care is vital for an increasing share of the consumers. This has provided an opportunity for children's clothing brand suppliers to attempt to create their own labels, and either sell directly to the retailers, through their own shops, or via online shops. This allows them to establish and expand their brand name in time

The Catalonian regional government has seen new distribution channels as a way forward, and indeed this strategy has proven a success for a few companies. However, according to the interviews in Catalonia, the main barrier to this type of restructuring is reluctance in companies to change their traditional distribution channels. The Catalonian company Star Textil is a good example of a company which, through a long process, has managed to create a brand through several initiatives (please see more details in the Catalonia case study).

In Lithuania there were mixed views about the effect becoming a co-contractor. The companies in favour of having their own label saw this as a type of risk mitigation strategy as they would then not be dependent on supplying to a limited number of brand companies (see LTM Garments example in the Lithuanian case study). Klasikine is a typical example of a co-contractor; their own brand has not made a big impact yet but it is clearly a next step.

Those of the company interviewees not in favour of having their own label saw the home market as extremely limited and felt it to be a significant barrier that the companies had little expertise exporting and marketing their

own labels. Building on the latter point, the companies saw that it would be difficult for Lithuanian companies to uphold a strategy with focus on export, as their experience indicates that Lithuanian design is not seen as interesting by neither customers nor by consumers in the old member states. For many Lithuanian companies, expanding the client base (as subcontractors) and product range, and making production more efficient were more important than having their own label.

In Herning, creating own labels was not highlighted as an important strategic choice by any of the supplier companies. This could be due to the large internationalisation of the Danish companies, as the model is normally tested in the home markets before launching the new labels internationally. Also, some companies mentioned that creating own labels and identifying new distribution channels has been an integral part of the companies for many years.

In the Netherlands co-contracting is prevalent in home textiles, but often complementing own brands. The co-contracting strategy is often a consequence of specialization, and facilitated by the reduction of competitiveness. JB textiles as the last printer, is a good example. Vadain has moved from subcontractor to co-contractor but has also set up a collection for interior retailers. Carpet firms have developed web interfaces to support clients but also to prepare for a direct sale to customers. They are also looking at models to customise carpets to end-user needs.

Driver

Changes in consumer preferences have created new opportunities for the companies in all case regions. However the Northern Greek case has not focused on aspects related to this point. Consumer focus on quality and specialised products has created opportunities such as developing new labels/brands and new ways of selling those brands directly to the consumers.

Impact

The main impact of the changing consumer trends is that it has provided manufacturers of producers of garments and suppliers with an opportunity to co-contract and sell their labels through a long line of different distribution channels (multi-brand stores, outlets, franchise, e-stores etc.), in some cases retrieving profits that would otherwise accrue to retailers.

For especially the companies in Catalonia, this was seen as a good strategy because the region has a good reputation for design and fashion combined with a large home market. In Lithuania, the impact of having their own label is rather limited as the home market is very small and the country is not known for design and fashion.

Value added

The value added for this model depends a lot on the success of the label and distribution channels. Selling directly to the consumer should create higher value added. However, it is important to differentiate between labels and brands. Having your own label will not necessarily create any added value as it might still be unknown to the consumer. If the companies manage to create a brand – recognized by the consumers – the chance of higher value added increases. The market size is also an important factor. Companies in Catalonia have, although the market has been declining, a larger home market compared to for example Lithuania.

21.2.5. MODEL E: CONSOLIDATION

Business model

Successful textile and clothing companies have acquired companies hard hit by the credit crunch. The consolidation patterns in some textile companies in the Herning case has involved acquiring small competitors in order to increase market shares and diversify product portfolios, rather than acquiring suppliers or distribution channels. According to the companies interviewed, in most cases, becoming bigger provides a competitive advantage and the possibility to be able to keep up with the largest customers.

One example is the company Tytex, that is required by customers to provide a full programme of products, not just stand-alone items. This has led to the development of new products and take-over of a few small companies and concepts in order to become '*the complete provider*'.

The Lithuanian case study also provides examples of consolidation strategies, but rather through the acquisition of assets such as equipment than through the buy-up of whole companies. Also in the Netherlands, the carpet industry consolidated from 24 into 9 groups with a rationalisation of production. This trend was also seen in the report on SMEs (task 3) for the carpet industry in Belgium. In technical textiles a consolidation also happened but more at international than at national scale. TenCate has been most active in downward integration also.

In addition, mergers and acquisitions have taken place downstream the value chain among the customers/distributors. A few companies mentioned that the consolidation of the distribution channels puts pressure on the textile companies to be able to deliver a wider product range of products to satisfy the distributors' wish for 'one-stop-shopping'. These trends were also evident in Catalonia, but to lesser extent in Lithuania.

In Lithuania the successful companies hired workers from companies that had to lay off workers, but there were also examples of companies buying equipment and machines in old member states when these companies decided to outsource production.

In the Northern Greece case the examples of Klonatex and Hellenic Fabrics represent a case of consolidation strategy. However the strategy of Klonatex failed because of a very weak equity basis, overvalued assets and heavy burden of loans that reached a critical point with the 2008 crisis. Hellenic Fabrics consolidated its business by vertical integration, however that strategy has not avoided Hellenic from being severely hit by the economic crisis in Greece even if it is successfully specialized in the high end segment of the market.

Driver

The 2008-2009 financial crisis and the challenging times for most companies in the T&C industry, left some in dire straits while others were even forced to close down. This has however provided opportunities for companies less affected or with a different strategy.

Impact

At many interviews with the companies, it was mentioned that the companies left in the sector now are strong companies, as they have survived all the negative trends in the sector over the past couple of decades. This has also provided an opportunity for many companies to grow, but often only in terms of turnover, and not in terms of employment. This is mainly due to the increased focus on developing lean processes and investing in new equipment to enhance efficiency. These companies also outsource part of the production.

Changes in the market and customer requirements have created a need for companies to cover more functions. Therefore, in order to remain competitive, many companies have been through a consolidation process in order to

obtain the necessary critical mass. The effect of consolidation is also to strengthen the internal orientation of firms. They are less dependent on subcontractors, hence consolidation goes against the formation of production clusters.

Value added

Consolidation will provide greater control of the market through critical mass and also result in economies of scale in sourcing of raw materials, production costs and distribution costs. The value added can be created through production efficiency and greater control of the value chain, which can minimize risks in times of restructuring. However consolidation also leads to rationalisation of productive facilities, either by combining plants or by reallocating activities between plants.

21.2.6. OVERVIEW OF BUSINESS MODELS

For a better overview, the table below summarises visually the business models identified and analysed.

Table 7: Overview of business models

Model (title)	Trend/driver	Type of change	Impact	Type of companies
A:Changing role in value chain	Outsourcing/offshoring Just-in-time Financial crisis	Virtual production companies Rise of new agencies Increased role of NMS in value chain	Larger contracts Reshuffling of roles in value chain Increased efficiency	Mainly suppliers
B: Specialisation and niche products	Competition from Far East Consumer demand	Focus on high-end products Focus on specialised skills and complex processes Outsourcing of standard products Own brands	Differentiating and staying ahead of low-cost competitors More focus on design Changed skill composition in staff and management	All
C: Two string strategy	Long leads times of production in Asia	Production of low-value standard products in Far East/Northern Africa (high volume) Production of niche products and high-end products in Europe (low volume)	Meeting demand of retailers Increased outsourcing to NMS instead of Far East Return of production to Europe?	Branding companies (outsourcing to NMS) NMS suppliers (increase in orders)

D: Co-contractors and hybrids	Changing consumer trends	Sub-contractors create own labels Opening of own shops, outlets, franchises, e-shops etc.	Risk mitigation strategy Increase in business base Increased control of market and value chain	Mainly sub-contractor or suppliers previously without own label
E: Consolidation	Financial crisis Changes in markets and customer demand requiring increased critical mass	Mergers and acquisitions Buying machinery and equipment from companies going out of business Hire skilled workers made unemployed as a result of companies going out of business	Increased market share and control of market	Larger companies

21.3. STRATEGIC RESPONSES BY POLICY MAKERS, BUSINESS ASSOCIATIONS AND EDUCATIONAL INSTITUTIONS

21.3.1. POLICY RESPONSES

The manufacturing industry in Europe, including the T&C sector, has experienced a large decline as a result of outsourcing and offshoring trends and increased import from low-cost countries. This has been accompanied by restructuring European textile companies with increased focus on design, value chain management, logistics, and marketing.

The result has been a change in political focus away from manufacturing (including T&C) and more towards strategic priorities associated with knowledge intensive industries and service sectors. In addition, the interviews showed that neither the industry nor the intermediaries have been able to create a clear vision for the T&C sector. Only in the Netherlands has the industry developed a strategic approach, making use of horizontal policies with regard to energy saving, flexibilisation of labour and innovation. However these strategies were responses to the 1990s restructuring, not to the last crisis. The lack of a strategy in other countries and regions that fit the industry-specific needs makes it difficult to support the restructuring process of the textile and clothing industry. As a result, the sector is not clearly visible in national/regional development strategies. In Lithuania the industry association lobbied in 2007 and in 2009 for a national strategy for the textile sector and got the government so far as to tender a contract for a sectoral plan. In both years the tender procedure was stopped because of budget restrictions.

Companies mentioned some successful initiatives and projects, such as the support of export promotion and the provision of market information, but the impact of these useful tools were not considered as decisive, especially not at the time of crisis. A substantial number of the companies interviewed expressed that they are met with a stereotypic image of the sector as an old-fashioned industrial sector characterised by low skill levels, poor pay and low value added. This is compounded by a lack of vision of the industry in all regions but the Netherlands, where the industry has developed a technology road map together with the government. Where no such road map exists companies do not share a vision nor align their strategies. Only in the Netherlands and Lithuania the industry associations have an active communication strategy oriented to e.g. (future) students or the financial services. In other instances there is a communication gap between industry, regional authorities and stakeholders. This might explain a mismatch between the strategies of for example the educational institutes and the companies. It might also explain difficulties in obtaining financial facilities from banks. In Catalonia, Lithuania and Northern Greece the modernization of research facilities was supported (sometimes in projects partly supported by ERDF Funds) but without a joint strategy. Projects, also often also funded through the ERDF, often had little impact because of lack of industry involvement (e.g. with the research facility Leitat in Catalonia) and fragmentation of resources.

In Catalonia, the regional Government carried out a cluster study where focus was on learning from the most successful companies in the region. The study was followed by initiatives with a focus on helping companies to export and create new distribution channels, but only a few companies have been successful in this (e.g. Mango, Desigual) and the assessment of stakeholders is that the success of these companies is more due to the companies' own strategies than due to the public support. However, although many of the companies expressed that it was not relevant for them, others mentioned that the initiatives have helped to focus on new distribution channels in their business strategy.

Our interviews in Catalonia indicated that the cluster approach is not efficient: local business networking has become less frequent as companies have reduced the number of local suppliers and internationalised their sourcing base. According to the interviewees, although there is an agglomeration of companies in the Catalonia region, there is not an integrated textile cluster and the majority of the companies themselves do not see any value-added in the proximity to other textile companies. Only general information is exchanged through trade associations. Instead, most of the companies have bilateral relationships with local schools or research institutes.

In several case study regions, the T&C sector is still of substantial importance in terms of employment, turnover, and exports, but policy attention and support has been declining. In Herning and the Netherlands the T&C industry is small but also has not received substantial policy attention except for some successful projects or activities with horizontal policies. In all of the regions, the financial allocations for business support programmes have been steady or even growing, but public policy programmes are very broadly defined and the textile sector has to compete for funding with other sectors. The stereotypic image has, according to many companies in Lithuania and Catalonia, been one of the major barriers for access to funding as both governments and banks are more likely to support growing sectors. This has especially been a barrier during the latest financial crisis where banks in general has been reluctant to offer loans, and according to the companies, have required more guarantees from the companies. In the battle for public funding with other sectors the image of the sector is, according to the companies and sector organisations, a negative factor especially for those companies that are actually doing well.

For Northern Greece government support has been more focused on the textile industry but has also been less coordinated. There are inconsistencies between agricultural policies and industrial policies. Specific measures are contrasting with labour policies and energy policies that are detrimental to the competitiveness of the industry. Some specific assistance to Klonatex has also been investigated for infringement of the EU rules for state aid. In the Netherlands the sector has for a long time been set aside, but more recently the textile and the clothing sector are

included in the nine top sectors of national innovation policy under the clusters 'high tech materials' and 'creative industry". This has brought together the players in joint road maps and in some projects. However the impact of this policy and of projects cannot be assessed before 2014. Rebranding an industry may help to overcome image problems. The Dutch industry has benefited from horizontal policies such as flexibilization of the labour market and the energy covenants.

The main public support used by companies is support for export promotion, sometimes in projects co-funded through the Structural Funds (ERDF) but mostly from national/regional support schemes. Among the companies interviewed, most have made use of such initiatives to finance their participation in trade fairs. Many of the companies complained about the length of processing applications, which meant that they often receive the funding after they have attended the trade fairs, which means that they still had to pre-finance the costs of going to the fairs. According to a high proportion of the companies interviewed, this then defeats the purpose of applying for funding and the amounts are also not that significant for trade fairs.

Some interviewees, especially in Lithuania, indicated that ERDF grants were available as co-funding for modernization of equipment. But, in order to be eligible for subsidies for purchase of equipment, the equipment has to be brand new and purchased from European suppliers. According to the companies interviewed in Lithuania, they do not need new state-of-the-art machinery, since they can utilise cheaper, used machinery, which will fit with and improve the efficiency of the current production. This type of used, but still very good, machinery has become available because of the outsourcing strategy of many companies in the old member states. However, it is not possible to receive grants towards purchasing used machinery. The net cost of buying new equipment from European suppliers is much higher, even including the grant, compared to buying used equipment without subsidies. Still, the case studies include examples of companies that have been able to use the subsidies for purchase of equipment as a key to survival of the latest financial crisis (see for example Lithuanian case study).

Finally, across the five case study regions, companies see the access to projects or programmes co-funded by European Structural Funds limited by application procedures, which appear complex and time-consuming for companies. The guidelines set by the European Commission are broad and it is up to the national/regional governments to decide how to implement the structural funds under these broad guidelines.

The structural funds are often closely linked to the regional or national strategies and here the interviewees mentioned the diminishing role of the textile sector in these strategies. The textile industry has also not been able to articulate a strategy towards modernization and structural funds. Also, a barrier mentioned was the procedures of the national or regional governments, especially a very long application process. Adding to this is the amount of administrative work for the companies themselves, which is often costly compared to the amounts of funding the companies apply for.

21.3.2. BUSINESS ASSOCIATIONS

The impact and role of the interviewed trade organisations in the five case study regions varied considerably, and this was reflected in their responses to the challenges of the last decade. The main role of most of the trade organisations is to work as lobbyists for the sector at regional, national and international level. Further, many of the associations facilitate networking between companies, which is obviously also one of the reasons they exist in the first place. However, in all five regions there were examples of how trade organisations have either started or been active in new initiatives helping the companies in changing circumstances as a result of the restructuring of the T&C sector.

In Catalonia, there are two trade associations. The first is *Texfor,* or the trade association for the textile industry. The second is *CITYC (*The Centre of Information about Textile and Clothing Industry**)**, which is a non-profit-making organization which, together with the Ministry of Industry, Tourism and Trade has as its main goal to provide the necessary information for helping the companies to make their strategic decisions. These associations mainly work with lobbying and help companies understand and react to new legislation and regulation. They also facilitate contact between RTOs/educational institutes and the companies.

In Denmark, the trade organisation *DM&T* has gone from being a social partner mainly focusing on employer aspects in the social dialogue to becoming more of a consulting and networking organisation. DM&T also offer support to educational institutes for developing new training programmes that will meet the demand of the companies. DM&T works with the main training providers on upgrading textile education. Further, DM&T is involved with other trade associations working in fashion industries in a joint innovation centre in Copenhagen.

A similar approach is seen at *FITEX*[110] in Catalonia, where a group of companies in cooperation with FITEX and supported by the regional government has created *FITEX Hong Kong*. The companies (SMEs) individually were able to search for new suppliers, but struggled to search for market opportunities and increase quality control. In order to create critical mass the companies joined forces with support from FITEX. Together, they employed experts in Hong Kong to assist the companies in identifying new suppliers, market opportunities and to help them out with regulatory issues. A *FITEX Romania* is now under consideration, which would facilitate more inside-Europe sourcing.

In Lithuania, the main trade association *LATIA* has since 2001 followed a strategy giving less priority to lobbying and more to attracting potential customers (mainly brand-led companies) to trade fairs and events in Lithuania. LATIA has also created a number of online tools and platforms, which enhance networking both with national and international companies. Another example is that they have coordinated a 'lean' project as they, and the companies, see increased efficiency as the key to staying competitive on the market.

One very interesting strategy of LATIA is that they consider as relevant target audiences all types of service providers to the textile sector. This includes companies in finance, insurance, transport, energy, courier services, printing etc. Insofar as they are suppliers to textile companies, such companies are invited to become members of LATIA. As members they get free access to relevant information on the sector via LATIA newsletters, website etc. – information which would otherwise have only been available at a cost. LATIA has informally agreed to have only one service company as a member of each kind (one bank, one transport company, etc.), and to recommend only this company to member companies (with no obligations on the part of the textile company to actually use this specific service provider). This provides advantages to members in the textile sector itself, as it enables them to negotiate better prices on several of the services that they require. Particularly the agreements with a bank have made access to finance easier. Also it has been positive in terms of getting loans and thereby combating the bad image of the sector. In Lithuania, although they were extremely proactive and launched several initiatives, their impact was limited due to lack of scale of the initiatives. However, LATIA did manage to bring together the companies regularly, which appeared to have a positive effect on the strong personal networks between firms.

In the Netherlands Modint combines all the elements described above. It has shifted from lobbying to providing services. It has established one single body for the entire industry and it is also developing activities abroad both in

[110] FITEX is a mix between a technology centre and a trade association. FITEX is owned by companies and supported by the regional government.

export promotion (under the Dutch Design, Fashion and Architecture initiative) and credit insurance. Modint has a strong division in financial services and is now the largest textile industry association in Europe. However its entrepreneurialism has focused on promoting short term benefits of members over long term planning. The recently accomplished technology road-maps are a first step in developing a long term strategy.

In Northern Greece the impact of both industry associations (textiles and clothing) is declining and in general they are focusing on short term strategies. The size of the organisations, the urgency of reform and budget cuts in Greece has focused the industry organisation on lobbying and negotiations with labour unions.

The size of the associations differed and so did their impact of their activities on the sector. Modint and DM&T were the largest and so was the range and scale of initiatives compared to those in Northern Greece, Catalonia and Lithuania. It is important to note that the financial crisis and rapid decline in number of companies and employment led to a restructuring of the associations. In Northern Greece and Lithuania the focus was on reducing costs. In Denmark and Catalonia the associations engaged in a consolidation process. Modint had completed this process by 2008 and had more resources to allocate to more strategic actions. The other associations, although delivering useful services, were less swift and not as well equipped to play a strategic role for their members in the financial crisis.

21.3.3. EDUCATIONAL AND RESEARCH INSTITUTES

The educational and research institutes will only briefly be included in this report as they are covered in the report on Education (Task 5).

The restructuring of the T&C sector in the five case study regions has resulted in a number of issues related to the education and research institutes. These include:

- Loss of popularity amongst students
- The general lack of interest in technical/engineering studies also has an impact on the T&C sector
- Still demand for low, but specialised skills in new member states
- Disappearance of skills with outsourcing of production.

In the case studies it was clear that that the main collaboration between companies and technical schools/ universities is based around testing and market research, while only a few companies engage in R&D collaboration with research organisations. One can argue that the role of the higher level educational institutes is simply to carry out tests for the majority of the companies and have R&D projects with the few companies requesting this. The more specific requests by the companies could then potentially be covered by the design and fashion schools and colleges.

At university level, the companies pointed out that designers were seen as important for the clothing industry, but all stakeholders appeared to agree that shortage of design skills was not an issue. The only comment made was that the designs and fashion colleges/schools did not produce students with the level of technical knowledge needed in the companies. However a stronger focus on fashion design has shown to increase the image and attractiveness of education to young people. The exercise is thus to combine the image of fashion to attract students with a curriculum oriented to the needs of the industry. The Dutch clothing and textile schools have solved the first problem but not the second one.

21.3.3.1. DESIGN AND FASHION SCHOOLS/COLLEGES

The design and fashion schools/colleges are important for especially the clothing industry, but also for the textile companies if the students are working with materials/fabrics. According to the educational institutes interviewed for this task the issue for the T&C sector is that there is little interest to work with fabrics, but more with fashion

Another issue is that in some regions, a lack of dialogue between the colleges and schools seems to be one of the major factors behind the mismatch between what the companies ask for and what the colleges offer.

The case studies show how some of these schools and colleges have dealt with this issue and created a positive dialogue between the schools/colleges and the industry resulting in a better match.

21.3.3.2. TRAINING CENTRES

Especially in Lithuania, specialised sewing and knitting skills are essential to retain production in the clothing industry in Lithuania, but this is also a Europe-wide issue. Without employees with the right skills, the production capacity in Europe cannot be sustained. In Lithuania, but also in Catalonia, specialised sewing skills are important as Far East competitors do not (yet) have access to these skills. Also, these skills are what allow the companies to specialise in niche areas. In Lithuania, a number of training centres for the unemployed provide training in sewing, but there is little interest from participants, and the sewing methods taught do not match the need in the companies.

The mismatch in the Netherlands does not fully apply in education. In higher education student uptake is increasing, mainly because of the attractiveness of the fashion image of the industry. This also benefits the textile industry, provided that the schools are able to strengthen the technical parts of the curriculum. A better match between innovation needs of the industry and research is being tackled in a sectoral technology road-map. Its implementation is most recent, but it is boosted by the recognition of the textile industry as a creative and a high-tech material sector

Several of the companies mentioned that if training course providers provided training in the specific sewing methods that the companies use, the companies were prepared to offer the course participants a job. This would not only benefit the companies, but also the regional authorities. However, it is not only poor communication that hampers this apparent win-win scenario: Wages in sewing operations tend to be too low to offer an attractive alternative to unemployment benefits. The main issue for these companies is therefore not skills-related but rather related to price competitiveness.

22. CONCLUSIONS

The conclusions in this section are based on the findings of the five case studies, the analysis of the dynamics of restructuring at European level and some cases from the other reports. Therefore, care should be taken to interpret these conclusions as valid for the entire European T&C sector and even at national level. Instead, the conclusions seek to demonstrate how the restructuring has taken place in the five selected regions. The research has shown that not only are the responses to competitive pressures varied according to differences in markets and policy context – the competitive pressures and drivers of restructuring themselves have taken on different shapes and natures in the five regions.

22.1. DRIVERS OF RESTRUCTURING

Five overall drivers and effects of restructuring have been analysed in this study. On the bases of the cases globalisation and the financial crisis can be considered important drivers of change. Consumer demand and changes in distribution channels is a direct driver of change in Catalonia and to some extent in the Netherlands. In Lithuania and Northern Greece it is a driver to be associated with globalization. Technology is not a direct driver of restructuring. Regulation is only a driver of specific restructuring and also possibly a driver of change.

Globalization

The globalization of the textile market is probably the main driver of restructuring over the last ten years for the regions examined, but for high labour cost countries such as the Netherlands and Herning in Denmark it is already so for forty years. The Herning companies have partly delocalized their production but they were more recently faced with rising transport costs from off-shore production. For Northern Greece, Catalonia and Lithuania it is an important driver as it led to changes in sourcing policies of retailers, more competition from low cost suppliers especially in commodities and large volumes. Lithuania gained somehow from inward investment and could maintain a position in specialized products.

Labour cost has an important impact for an industry with labour intensive processes and global competition. The Netherlands and Herning are used to high labour costs and have specialized accordingly and delocalized parts of more labour intensive production. Rising labour costs over the last decade have especially been mentioned in Northern Greece. These are associated with a lack of productivity and lack of specialization in niches that can sustain higher labour costs. Lithuania has not yet major problems with labour costs. It is of course a more expensive production location than Asia, but competitive in specialized markets and quick response. Catalonia has gradually become a region with high labour costs, but it does not seem to be a major factor of restructuring. Lack of specialization and upgrading to absorb higher cost is rather a factor.

Globalization also leads to market opportunities outside the EU. Most companies examined have not been able to pick up that challenge. In order to grasp those challenges a strong brand is often required, export skills gained within the internal market and a certain critical mass. Consolidation, as we have seen in the Netherlands, may have contributed to develop exports. It is the only regional case with substantial exports outside the EU. In Catalonia and Lithuania the strategy of co-contracting and hybrid is a first step towards exports. In Northern Greece the focus

on commodity cotton qualities had fostered export of raw cotton but hampered the textile industry in developing a quality niche in the global market.

The financial crisis

The financial crisis that started in 2008 had an important impact on the industry. There is a difference between regions and companies that had a dramatic drop in 2008/09 and a recovery in the second half of 2009, such as the Netherlands, Herning and Lithuania and Northern Greece and Catalonia that witnessed no recovery since 2009. The crisis caused a drop in demand, a weakening and disappearance of many retailers, a stronger pressure on costs. The impact on the industry is first a reduction of production volumes and most often because of limited labour flexibility a financial loss as costs could not be adjusted to lower sales levels.

Overall the industry in all case studies and in a larger dataset made substantial financial losses in 2008/09. In Northern Greece and Catalonia this situation continued in 2010 and 2011, even if downsizing enabled to limit losses but at the price of job losses. The lower of level of profits from 2008 onwards impacted on the solvency of firms and to the means available for financing new strategies or modernizing equipment. The weakened position compounded a declining image of the sector and the ability to attract credit and policy support. Companies operating in niche markets, and/or surviving a shake out could often consolidate or reinforce their capital. Hence a substantial part of the industry has a viable financial position, but very limited room to sustain a prolonged crisis or engage in new ventures.

Consumer demand and distribution channels

There has been an increase in the role of retailers and also a change in demand structures. In general large retailers have gained market share and SMEs supplying independent retailers are faced with a declining market. This is an important factor of restructuring in Catalonia. In none of the case studies there has been a major trend in the companies examined of downward integration into retailing. In the Netherlands there has been investments into an internet presence. In the Netherlands the consolidation of retailing may be a factor in consolidation in the carpet and home textiles. In Northern Greece the case examined more upstream sectors for which changes in retailing had no direct impact. It had an indirect impact since Greek based garment suppliers to retailers lost their clients, this had a major indirect impact. In Lithuania volume markets were lost, but a specialized offer could maintain its foothold with large retailers.

Technology:

Technology has not been identified as a strong driver of restructuring. However the lack of uptake of technologies had a strong impact since it altered the productivity gaps compared with the actual adoption of technologies. In Catalonia and Northern Greece the adoption of new technologies is low, which impacts on a very limited development of new products, processes and services. It did also not contribute to increase in productivity. In the Netherlands and Herning modernization of equipment may have led to control of costs through increased productivity. The industry is engaged in new products and processes in the Netherlands, but the impact on restructuring is not visible. Lithuania has been the most active in modernization through replacement. This has improved productivity, but the strategy and quality of management is more decisive as a factor of survival of companies. It shall be noticed that Lithuania was the only country were public grants were involved for co-funding of equipment.

Policy and Regulations

Regulation is hardly a separate driver of change. The liberalisation of trade is a driver behind globalization, but not a self standing driver. Specific regulation associate with sustainable production is only a driver for specific segments. Some companies, most notably in the Netherlands, have considered regulation as an opportunity to specialize in regulated niche markets. Regulation may also have helped to control energy costs in the Netherlands. In Northern Greece the cotton textile sector has experienced a negative effect of the reform of the Common Agricultural Policy.

Besides the specific and objective regulations described above, many companies in all regions felt that there has been an overall increase in burdens from the EU, the national legal framework and local implementation. These are possibly to be most often horizontal regulations related to the tax code, employment law, and not specific to textiles. However the Lithuanian companies appreciated the clarity of the EU legal framework. In the Netherlands the deregulation of the labour market was a positive factor for the industry. Labour market flexibility is an important dimension for competitiveness. Flexibility may arise from adjustment of the work force to the volume of demand or to requalification. In Northern Greece the lack of flexibility of the labour market was mentioned, especially with regard to hiring and firing. In the Netherlands and Herning (Denmark) the labour market flexibility was seen as a positive factor to absorb fluctuation in demand. In the Netherlands it was also mentioned that the involvement of a flexible pool of workers, eroded the skills base of the industry.

22.2. DYNAMICS OF RESTRUCTURING AND BUSINESS MODELS

The drivers of restructuring have in general led to decline of the industry in all regions examinated; however it was possible to analyze the specific responses of the companies that were presented in each of the cases. In all countries but the Netherlands there has been a strong decline in the number of companies, most notably in Catalonia; this decline is likely to be the biggest cause of job losses; while in the Netherlands consolidation through take-overs and flexibility of labour have absorbed most of the restructuring impact. In Lithuania, Herning (Denmark) and to a lesser extent Catalonia we have seen many companies responding to restructuring by adjusting their business models while in Northern Greece we have seen very little adjustment.

Downsizing is an evident effect of the restructuring process, together with simple disengagement by closure. In Catalonia, Northern Greece and Lithuania the number of companies declined, mainly because of closure. In the Netherlands it increased slightly. Employment in the surviving firms declined in all countries but the Netherlands: the Dutch industry was in fact the only one to fully recover from the financial crisis.

In the cases examined the majority of firms have a policy enabling to resist through the financial crisis. Resistance is visible in stable turnover, decline in employment, no profit or a slight loss and most importantly a rather strong capital base as is visible in a good solvency ratio. Only in Northern Greece decline is the dominant pattern. In the Netherlands and in Herning it is combined with recovery, in Catalonia and Lithuania resistance and downsizing are the dominant patterns. It should be said that the financial ability of resistance in the industry in general is still strong: at the time of this study, the majority of firms in all the regions had a solvency ratio that banks consider as safe. However in Northern Greece the situation is rapidly deteriorating. The term ‘resistance’ might recall a negative connotation but this is wrong. It assumes that markets shall recover and that competitors will not survive the restructuring. Resisting may involve a change in the business model like repositioning in the value chain,

specializing in better protected niches or products with more value added, adding more service to customers by becoming a co-contractor, delocalizing or subcontracting part of the production. These are all business models aiming at keeping the commercial basis, increasing value added and reducing costs. If companies are financially solid, and we have seen that the majority of firms were still solid in 2011, this can be a viable option. It is especially viable if the European economy recovers. For companies in old member states, when locked into a commodity trap specialization towards niche markets is the most promising business model to adopt. In new member states, where the majority of companies are subcontractors, co-contracting is the most feasible business model to put in place. Both require a step by step implementation and demand a healthy financial base.

In the analysis we have identified the following business models:

- Change the role in the value chain
- Specialise and operate on niche markets
- Use a two-string strategy of localisation of production
- Work as co-contractors or hybrids, by adding services such as design and logistics to sub contracting or operating a label while work as sub-contractor for another branding company.
- Consolidate in order to increase market share

Change of the role in the value chain is a business model implemented by a large number of companies in almost all regions; however it entails the implementation of strategies of integration into design, branding but also withdrawal from manufacturing. In Catalonia some companies have indeed developed retail activities. Specialization was the most successful business model in Herning and the Netherlands, but also in Lithuania companies look for markets were dedicated technology and skills are demanded. The two string strategy, combining European and Asian production, has been successfully used in Herning and to a lesser extent in Catalonia. However the latter region also had a case of company that delocalized part of production too late and with a too slow implementation. Co-contracting, is the main strategy in Lithuania, whereby subcontractors increased design and logistic functions to service the client. Consolidation is a an important trend in Europe; as shown in the analysis of consolidation trends(page 49); however with reference to the regional cases it has a relevant impact only in the Dutch case. In this case we see clear consolidation amongst the largest firms in textiles, especially carpets, and we see leading players in the top 20 in clothing and textiles. In all other regional cases no company is present in the top 100 of the industry and there is almost no consolidation, not even amongst SMEs.

Restructuring may entail consolidation. While consolidation is a relevant trend in Europe as showed in section 3.4, in the regional cases occurred only in the Netherlands. In this case we see clear consolidation among the largest firms in textiles, especially carpets, and we see leading players in the top 20 in clothing and textiles. In all other cases no company is present in the top 100 of the industry and there is almost no consolidation, not even among SMEs.

The regional restructuring paths and individual business models differ not only as a result of the individual managerial choices, but are often a result of the pre-conditions the companies have to accept. Globalization of production was already a major driver before the financial crisis. The financial crisis of 2008/09 compounded strengths and weaknesses that had unfolded over the last twenty years. The weakness in Northern Greece and Catalonia is imputable to a lack of response to the challenges of the 1990s. Lithuania was faced with the financial crisis while the transformation from a centrally planned economic system was not fully consolidated in the textile sector. The Netherlands and Herning were rather resilient as they had already moved out of commodities and subcontracting in the 1980s.

In Catalonia, many of the companies are family-owned SMEs with either their own label/brand or subcontractors to the major local brands. The importance, and dependence, of the home market is still extremely high and with the difficult financial situation in Spain, this dependence has limited the restructuring opportunities - even with Barcelona as a large commercial center, which is a plus in terms of branding. Some companies have developed own retailing, while others have adjusted to retail sourcing strategies by delocalizing production. The Lithuanian companies have gone from being extremely large companies in the Soviet times, to a high number of small and medium companies. Many of the T&C companies have their origin in these large Soviet companies. Foreign investments have played a major role in Lithuania and many of the companies have foreign owners and partners. One of the competitive advantages in Lithuania is the specialization of skills, which are no longer present in old member states and also not in countries such as India and Asia. The companies are mainly contractors to European brands outside Lithuania and only a limited number have their own label/brand. This is very much due to a collapse of the large Soviet market and the small home market. It has been difficult for the Lithuanian T&C companies to create a name in other EU member states.

In Herning there is a mix of companies, but the majority are SMEs. Many of the companies have their own label/brand or are high up in the value chain. There is a focus on specific product performances, tested quality and green solutions. The Herning T&C companies have been export orientated for a long time, due to the limited home market. They have also successfully delocalized (off shored) part of their production in e.g. Lithuania. Although this has enabled to specialize production in high added value processes and products in Denmark, it has made them vulnerable to rising transport costs related to foreign production.

Northern Greece lost almost the totality of its textile manufacturing in the last ten years. A handful of relatively healthier companies have survived in the industry, but their financial position is increasingly vulnerable even if they have shifted to specialty yarns or are sheltered against fluctuations in raw materials markets because of vertical integration. Modernisation of productive units is essential, in order to achieve reduction of cost of production, improvement of quality and specialization in products of great added value. The competitive advantage of the use of the local cotton supply chain must be addressed before the industry loses its know-how. However long term competitiveness of the Northern Greek cotton sector needs to be based on a comprehensive quality and ecological strategy for the whole cotton supply chain.

The findings enable to identify best practices. In the case of new member states, with a dominance of subcontractors the policy of becoming hybrids or co-contractors is a sound one. This has been demonstrated in the Belgian industry in the 1980s and in the Portuguese one in the 1990s. Klasikine did it in Lithuania in the last decade. This transition out of the subcontracting trap is a logical one. For companies it is in general sound to specialize in niches with some protection in specific segments of home textiles, specialty yarns and fabrics. Varvaressos, Gaudium, Omniteksas are good examples of strategies of moving out of commodity sectors. The two string strategy of delocalizing part of the production is a good idea, badly executed by Dogi and well done by Sedatex. In countries where the local market has buying power setting up retail activities makes sense as did Star Textil in Catalonia. It was wise of Skalmantas to engage in technical textiles, but that market also requires controlling costs and payment conditions. A good strategy was well executed but some basics in financial management were overlooked. In the Netherlands most firms had already specialized in higher value segments before the crisis. Outsourcing was also well established before 2009. Hence the crisis had less impact on changes in business models. Dutch companies, still existing in 2011, had responded adequately to the challenges of earlier crisis such as in 2001.

When it comes to bad and good practices it is hard to distinguish between structural drivers, specific factors in the regional business environment and personal skills. The success of some company cases is often related to personal leadership, the ability to forge relations with clients, the curiosity to enter in new markets, the perseverance in

taking step by step measures in a strategy. The Star Textil and Klasikine cases have much to do with these intangible factors and the desire to detach oneself from the regional environment. A constant aspect amongst successful companies is not the strategy they choose but the perseverance in implementing it step by step over a long period of time. We would like to stress that the best practices in most of the regions are rather exceptions in their regions. They do not seem to be the product of specific local conditions or local policies, but of the ability of entrepreneurs to escape the local context.

22.3. OUTCOMES OF RESTRUCTURING

The restructuring process might have created new alliances or partnership. We have found few of these new alliances or partnerships, and if created they might have been the result of implementation of plans started before the restructuring process resulting from the financial crisis. In general companies following a strategy of co-contracting or specialization have given great interest to improving relations with customers. We have seen this in the case of Hellenic Fabrics in Northern Greece with jeans brands, in the case of the Dutch carpet industry with interior retailers and architects or for Klasikine in Lithuania with major department stores. However the term alliance or partnership does not really cover these more intense relations. This intensity rather arises from a realization of mutual dependency, either because of supplier fills in an essential part of the collection, or because the client depends on supplier credit. The same applies to subcontractors, when they offer essential skills for the client, relations have become more intense.

In general the relations with training and research centres has loosened. In the first place firms are recruiting less from schools and with the restructuring more experienced workers can be recruited. The companies in the cases of this report on restructuring have not shown a strong research agenda, thus the relations with research centres have become less intense. The research centres themselves, as we have described in the report on research (Task 2), are for their survival rather oriented towards public funding, which distances them from immediate company needs. This is clearly visible in Catalonia and Lithuania. In the Netherlands, to the contrary, more intense relations between industry and research is developing but this is more an long term evolution and the consequence of horizontal policies than a response to restructuring. The Netherlands is however the only country of the five cases where government policies and industry strategies are well coordinated, with an important role for the industry association. This context has also created new alliances with e.g. Philips that create innovation potential for new products. However these alliances are still at an early stage.

Restructuring may lead to more intense relation between firms in a region with the effect of creating production clusters. Such clusters could be seen as more intensive relations between companies, possibly concentration of factories in common sites, or the organization of companies under joint associations. We would define clusters here as underpinned by strong production relations between firms. We have rather seen a dismantlement of clusters than their development, in Catalonia and Herning, Denmark. In Lithuania the linen clusters went down from 10 to 4 companies their relations inside Lithuania rather dwindled than declined. The Northern Greek cotton sector shows little horizontal cooperation and despite mechanisms to promote collaboration between cotton ginners and spinners the alignment of interest between cotton ginners and spinners has rather declined than increased. Decline and consolidation have in general reduced the critical mass to form clusters, and with increased specialization complementary skills are often in other regions. In the Netherlands the consolidation of the carpet industry has fostered integration inside larger firms and less cooperation between firms. The synthetic grass sector is an exception, but clustering has been the effect of dominance of one key player TenCate.

The declining critical mass of clusters is also tangible at the level of associations. With declining membership and with a large number of firms with declining membership fees, associations are more oriented towards trimming their services and organizing the consolidation of associations. In Herning and the Netherlands the consolidation of the industry organizations had started in the 1980s and was completed before the restructuring of 2008/09. In the Dutch case the consolidation of the carpet industry increased synergies inside groups, but reduced synergies between the firms in terms of production arrangements. Only in synthetic turf TenCate reorganized the value chain and entered selectively in production arrangements. Hence the formation of European value chains is possibly a stronger trend than the formation of regional production clusters.

Most often reorganization of production involves a wide range of productivity increasing methods sometimes increased automation. The first specific example is in Herning (Gabriel) and in Catalonia when companies shift from production to subcontracting or sourcing (Sedatex). This transformation also changes the skills base required: more design and logistic skills are then needed. The second specific example of change in the organization of work was found in the Netherlands, mainly as a response to the 2001 crisis. By reorganizing work between product oriented specialist on fixed contracts and process oriented flexible workers, the Dutch industry prepared itself to absorb the 2008/09 shock by being able to rapidly reduce the shell of flexible workers.

Consolidation is mainly a trend amongst companies above the SME threshold. Of the five regions examined only the Netherlands show a substantial trend in consolidation. Leading groups in carpets and home textiles took over SMEs, trimmed them down and integrated them in the group. In Northern Greece - Klonatex- consolidation failed. If consolidation is started the main reason is to increase critical mass towards suppliers and clients. Economies of scale should create a better negotiating position towards them. We have found almost no evidence of SMEs consolidating (nor in the financial analysis nor in the cases). We have found in the case of the Dutch printers barriers to consolidate in the form the difficulties in setting up a shareholder structure and opportunistic behaviour from the parts and ultimately the survivor acquired the assets of the bankrupt ones. SMEs in regions often have a history of competition and conflict (The Netherlands, Catalonia, Northern Greece). As two directors of SMEs in Catalonia and Northern Greece expressed in different ways: "it is difficult to cooperate (or to merge) when you have a legacy of conflict". Cooperation may be sound from a strategic point of view, but personal interests, family feuds, imbalances in commercial and financial power play a role. The Dutch printers ultimately consolidated because the last survivor picked the interesting assets of the deceased companies. In Lithuania we found cooperation amongst companies, but without consolidation.

22.4. STRATEGIC RESPONSES

We have in each regional case examined the response to restructuring of associations, social partners, research and education centres, and of course policy makers. What strikes from the cases is the low level of anticipation and the generally poor management of restructuring. Although the Dutch case showed that the Dutch firms did rather well in the period 2006-2011, the poor anticipation and management of the restructuring of the Dutch textile industry in the period 1958-2000 has been well documented[111]. Unfortunately the lesson that a restructuring can be anticipated has not been drawn by the collective bodies of the industry and by policy makers. The Catalonia and Northern Greece case shows that the textile industry had not fully taken up the opportunities of the single market even by the year 2000. The Lithuanian case showed that the industry had first to cope with the collapse of a state controlled economy and then to get through a process of privatization.

[111] See Hesselink, 2010.

The different strategies and business models that companies put in place such as moving out of commodities and into brands, setting up foreign factories are difficult and risky. One may recruit a less talented designer or choose the wrong location and only discover it too late. When companies are exceptions in their regions, they do not have a peer group to exchange experiences with and lack the management skills in the region to lead the new business models. Unsuccessful companies in the Catalonia, Lithuania or Northern Greece cases did not learn from other companies nor recruited managers with adequate skills although it was a viable opportunity for putting in place new business models. Those companies consider experienced managers or consultants with thorough experience too expensive and limit their directional activities to the basics of management such as proper cost calculation and cost control, which do not require external complex support. In the older member states similar problems were visible with subcontractors in the 1970s and 1980s: the offer of specific consulting services and adequate software helped subcontractors to adapt their business models, often with the support of industry associations or technical centres. We have not found evidence of these types of services in the cases presented.

In the 1970s and the 1980s industry associations proposed projects to set up technical support units to companies, e.g. in the Netherlands. These were often co-funded by national industry or regional policies. In the 1990s RETEX, a sectoral programme in the European Regional Development Fund, co-funded the setting up of technical services to industry in e.g. Portugal. European learning through networks of excellence, networking of clusters has mainly focused on promoting valorisation of research and innovation. However similar instruments could be used to exchange practices in support for strategic change. Thematic approaches could also be used such as improving synergies between agriculture as raw materials base and environmental friendly industrial processing. Despite differences in materials the challenges for cotton in Northern Greece and linen in Lithuania are comparable.

In none of the regions have we seen strategic anticipation of restructuring. This anticipation can be done by companies or by public authorities or associations. Although the financial crisis could not be anticipated, the more structural drivers such as globalization, changes in consumer demand, distribution channels, technology and regulation could have been addressed. In none of the regions has there been a strategic and comprehensive approach developed by industry associations and therefore also not by policy makers. In the Netherlands and Catalonia we have witnessed partial anticipation. In the Netherlands the carpet industry has developed a technology road map, taken active use of the regulatory context for energy saving, used at industry and company level the legal provisions for labour flexibility. These responses can be seen as a response to longer term changes in consumer demand and the shock of the financial crisis. In Catalonia policy makers, industry association have developed a vision on retailing. Some companies have taken up recommendations. In Herning and Lithuania industry and association have taken tactical actions but have not come to any coherent strategy. In Northern Greece we have not even found any relevant actions.

Of relevance is that in many regions despite restructuring, companies face skills shortages. This is the case for classic technical skills such as weaving or specialized sewing which are needed to specialize and develop products with higher added value. The skills shortage concerns also design, marketing, logistic and managerial skills that are needed to engage into branding, retailing or even co-contracting or partial delocalisation of production. The poor image of the sector, often weakened by the financial crisis, lead to low attraction for the labour market and for specialized education courses. Solutions that improve short term competitiveness, such as flexibilisation of labour in the Netherlands, erode the training base for more specialized workers. As we have also highlighted in the report on education (task 5), this is a key issue to address to keep long term competitiveness.

It is hard to judge whether the institutional context and the collective organization of the industry in terms of schools, training centres, industry associations had a positive impact on restructuring processes. The relative stability of the Dutch textile and clothing industry builds on the reforms carried on during the period 1998-2002, in

particular flexibilisation of labour and of financial markets. The only clear case is the Netherlands where the sectoral energy covenants created the framework for environmental actions and for a sectoral technology road map. But this was not a response to restructuring, rather the sectoral translation of a policy started in the 1990s. The flexibilisation of labour, the setting up of a common training track for all process industries could be seen as a response to the restructuring in the 1990s and it was a strong tool to absorb the 2008/09 crisis, but it was a horizontal policy – well picked up the industry. The amalgamation of industry in one association and the consolidation of the higher education sector in textiles and clothing is a response the 1980s downsizing but achieved only by 2000. The development of credit services with the benefit of precise market data and relations with banks goes back to the 1930s. Hence the mechanisms that enabled to recover from the 2008/09 had been in place often before the more recent restructuring stage, were outcomes of horizontal policies – but well adopted by a consolidated industry.

The Dutch case is also different as the policies and their uptake by associations and industry had an impact on major cost factors such as energy, labour or intervened in critical processes and with radical and comprehensive approaches. In the other regions actions were more tactical, such as provision of market information, collective stands at fairs, or inclusion of banks in the industry association. Though possibly helpful, but not having a radical impact. Moreover in Greece, Spain and Lithuania there was no structural reform of labour markets, energy markets and product markets. In Greece the reform of the CAP, combined with national regulation, even hampered a comprehensive strategy for the cotton supply chain. In the Northern Greece case the social policy increased labour costs without promoting the productivity increases needed to absorb increasing labour costs.

22.5. IMPACT OF EU FUNDS AND POLICIES

The impact of EU funds is very difficult to assess. Most projects funded through the ERDF were horizontal in nature (not specifically oriented to a sector), funded activities of intermediate organisation or financed innovation infrastructures. The impact on companies is often indirect, hence it had little effect on modernization of equipment or change in business models. An indirect effect is at stake when education or research infrastructures are improved. For two countries, the Netherlands and Denmark, European structural funds were source of co-financing for regional innovation funds. They are possibly a response to restructuring but their results will not be visible before 2014, possibly creating new markets. In both countries the ESF, European Social Fund, has been widely used for retraining and multi-skilling workers, but this happened mainly up to 2000 and the impact could not be clearly discussed. The ERDF has been widely available in Catalonia, Lithuania and Northern Greece. However limited evidence of direct use (mainly Audejas in Lithuania) or benefit for firms came out of the interviews. Lithuania seems to be the only country where ERDF funds were directly co-financing modernization of firms.

Companies, e.g. in the Herning case, often felt that they had no access to funds while others had it. Companies did also perceive that access to funding, like in Lithuania, was complex, burdensome and lengthy. In the specific cases analyzed in the context of our research we found that in many cases the activities aimed at modernizing research and training facilities; projects were implemented with the objective of promoting exports, entrepreneurship and innovation. In most countries the cooperation between industry and research – when organized in projects co-funded through ERDF funds were not successfully implemented (e.g. in enzymatic processes in Northern Greece). The best practice is discussed in the report on research (Task 6). One Lithuanian company was involved in a research project but did not implement any result, since it went bankrupt before the project ended..

In the case of Lithuania, companies have used the ‘New Opportunities’ grants funded by EU Structural Funds. These grants have been included in the ERDF Operational Programme for Lithuania and is partly funded by the ERDF and partly by national funding.

Retex, a sectoral programme under ERDF in the 1990s, was used in Northern Greece mainly for modernizing equipment but less to review business models. Its implementation was finished by 2000. The reform of the CAP was accompanied by measures to improve the cooperation between cotton agriculture and industry. The results reported were inconclusive. The European Globalisation Adjustment Fund (EGF)[112] was used for mitigating for workers the effect of the closure of the former state owned mill Alytaus Tekstile. It was not used in the comparable case of the Drobe closure nor in comparable situations in Northern Greece. The EGF also intervened in Catalonia for workers made redundant by a large number of firms.

We did not find clear evidence of practical problems with regulation on environment. However the transposition of EU directives for the liberalization of energy markets was uneven in some member state. In this context the lack of liberalisation of energy markets, and the high cost of energy was mentioned in Northern Greece and Herning, Denmark. In the Netherlands EU policies on energy management had a positive impact since it contributed to a reduction in energy and modernization of production. In the Netherlands the energy covenants laid the basis for an innovation strategy. The sale of shares of the Netherlands in energy companies fed substantial innovation funds that in Overijssel assisted in funding textile projects.

Burdens of regulation were specifically mentioned in few instances in the region of this report as well as in the reports on innovation. It is often SME's in commodity markets that complain about costs for complying with the water directive, REACH and some product specific directives such as the PPE directive. Clear cases of restructuring associated with higher standards or regulation were not found, such instances were often related to other companies having downsized or closed down. On the other hand few companies, especially in the Netherlands, mentioned opportunities created by higher norms and standards. Overall however the evidence gained in the interviews is limited, since we interviewed few firms using chemical processes or operating in rather regulated markets.

Even if regulation has often objectively little possible impact, the perception of an uneven playing field between imported and EU made products, as well as a feeling of not receiving adequate support in implementing it, is a sign of companies feeling as the losers of globalization. The perception probably pre-empts over the reality since most regulation on safety of processes and products applies only to the textile finishing sector, and to some niches in which most companies interviewed were not active. The lack of transparence for companies of what projects or which companies in other member states receive co-funding from structural funds is also striking. Indeed while companies in Herning complained, with no specific example to their knowledge, that companies in Southern Europe received European grants, companies in Catalonia, mentioned that grants were not available to them. We take the last aspect more as a sign of poor understanding of public policies by companies in the T&C industry. Organizing a single voice in a diversified and fragmented industry is not easy. Maintaining strong industry associations that have the skills and the network to develop a vision and strategy requires critical mass and financial resources.

This report has pointed to drivers of restructuring, of which globalisation and the financials crisis are the most important ones. In Herning, Lithuania and Catalonia this has led to substantial downsizing of the industry but also to practices of strategic changes. In the Netherlands the industry recovered after the financial crisis. In Northern Greece however even the few companies that responded strategically to the crisis could not avoid being engaged in severe downsizing. The two key responses is to specialize in niche markets and to develop from subcontracting to

[112] http://ec.europa.eu/social/main.jsp?catId=326&langId=en

co-contracting, hence offer more skills and service to clients. Good strategic choices, well executed go alongside companies having reacted too late and with less leadership.

The ability to sustain a prolonged financial crisis is severely curtailed by growing number of firms in a weak financial position, lacking the means to redeploy. In addition skills shortages is also inhibiting strategic repositioning. The responses to restructuring have mainly been the initiative of individual companies, with little strategic anticipation or support of industry associations, except in the Netherlands or regional/national authorities. Although the types of responses and the constraints on restructuring is not new, since European countries have experience in the textile and clothing industry with restructuring since 1958, the collective learning inside regions and between regions is limited. Promoting exchange of practices across regions, but also fostering regional institutions that can facilitate restructuring is as important now as it was in the old member states in the 1970s and 1980s. This learning can be organised thematically or as cross-regional initiatives.

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ANNEX I: LIST OF INTERVIEWEES

LIST OF INTERVIEWEES CATALONIA

Name	Title	Organisation
Sergi Artigas Barcelo	Assistant Manager	Leitat Technological Center
Helena Esteve	Textile Scientist	Leitat Technological Center
Salvador Maluquer	General Secretary	Texfor
Victor Fabregat	Director	CITYC
Ignasi Gonzales de la Fuente	Assistant Manager	ESDi
Lidia Morcillo Jordana	Assistant Manager	Fitex
Francisco Algas	Director	Star Textil S.A. (Boboli)
Djaja Rajapakse	Director Sri Lanka	Dogi/EFA
Interview at Techtextil	Commercial Directors	SATI, IBQ, Estambril, Sauleda
Interview at Premiere Vision	Commercial Director	SEDATEX
Josep Ignasi Reixach	General Manager	Punto Blanco

Josep Calzada Vich	Production Manager	Punto Blanco
Joan Sanchez	Financial Manager	Punto Blanco
Jordi Castellet i Torrents	CEO	Casas y Castellet
Alberto Pezzi	Director of Analysis and Foresight	Government of Catalonia
Roger Ylla	Head of new business opportunities	Generalitat de Catalonia
Joachem Sola Morales	Manager	Hilados Dusol

LIST OF INTERVIEWEES IN LITHUANIA

Name	**Title**	**Organisation/company**
Gediminas Viskelis	Director general	LATIA
Linas Lasiauskas	President	LATIA
Aldis Fledzinskas	Executive director	Vilnius College of Design
Jurate Jazgeviviene	Head of project management	Vilnius College of Design
Dovile Lodaite	Joint owner	UAB First Priority
Violeta Eitutiene	Joint owner	UAB First Priority
Rimantas Baumilas	Director	Klasikine Tekstile
Vida Baltrusaitiene	R&D Officer	Skalmantas
Sandra Kuliesaite	Sales manager	Barker Textiles

Raimo Haapamaki	General manager	Barker Textiles
Prof. Eugenija Strazdiene	Head of Department	Kaunas Technical University – Faculty of design and technologies
Romualda Mozurierne	Director	Engel Dali
V. Gubavicius	General director	Drobe
V. Sinevicius	Former Minister for Industry and Trade	

LIST OF INTERVIEWEES HERNING/DENMARK

Name	**Title**	**Organisation**
Thomas Klausen	President & CCO	Tytex
Svend Aage Færch Nielsen	Director	Ege
Anders H. Petersen	Chief Executive Officer (CEO)	Gabriel
Jesper Klausen	Director, Production & Logistics	Spectre
Poul Sønderbæk	Director	Martin P. Socks
Jørgen Bech Madsen	Director	Fibertex
Claus Sørensen	Chief Executive Officer (CEO)	Brandtex
Hanne Troels Jensen	Head of Knowledge Centre	TEKO
Jørgen Baadsgaard-Jensen	Head of Department	Danish Technological Institute, Department of Textiles

Preben W. Friis	Director	Dansk Mode & Textil

LIST OF INTERVIEWEES NORTHERN GREECE

Name	**Title**	**Organisation/company**
John Accas	Director	Hellenic Fabrics
Dick Hendriks	Financial Controller (till 1998)	TenCate Greece
Evripidis Dontas	Director	Selected Textiles
Yiannis Musoulidis	Director	United Textiles
N. Karagiorgos	Director	Karagiorgos Ginning
Antonis Siarkos	Director	Siarkos Ginning Mills S.A.
NIKOS OUSOULTZOGLOU	Director	OUSOULTZOGLOU NIKOS S.A
Mrs.N. Varvarressos	Director	Varvarressos Spinning Mills
Sonia Pavidlu	Researcher	Clotefi
Michele Anselme	Secretary General	EUROCOTON

LIST OF INTERVIEWEES NETHERLANDS

Name	**Organisation/company**

Hans Huitenga	Texpress
J.Mahy	Colbond
J.de Jager	API
Bart Oonk	Gaudium
Jos Pelders	Innofa
P.v.d.Acker	J.v.d.Acker &Zonen
G.Bouwhuis	Saxion (Dutch Printers)
J.Teunissen	ARTEZ
L. in ’t Hout	AMFI HvA
A.Luiken	Alcon Advies
G.Lamers	de Bikkelen
C.Pasman	Verosol
H.Dobbe	Intercarpet
J. van Dijk	Robusta Carpets
F. de Loos	Lankhorst
M. Olde Weghuis	TenCate
T. van Deursen	Vlisco
H. van Dalfsen	Vadain

H.van der Lelie	Vanderlelie Gordijnenateliers
Dirk Mulder	ING
Patrick Wijffelman	MBCF Mazars Corporate Finance
Ellen Bergsma	JB Textiles
R. Tap	Modint
J.Wintermans	Modint
M.Crietee	Modint

ANNEX II RANKING OF LARGEST TEXTILE AND CLOTHING COMPANIES

LARGEST TEXTILE FIRMS

NAME	Mln Euro	Type	MS	NAME	Mln Euro	Type	MS
2001				**2009**			
Coats (Textiles)[i]	1310	Diversified	UK	Coats Holding	1008	Threads	UK
Chargeurs	1188	Diversified	FR	Daun Gruppe	895	Diversified	DE
Daun	1059	Diversified	DE	TenCate	842	Technical	NL
Gamma Holding	975	Technical	NL	Gamma Holding[ii]	658	Technical	NL
Freudenberg	888	Technical	DE	Freudenberg	531	Technical	DE
DMC[iii]	523	Diversified	FR	Balta[iv]	640	Carpets	BE
Balta	495	Carpets	BE	Borgers	384	Technical	DE
Domo	470	Carpets	BE	Low and Bonar	366	Technical	UK
ERWO	469	Diversified	DE	ERWO	328	Diversified	DE
Marzotto[v]	426	Fashion	IT	Tavex	315	Denim	ES
Eybl[vi]	377	Technical	AU	Chargeurs[vii]	310	Linings	FR
TenCate	375	Technical	NL	Wirth	260	Carpets	DE
Zucchi	375	Home T.	IT	Sioen	252	Technical	BE

Miroglio	374	Fashion	IT	Marzotto[viii]	245	Fashion	IT
Borgers	360	Technical	DE	Condor	239	Carpets	NL
Ideal Groep	333	Carpets	DE	Beaulieu[ix]	432	Carpets	BE
Low & Bonar	276	Technical	UK	Zucchi	222	Home T.	IT
Chapelthorpe[x]	228	Technical	UK	Ideal	210	Carpets	DE
Santens[xi]	227	Home T.	BE	Miroglio Textile	172	Fashion	IT
Loro Piana[xii]	214	Fashion T.	IT	Eurocomfort[xiii]	168	Home T.	DE

This list is based on Textil Witschaft Top 100 Rangliste. The selection excludes textile companies making apparel. When companies make textiles and clothing, the clothing turnover is excluded.

LARGEST CLOTHING COMPANIES

NAME	**Mln Euro**	**Type**	**MS**	**NAME**	**Mln Euro**	**Type**	**MS**
2001				2009			
Benetton	2098	Multibrand	I	Benetton	1950	Multibrand	I
Triumph	1688	Monobrand	D	Tommy Hilfiger[xiv]	1948	Monobrand	NL
Marzotto[xv]	1410	Multibrand	I	Burberry	1750	Monobrand	UK
Courtaulds[xvi]	1390	Private Label	UK	Hugo Boss	1729	Monobrand	D
Giorgio Armani	1270	Monobrand	I	Triumph	1594	Monobrand	D
Max Mara	1065	Multibrand	I	Maus (Devanlay)	1514	Multibrand	F

Burberry	778	Monobrand	UK	Diesel Group	1400	Multibrand	I
Escada	765	Multibrand	D	Multiline Textil	1328	Multibrand	D
Coats Viyella[xvii]	710	Private Label	UK	Giorgio Armani	1272	Monobrand	I
E. Zegna	686	Monobrand	I	Max Mara	1210	Multibrand	I
Dewhirst[xviii]	654	Private Label	UK	S.Oliver	1070	Monobrand	D
S.Oliver	614	Monobrand	D	Miro Radici	840	Multibrand	I
Diesel	565	Monobrand	I	Miroglio	821	Multibrand	I
Steilmann[xix]	559	Multibrand	D	DIM	800	Multibrand	F
IT Holding[xx]	544	Multibrand	I	G-Star	750	Monobrand	NL
Zannier	542	Multibrand	F	E.Zegna	674	Monobrand	I
Mexx[xxi]	520	Monobrand	NL	Kwintet[xxii]	622	Workwear	DK
Fila	516	Monobrand	I	Gerry Weber	622	Monobrand	D
Devanlay[xxiii]	512	Monobrand	F	Mexx Europe	580	Monobrand	NL
Sixty	490	Monobrand	I	Valentino	490	Multibrand	I

The list is based on the Textil Wirtschaft Top 100. The list excludes clothing manufacturers that are considered as textile companies because of their technical process (e.g. socks and underwear). The list also excludes companies producing clothing but classified as leather industry (e.g. Hermes or Louis Vuitton) or shoe and sport goods manufacturers (e.g. Adidas and Prada). We have verified that all firms above are classified as clothing industry in the Orbis database.

We have given one characterization relevant for the company. Most companies are active in menswear and womenswear, this does not provide a clear distinction. Companies may be monobrand or multibrand, but that might have changed between 2001 and 2009.

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[i] Coats Viyella disinvested from all textile activities after 2001 except for the original business in sewing threads
[ii] Gamma disposed Vlisco and most of Verseidag activities in 2010
[iii] DMC disinvested from all activities except handicraft
[iv] Balta took over Domo in 2009
[v] Marzotto excluding Hugo Boss and Valentino
[vi] Went bankrupt in 2009, part of Eybl was takeover by automotive component group Prevent
[vii] Chargeurs disposed of the wool business before 2009
[viii] Marzotto withdrew from clothing production but grew in 2010 by taking over Ratti
[ix] Beaulieu took over Associated Weavers
[x] Chapelthorpe disposed of several units after 2001 and is no longer in the top 25
[xi] Went bankrupt in 2011
[xii] Loro Piana excludes retail turnover
[xiii] Eurocomfort has emerged from the consolidation of several german home textile firms and later the takeover of Abeil (F)(in 2011)
[xiv] Tommy Hilfiger was US owned in 2001, taken over by European management in 2007 and sold to US based Phillips van Heusen. It still has a headquarter in Amsterdam and production under license with EU based manufacturers
[xv] Marzotto spun off the fashion group under the names Higo Boss and Valentino Fashion Group
[xvi] Courtaulds disposed of all non-lingerie business and private label business and was renamed into DIM
[xvii] Coats Viyella only clothing business. The brands were sold and the private label business continued as Quantum Clothing (no longer in top 50)
[xviii] Dewhirst took over some private label business of Courtaulds, still in existence around place 50
[xix] Steilmann was taken over by the Miro Radici Group
[xx] IT Group holds licences of Versace, Ferre and Cavalli and brands as Exte and Malo. Went bankrupt in 2009, parts of the group continued as smaller companies.
[xxi] Mexx was bought by Liz Claiborne in 2002 and bought out in 2009
[xxii] Kwintet is the only workwear manufacturer in the top 20. Restructered in 2009-2010
[xxiii] Devanlay (Lacoste Brand) was taken over by Maus, Maus also bought Gant and Aigle, thus became multibrand