European Foundation for the Improvement of Living and Working Conditions

Sector Futures

Textiles and clothing: A dying industry – or not?

european Monitoring Centre on Change

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The first article in the series on the textiles and leather sector, including footwear production, outlined some of the main trends and drivers affecting the sector over the coming decade. This second article only covers the textiles and clothing industry, focusing on six key drivers that are likely to shape future developments in the industry. For each driver, three 'outlooks' have been articulated: an extrapolation of current trends and drivers ('Alpha' outlook), a situation where many things go wrong ('Beta' outlook), and a situation involving more visionary outcomes ('Delta' outlook). The aim is not to forecast the future, but rather to explore plausible outcomes for the industry over next 10 years.

Introduction

In the late 1990s, Harvard University researchers, charged with examining the competitiveness factors affecting the US industry, questioned whether the US textiles and clothing sector is 'a dying industry – or not?' (see Abernathy *et al*, 1999). The conventional wisdom among many commentators is that much production in the United States (US) will move offshore when the current quota system is dismantled beginning of 2005. This might happen on account of comparative labour costs. In other words, the US industry faces near-certain devastation, especially in the manufacture of clothing. These researchers, however, sought to articulate an alternative vision, one where the US industry embraces high technology and the flexibility to respond fast to fashion tastes. Thus, a future where proximity to mass markets, such as those found in the US, will be important, securing a viable – though reformed – apparel industry in the US.

Today, the same question can be asked of European textiles and clothing: 'a dying industry – or not?' The European industry also stands at a crossroads, where much production capacity could be lost offshore, or where proximity plays an increasingly important role in a high-tech, consumer-responsive sector. To examine these possible alternative futures, six key drivers have been identified that shape the visible and/or anticipated trends and developments in the sector:

1. international trade relations;
2. organisation and structure of the industry;
3. new and emerging technologies;
4. human resources;
5. environmental legislation;
6. enforcing international standards.

Each driver is presented in a common framework, involving:

1. an attempt to understand the driver and its main features;
2. a set of key questions concerning the driver;
3. three 'outlooks' for the future up to 2015.

These outlooks are not intended to be predictions, but rather represent plausible outcomes by the year 2015. There are, of course, many plausible outlooks for each area, and this article does not claim exclusivity. It intends to provide 'food for thought' and ideas to be challenged. For each driver, three 10-year outlooks have been constructed representing three distinctive patterns of development along the following lines:

1. *Alpha outlooks* represent a 'business as usual' future, in effect, an extrapolation of current forces and processes (if not always an extrapolation of trends).

2. *Beta outlooks* consider, in particular, some of the many things that could go wrong.
3. *Delta outlooks* describe potential changes in direction; thus, possibilities are emphasised that involve more visionary outcomes.

The following analyses of each of the drivers show that there are numerous points where the discussions overlap and the drivers influence each other.

International trade relations

International trade relations in textiles and clothing have for the last 40 years been dominated by the Multi Fibre Arrangement (MFA), which has played a crucial role in protecting producers in the EU and the US. However, as a result of the 1995 Uruguay Round of the GATT, trade in textiles and clothing was incorporated into the World Trade Organisation (WTO), with the MFA to be phased out in three stages over a 10-year period from 1995 until 2005 (Dicken, 2003, p. 339):

- stage 1 (1995-1998): 16% of tariff lines to be integrated into the GATT;
- stage 2 (1998-2002): 17% of tariff lines to be integrated;
- stage 3 (2002-2005): 18% to be integrated after 2002, followed by the final 49% by the end of 2004.

Clearly, integration is heavily backloaded, much to the annoyance of those developing countries that would benefit from freer trade. Moreover, both the EU and the US have left integration of the most valuable and therefore most sensitive products until the end of 2004. For this reason, many in the industry view 1 January 2005 as a 'big bang' with far-reaching repercussions for domestic producers.

The threat from China is seen to be particularly acute as its increase in exports has been startling for those products where quotas have already been removed. For example, EU imports from China increased by 164% in volume in 2002 in those product categories where quotas were eliminated. At the same time, imports from all countries in the same product categories increased by only 10%. The EU and US largely anticipated such growth in Chinese imports. Thus, a textile-specific special safeguard was negotiated with China as part of its entry agreement to the WTO. This allows any WTO member to re-impose quotas on Chinese textiles and clothing categories for one year, between 2005 and 2008, if these are deemed to be disrupting domestic markets and hurting home producers. The US has already invoked this special safeguard, while the European Commission is under increasing pressure to do the same.

Given this picture, many people are sceptical as to whether full liberalisation of the textiles and clothing industry can ever be achieved. Some industry spokespersons suggest that the EU should negotiate new quantitative export restrictions with countries like China. It is argued this would also benefit the Chinese, since they would avoid being frequently hampered by a continuing stream of anti-dumping cases. Without such new restrictions, many believe that China will capture 50% of the world's textiles and clothing exports before 2010, largely on the back of what are deemed unfair policies: a 40% under-valuation of its currency and the financial invulnerability of state companies. Moreover, China has a highly mobile and cheap labour force (workers earn about US $120 per month), economies of scale in the domestic market and the increasing ability of strong companies to access capital and upgrade their technology (the latest machinery imported from Japan, Germany and Italy is often in use).

However, not all voices in the EU are calling for renewed protection. For example, EuroCommerce has estimated that EU import restrictions on textiles and clothing cost the EU consumer a total of €25 billion per year. This translates into

an extra cost of about €270 per year for an average family with two children. The European Commission has also been pushing for the abolition of very high tariffs and non-tariff barriers intended to restrict European exports into large domestic markets like China and India. With a growing middle class in these and other developing countries, the appetite for branded clothing, much of which originates in Europe, has been increasing in recent years. The European Commission argues that European companies should be given a fair opportunity to meet this growing demand.

But the voices for renegotiation of import restrictions are growing louder, and they are not just coming from the spokespersons for domestic producers. Organisations representing interests in the developing world are also concerned at the prospect of unfettered free trade in textiles and clothing. One of the unintended side effects of the MFA was the development of sizeable textiles and clothing industries in many developing countries. This came about during the 1970s, 1980s and 1990s as a result of quota-hopping, sub-contracting, or relocating to countries without quota or with unfulfilled quota by producers mostly from the Far East. Without the MFA, it is doubtful whether countries such as Sri Lanka, Bangladesh and Indonesia would have seen the development of a significant textiles and clothing export industry.

With the MFA's abolition, clothing manufacturing is likely to be concentrated in those countries offering the lowest labour costs, most efficient production and most developed transportation and telecommunications infrastructure. Countries that provide full-package services – from textiles production to cutting, sewing and packaging – will be the most competitive. China, India and Pakistan, as well as the upcoming Vietnam have competitive advantage in all these areas, while other south Asian producers, not to mention producers in sub-Saharan Africa, are likely to see their industries decimated.

Many believe the solution to this pending crisis is not a level playing field of free trade for everyone, but rather a policy of affirmative action, where poorer countries are given quota and tariff advantages over their more developed competitors. In this regard, the EU has made use of the Generalised System of Preferences (GSP), which permits developing countries to export garments at markedly reduced rates. It has also granted quota-free access to the poorer countries. Yet, such preferences offered to the poorest countries are likely to prove insufficient to protect their export markets from the dominance of China in a quota-free world. This is because quotas cost as much as 50% of the price of an imported garment, far more than the average European tariff, which stands only at around 8%.

Key questions

- Will the abolition of the current quota system in 2005 simply lead to other protectionist strategies being deployed by the developed world, or will a genuine free market in apparel emerge?
- What medium- to long-term impact will the abolition of quotas in 2005 have on the European textiles and clothing industry?
- Will the EC make use of the WTO special safeguard measures to protect domestic producers? What other 'protectionist' measures could the EC legitimately pursue?
- What impact will quota abolition have on other less developed economies, notably those in Asia and Africa that have benefited from earlier quota-hopping practices?
- To what extent will European exporters be able to penetrate overseas markets in a more open trading system?

Alpha outlook on international trade relations

The EU and US make extensive use of the WTO special safeguard against China, bringing considerable uncertainty to the international trading system. In the medium term, import quotas are renegotiated as European and US businesses find it impossible to compete with Chinese imports. Measures introduced by national governments and the EC to move the industry into higher value-added product areas have only limited impact. This results in many firms either closing down or relocating production to China. While a haven of special preferences is offered to some of the poorest countries in the world, their industries nevertheless fall into decline.

Beta outlook on international trade relations

Generally speaking, the EC decides not to intervene to protect domestic producers. The abolition of quotas quickly leads to major job losses across the EU, as companies either close or relocate to cheaper production sites. Hardest hit are the new accession and Mediterranean Rim countries, which have relied upon cheap labour for much of their competitiveness. Textiles industries in many developing countries, such as Bangladesh and Sri Lanka, are virtually wiped out by Chinese competition. This leads to severe economic hardship in some of the poorest countries in the world.

Delta outlook on international trade relations

The EC develops an 'intelligent' and fair policy of protection for its domestic producers, including anti-dumping actions and the championing of global workers' rights. European companies prove remarkably agile in surviving and prospering in the new trading regime. While some relocation to China and India occurs, the importance of proximity to domestic markets means that much of the industry remains in Europe. Without the need for quota-hopping, supply chains shorten and stabilise, reducing transaction costs and producing savings that can be passed onto consumers. The EC provides additional preferential access to developing countries on a multilateral or regional basis only. Especially with regard to rule of origin requirements, the EU favours regional accumulation in order to foster regional integration. This has led to the development of powerful, cross-border supply chains in the Mediterranean Rim countries, which are highly integrated in serving the European market.

Industrial organisation and structure

In general, textiles manufacturing has become more and more capital-intensive and increasingly important for large companies. By contrast, the clothing industry remains far more fragmented organisationally as sub-contracting is prominent, and is less sophisticated technologically. At the same time, retailers gain in importance and impact on the organisation and location of clothing production. Indeed, buyer-driven production chains now dominate the clothing industry (Dicken, 2003, pp. 318-319).

> *The highly concentrated purchasing power of the large retail chains gives them enormous leverage over textiles and garments manufacturers. When the market was dominated largely by the mass market retailers, demand was for long production runs of standardised garments at low cost. As the market has become more differentiated and more frequent fashion changes have become the rule, manufacturers are forced to respond far more rapidly to retailer demands and specifications. Under such circumstances, the time involved in meeting orders becomes as important as the cost.*
>
> (Dicken, 2003, p. 330)

> *Product proliferation and shorter product cycles, reflected in ever-changing styles and product differentiation, contribute to general demand uncertainty for both retailers and manufacturers, thereby making demand forecasting and production planning harder every day. In a world where manufacturers must supply an increasing number of products with fashion elements, speed and flexibility are crucial capabilities for firms wrestling with product proliferation, whether they are retailers trying to offer a wide range of choices to consumers or manufacturers responding to retail demands for shipments.*
>
> (Abernathy *et al*, 1999, p. 9)

Thus, going to India or China for low prices alone may not be the smartest course of action. Increasingly, there is a need to factor in demand uncertainty and product proliferation, both of which demand a certain level of time-sensitive agility, when making sourcing decisions. This is perhaps best illustrated through the example of the fashion chain Zara. Zara has made spectacular progress by producing a very wide range of fast-changing basic garments from its domestic production base. Its so-called 'live collections' are designed, manufactured, distributed and sold almost as quickly as its customers' fleeting fads. The company takes an average of 10–15 days from sketching a new piece of clothing to delivery. At the heart of its success is a vertically integrated business model spanning design, just-in-time production, marketing and sales. By making around half of its clothes in-house, the company avoids the need to rely upon a network of disparate and slow-moving suppliers. Zara stores in Europe are supplied twice a week with fresh merchandise from a vast logistics centre in La Coruña, Spain, where garments travel along computerised tracks, and optical reading devices sort out and distribute more than 60,000 items of clothing an hour. The whole set-up is designed to minimise fashion risk. Production is done in small batches, with around 11,000 new designs produced each year. None stays in the stores for more than a month.

Key to the ability to respond so quickly to 'fast fashion' is the geographical proximity to markets. This helps to explain the survival of many clothing manufacturers in Europe. It also partly explains the relative advantage of low-cost countries located close to the major consumer markets of the United States (e.g. Mexico, the Caribbean) and western Europe (e.g. central and eastern Europe, the Mediterranean Rim). However, producers in the central and eastern European and Mediterranean Rim countries will have to invest more in technologies – especially in information and communication technologies (ICT) – to secure their positions in retail-driven supply chains.

Key questions

- Where will equilibrium sit between time and cost? This is likely to vary between different products.
- In an ever-shrinking world, to what extent will geographic proximity alone secure market share for domestic suppliers to the retail outlets?
- To what extent can the Italian fashion industry or the Zara model be emulated by others in the European industry?

Alpha outlook for industrial organisation and structure

The emerging EuroMed regional supply network continues to develop, but is hampered by low skills and inadequate investment in the latest technologies, especially ICT. Retailers continue to balance sourcing decisions, as different products have different customer requirements. Suppliers are judged not individually but rather on how they could fit into the retailer's overall supply chain strategy. In that respect, a fruitful long-term relationship with the buyer is regarded as important. However, the major sourcing factors for all companies remain price, quality, quick response and logistical requirements. Suppliers continue to be requested to take over an increasing array of services for the buyer and thereby carry an increasing share of the risks.

Beta outlook for industrial organisation and structure

European industry fails to sufficiently invest in new technologies that allow for a wide adoption of agile and flexible product sourcing. Consequently, the level of responsiveness present in the US and the Far East fails to be offered in Europe. The Italian fashion districts and companies like Zara remain the exception in Europe rather than the norm. Much of the European industry therefore struggles to survive against waves of cheap imports from Asia.

Delta outlook for industrial organisation and structure

Industrial organisation models such as those pioneered by the Italian districts and companies like Zara are widely emulated in Europe, creating a more stable and productive industry. While some products are almost exclusively sourced

from cheaper Asian producers, a significant proportion of textiles and clothing come from the EuroMed region, with many firms investing in speedy delivery so as to exploit their geographical advantages.

New and emerging technologies

Customers currently demand textiles and clothing companies to provide many more products in smaller lot sizes with shorter lead times. In the new competitive arena – where demand uncertainty and time to market have become important factors along with the price – textiles and clothing firms are forced to use new and emerging technologies, rather than just drawing on the economies of scale that led to their success in the past (Abernathy et al, p. 36).

The competitive advantage of European textiles and clothing enterprises largely depends upon exploitation of new technologies, research and development (R&D), and innovation and skills. In Europe, for a number of years, the textiles and clothing industries have been modernising to address a fall in competitiveness related mainly to high production costs. Consequently, European textiles producers today have large market shares in technical/industrial textiles and non-wovens (for example industrial filters, geotextiles, hygiene products and products for the automotive industry or the medical sector), and in high-quality garments with a high design content (European Commission, 2003a).

To sustain and increase the breadth of this competitive advantage, European companies must continue to make use of new and emerging technologies. Four main technology areas have the potential to present future opportunities if they are exploited advantageously:

1. production technologies (process technologies, automation);
2. information and communication technologies (ICT);
3. new materials and products (multi-functional textiles and garments);
4. innovation and research and development (R&D).

Production technologies

New production technologies focus on developing automated and computer-based manufacturing systems. Traditionally these technologies have been considered as tools for the improvement of manufacturing speed and quality. However, they may also provide flexibility in production, which is a must when fast-changing customer preferences and mass customisation are considered. In the clothing industry, new production technologies should enable EU industry to offer products tailored to the individual needs and wishes of customers, but manufactured in a mass-production system. Such mass production means producing tailor-made clothing at ready-to-wear prices, providing the EU industry with competitive advantage over mass-produced clothing.

Moreover, new textiles and composite materials will require adapted or entirely new machinery and processing methods. Existing materials can also present new opportunities if they are processed in innovative ways. Recent breakthroughs in biochemistry and biotechnology as well as plasma, laser, and nanotechnologies will permit novel yarn forming, coating or laminating processes. These will give new and traditional fibrous and textile materials highly desirable properties in terms of subsequent processability and final product characteristics.

Information and communication technologies

Information and communication technologies (ICT) play a major role for improving supply chain management, customisation, and reducing lead times. For example, work organisation in the sector has undergone some important changes through the use of CAD/CAM systems. These systems, in combination with the Internet, enable European

companies to create their designs or prototypes in Europe, programme machines located in Asia and have products manufactured there.

These technologies also allow for a higher level of customisation in clothing. Computer-generated body measurements provide opportunities in achieving better fit for customised apparel. In Europe, some companies have already developed a variety of business strategies for producing and marketing customised clothing. Recent research projects, financed by the **EC's Framework Programme**[1], such as **E-Tailor**[2], **FashionMe**[3], **eT-Cluster**[4] and **FashionOnLine**[5], have focused upon moving forward the necessary technologies to make these activities more effective and profitable. The more recent TEX-MAP project has worked to establish a research roadmap for the European textiles and fashion industry. The project aims at developing a strategic roadmap, which should lead to the transformation of the textile-clothing integrated and customer-oriented business network by the year 2010.

New materials and products

Fibres that respond in a 'smart' way to external influences like temperature changes, humidity, chemicals and bacteria, light and radiation, fire, electric discharge or mechanical use will enable the production of functional or smart clothing for sports and leisure wear as well as work wear and protective clothing, all of which present growing markets. A further area of technological advancement concerns 'intelligent textiles' that have the ability to conduct electric current or light, accumulate energy, store information, or receive and transfer radio waves. These have the potential to open up a whole new market for intelligent garments containing sensors and actuators. They will also advance the vision of wearable technology which can control, alert, inform, relax, or entertain the wearer. Such high value-added materials and products, which draw from traditional European strengths like engineering and industrial design skills, can give the industry tremendous opportunities to be competitive on international markets.

Innovation and R&D

Innovation is essential if the European industry is to remain competitive. This will mainly come about through the development and application of new technologies, although non-technological innovation also has a part to play. A striking feature of technology-driven innovation in the textiles and clothing industry is the transfer of technologies and practices from other sectors. One such example is the use of bar codes for inventory management – originally developed for the food industry. More recently, the European Space Agency's technology transfer programme has enabled the development of clothing: to monitor babies' sleep to help prevent sudden infant death syndrome (SIDS); suits to protect the skin of children suffering from the rare genetic disorder *xeroderma pigmentosa*; super-insulating jackets for use in arctic conditions; and undergarments incorporating integrated conditioning systems, which are already in use by a successful Formula 1 racing team. In addition, a recently launched project under the same programme aims to apply the existing technology of membrane bioreactors in order to develop compact and cost-effective high efficiency wastewater treatment systems for textiles finishing small and medium-sized enterprises (SMEs) (European Commission, 2003a).

1 **http://europa.eu.int/comm/research/fp6/index_en.html**

2 **http://www.atc.gr/e-tailor/**

3 **http://www.fashion-me.com/**

4 **http://www.atc.gr/eT-Cluster/index.htm**

5 **http://www.atc.gr/fol/**

Key questions

- To what extent will European textiles and clothing companies successfully exploit new and emerging technologies?
- How will new technological advances affect manufacturing processes in European firms?
- What are the possibilities offered by 'full' customisation? And to what extent will this become a widely adopted approach to buying by consumers?
- What are the major areas of using ICT in business-to-business (B2B) and business-to-consumer (B2C) relationships?
- What type of new products and materials could be developed by using new and emerging technologies? And what impact are these likely to have on the industry and consumers?

Alpha outlook on new and emerging technologies

The demand for diversification increases even further, which puts additional pressure on companies to be more innovative and flexible in the design and production of new products. Demand is shaped by technological developments, which are limited only by the innovation capability of the sector's enterprises. Internet use continues to increase. Most sales, however, are still from shops, where customers can try, touch and feel the products they want to buy. Customisation is important and more widespread. Flexibility in manufacturing is influential in this drive towards customisation. But there is still some way to go before full customisation is achieved.

Beta outlook on new and emerging technologies

In the wake of rapid industrialisation, Asian manufacturers dominate the market for new high-tech production plants, giving them an added advantage over their European counterparts. European science and technology remain at the cutting edge, and non-European companies are increasingly benefiting from the latest developments. Some of these companies are even collaborating with researchers in European research centres. Meanwhile, while large European enterprises make full use of ICT in their operations, many SMEs fail to take advantage due to a lack of knowledge and skills.

Delta outlook on new and emerging technologies

A majority of European businesses are using highly automated and computer-aided manufacturing (CAM) systems, operated by a highly educated and skilled labour force. New technologies developed for other industries in the areas of biotechnology, nanotechnology and laser technology create a production revolution in textiles and clothing firms. New sewing and joint methodologies totally change the organisation of manufacturing and the machines used. Europe maintains and builds upon its leading position in the development of new fibres with wide possible uses.

Human resources

Textiles and clothing has been viewed traditionally as a labour intensive sector, but it has become increasingly capital intensive over the last decades. This has lead to dramatic falls in employment levels worldwide – even in China, around 3 million people have left the sector since the mid-1990s, representing a 50% reduction in the size of the workforce. Clothing manufacturing continues to be labour-intensive as tasks like cutting and sewing have remained difficult to automate. Many jobs are, at best, semi-skilled, which means that their transfer to other low-wage locations is relatively straightforward. For this reason, much clothing manufacturing has moved offshore to sites of cheap labour in developing countries. Unfortunately, this has also led to a depression in wages for workers in Europe as companies have attempted to remain price-competitive.

Against this backdrop, European competitiveness depends upon innovation, research, fashion and design, creation and quality, and the use of new technologies, together with positive industrial relations. Moreover, the keys of sustained competitiveness are the preservation and development of know-how and skills through effective education and training, as the importance of knowledge-intensive tasks and flexible skills in the sector rises.

In highly specialised products and processing methods, skills play a key role. The sector has been hampered in its attempts to find a workforce with adequate qualifications, partly due to the low wages offered by a traditional manufacturing industry. The industry also suffers from a poor image since many associate it with difficult working conditions and poor pay. Furthermore, the sector has been concentrated in the low range of qualifications and, very often, in locations without alternative job opportunities. At the same time, it has been an important employer for women. All of these factors have contributed towards maintaining relatively low wages.

At present, many companies experience difficulties in recruiting staff with specialised skills. There is an acute need for ICT and eBusiness skills, which are becoming indispensable. Young people entering the industry need high-quality training that is relevant to the new profile of the sector. Moreover, when technological changes and modernisation and automation of production processes in the sector are considered, training of the existing workforce becomes necessary to upgrade their qualifications and skills (European Commission, 2003a).

Demands for diversification, improved quality and the incorporation of a fashion component at all stages of production have also affected training and development requirements. There is, thus, a need for tailor-made courses because of increasing mass customisation and diversification.

Yet, the response of the industry has not always been so positive. With a drive for greater flexibility, employers make increasing use of part-time workers, fixed-term contracts and temporary work arrangements. The search for flexibility tends to increase the recourse to the informal sector (the 'sweatshops') and to homeworkers. The latter provide the best means of matching production to market fluctuations. But as the ILO has pointed out, 'in the great majority of countries, homeworkers employed in the TCF industries have no legal status and no social protection, which puts them in a very precarious position and exposes them to potential abuses' (2000, p.112).

Key questions

- What type of skills and qualifications are needed in textiles and clothing to increase productivity? How can these be obtained?
- How can the requirement for greater flexibility and productivity in the industry, which is imposed by the market and global competition, be reconciled with the need to safeguard stable employment and decent labour practices?
- To what extent have international labour standards and voluntary private initiatives helped to improve labour practices and to bring about greater respect for human rights?
- What changes should be made to human resources development policies and programmes to ensure that working women and men are better equipped to cope with technological change? What should be the respective roles of the EU and the social partners in the development and implementation of education, initial training and vocational training programmes? What specific assistance might be given to SMEs? What innovative work practices need to be developed to ensure a better match between the supply and demand of skills?
- How will EU enlargement affect the job market in the textiles and clothing sector?

Alpha outlook on human resources

The industry shows a mixed response to increasing international competition. Some industry parts drive wages and working conditions even further down, while others intensify their commitment to high-value and/or high design-content production. The latter demands a highly skilled workforce, which in turn demands good pay and decent working conditions. Nevertheless, most jobs in the sector remain semi-skilled at best and continue to be carried out by women and newly arrived immigrants.

Beta outlook on human resources

As the industry becomes more capital intensive, the number of jobs decreases. Meanwhile, EU enlargement brings massive numbers of low-skilled labour into the EU15, which creates further downward pressure on current wage levels. The industry is hampered in its attempts to modernise and adopt the latest technologies by a deteriorating textiles knowledge base in Europe. At the same time, the sector remains unable to attract high-potential young people, which is mainly due to its traditional image and lower wages.

Delta outlook on human resources

The extensive use of ICT by a highly skilled and trained workforce increases productivity in the sector. Continuous development and lifelong learning become the norm. While a cheap labour force from accession and candidate countries enhances the sector's competitiveness in traditional mass production markets, the highly skilled and trained EU workforce is working at the cutting-edge of the industry to sustain Europe's innovate leadership with novel and high-quality products. New technologies, cleaner production, a strong interest in the fashion industry and continuous training and development opportunities increase the popularity of the sector and make attracting bright young people easier.

Environmental legislation

Two crucial environmental issues for the textiles and clothing sector concern the need for:

1. reductions in the amount of wastewater discharged after processes such as dyeing and finishing, and a decrease in the chemical load of this wastewater;
2. measures to encourage a life-cycle approach to the products manufactured by the sector.

The main piece of environmental legislation at EU level affecting the industry is the Integrated Pollution Prevention and Control (IPPC) Directive of 1996. This directive aims to achieve integrated prevention and control of pollution arising from a wide range of industrial and agricultural activities, including pre-treatment or dyeing of fibres or textiles (European Commission, 2003a). More recently, further challenges to the industry have come in the form of the EU's new chemicals policy, known as **REACH**[6]. This stipulates that certain chemical substances, many of which are used in the textiles dyeing and finishing sectors, will in future be subject to a registration and, in some instances, a restriction procedure (*ibid*). This could lead to price increases for some substances and the withdrawal of others. However, under pressure from the textiles industry (among others), the European Commission has reduced testing requirements for low tonnage substances and the administrative burden associated with complying with the regulation.

[6] **http://www.europa.eu.int/comm/enterprise/chemicals/chempol/whitepaper/reach.htm**

Nevertheless, some concerns remain across the industry. For example, it is likely that textiles and clothing companies in some of the new Member States will experience considerable difficulties and additional costs in respecting the Community acquis for environmental protection. Higher costs for compliance with EU environmental legislation have been taken into account in the negotiations with accession countries. For instance, transition periods have been granted to Poland and Slovenia (*ibid*).

Manufacturing companies operating in Europe complain that, compared to competitors in other parts of the world, they face higher costs for the use of natural resources such as energy in all forms and water, but also for health and safety provisions for the textiles workers in the production process. They argue that effective burden-sharing agreements need to be put in place which also include non-European producers.

Key questions

- How is environmental and chemicals regulation likely to impact on the behaviour of companies in the sector? Will such legislation encourage them to relocate to non-regulatory operating environments? If so, what can European governments and consumers do about this?
- What additional measures will need to be taken for accession and candidate countries, given their difficulties in meeting the demands of environmental regulations?
- How will the European sector be protected from Asian producers that do not operate under similar regulatory regimes?
- To what extent can we expect European textiles and clothing companies to adopt a life-cycle approach to the products they manufacture?

Alpha outlook on environmental legislation

The processes and final products of the sector comply with high environmental and health standards imposed by EU legislation. Life-cycle approaches to product manufacture are slow to take off among the sector's companies, though some vanguard ones demonstrate their feasibility and profit from them. To prevent EU enterprises from being at a disadvantage with international competitors, the environment is increasingly used as an issue to prevent unfair competition from Asian countries.

Beta outlook on environmental legislation

New environmental legislation leads to unsustainable increases in costs for companies based in the EU. In addition to high labour, machinery, energy and water costs, the introduction of new environmental and chemicals regulations makes manufacturing even more expensive. Accession and candidate countries experience particular difficulties in respecting the Community acquis because of the high additional costs. Therefore, the EU has to grant newcomers further transition periods. Asian producers fail to implement the same standards as those in Europe, even when supposedly bound to do so by international agreements. Finally, life-cycle approaches remain unfulfilled due to ever-changing and complex global sourcing strategies commonly found in the industry.

Delta outlook on environmental legislation

The sector's poor image on the environment is corrected by decreasing the amount of wastewater and its treatment, and also by using fewer polluting chemicals during the manufacturing and dyeing processes. Using the latest technology and being environmentally friendly, together with the outstanding skills of European designers, the 'made in EU' label represents trustable, innovative, healthy and environmentally friendly products. Moreover, the EU not only increases the

environmental friendliness of the European textiles and clothing sector but also proves successful in securing similar measures all around the world.

Enforcing international standards

Recent years have seen an increase in the threat to intellectual property rights (IPR) in the sector. This threat consists of an increase in trademark infringements, counterfeit goods, and imitation products. The trademark has often been described as the most important asset for a company, which is particularly the case concerning designer apparel. Accordingly, the WTO TRIPs (Trade Related Aspects of Intellectual Property Rights) Agreement draws specific attention to the need for WTO members to respect IPR in relation to designs and models in the textiles and clothing industry.

The issue of workers rights and international employment standards remains a dominant problem in the textiles and clothing sector. This subject is currently prevalent due to the impending quota elimination planned for December 2004 and the subsequent increase in free trade policies. Great uncertainty exists in the area of international codes of conduct due to a lack of legislation, and where legislation is present, a lack of enforcement. The latter, in particular, requires significant investment. For example, Gap has deployed more than 80 people around the world whose sole responsibility is factories' compliance with ethical sourcing criteria. Nike has over the past few years quadrupled the number of employees dealing with labour practices. Nevertheless, monitoring the situation remains difficult when products are manufactured in thousands of factories in dozens of countries. Matters are made even worse by the notorious volatility of supply chains in the sector, making it hard to establish the long-term relationships needed to improve working conditions. While international institutions such as the International Labour Organisation (ILO) have established conventions and guidelines covering labour rights, these are often difficult to implement.

Key questions

- How will deregulation of trade impact on working conditions within the sector?
- Will international legislation concerning working standards be developed and enforced?
- What, if any, improvements would international standards bring about?
- How great is the threat from counterfeit products to the genuine textiles and clothing industry? How great is the threat from counterfeit products to future innovation in the sector?
- Will customs enforcement increase under the WTO TRIPs legislation?
- Does the WTO need to alter existing legislation further in order to impact on the trade of counterfeit textiles and clothing goods?

Alpha outlook on enforcing international standards

Political pressure on countries failing to comply with WTO TRIPs legislation is stepped up in the form of sanctions and incentives. Steps are also taken in EU countries to educate the textiles and clothing industry on the importance of registration of innovations. However, it remains difficult to tackle counterfeit activities outside the EU. Although sweatshop conditions are still an important issue in both developing and developed nations, inroads into combating the problem are being made. The total elimination of sweatshop conditions, poor pay, forced labour and child labour, is set as a target by the ILO, however the path to be taken to solve the problem on an international scale remains unclear.

Beta outlook on enforcing international standards

Counterfeiting activities continue to increase, with WTO legislation having little impact. Customs enforcement worsens, allowing greater trading of products infringing on the IPR of legitimate textiles and clothing companies. Smaller EU textiles and clothing companies, lacking the funds required to enter court cases against counterfeiters, eventually lack the resources to continue innovating new products, yet the growth in sales of counterfeit apparel continues to intensify. Meanwhile, quota elimination results in massive job losses worldwide, as well as causing an escalation of poor wages and working conditions, as nations struggle to keep up with China's dominant position in the textiles and clothing market. Those working in developing countries face increasingly longer working hours and harsher conditions, due to a lack of accountability by governments to enforce minimum levels of acceptable working conditions. In developed countries, immigrants are increasingly employed in unstable, low-wage employment, with no or very limited access to benefits, support, or training.

Delta outlook on enforcing international standards

WTO member countries cooperate better to combat illegal counterfeiting activities within the sector. The abolition of quotas and the new era of free trade represent a fundamental shift in the efforts of countries to protect intellectual property rights (IPR). The WTO, as well as developing international standards of customs enforcement, set the elimination of counterfeit goods as a target. At the same time, corporations take more responsibility for working conditions, alongside new international regulations enforcing a code of conduct of minimum standards for working conditions. Governments take on greater accountability in terms of labour laws, ensuring an increased and effective protection of workers' rights. Changes in legislation and corporate practices result in a dramatic decrease in the numbers working under sweatshop conditions.

Coming up...

The third and final article in this series on the textiles and clothing sector will look at some of the measures already being pursued by European policymakers to address the issues raised by the driving forces and their outlooks.

References [7]

Abernathy, F., Dunlop, J., Hammond, J.H. and Weil, D., *A Stitch in time: Lean retailing and the transformation of manufacturing: Lessons from the apparel and textile industry*, New York, Oxford University Press, 1999.

Coates, J., 'From my perspective: the future of clothing', in *Technological forecasting and social change* (in press).

Dicken, P., *Global shift: Transforming the global economy*, London, Paul Chapman Publishing, 2003.

Department of Trade and Industry (DTI), *A national strategy for the UK textile and clothing sector - making it happen*, Report to the DTI from the Textile and Clothing Strategy Group, United Kingdom, 2002, available at: **http://www.dti.gov.uk/support/textiles/MakingItHappen.pdf**

DTI, 'A comparative study of the British and Italian textile and clothing industries', *DTI Economics Paper*, No. 2, April 2003, available at: **http://www.dti.gov.uk/economics/paper2-owen.pdf**

[7] All links accessed on 6 December 2004.

Euratex (European Association for Textiles and Clothing), *European research in the textiles and clothing sector - Common Strategy Paper*, Brussels, March 2002, available at:
http://www.euratex.org/download/publications/papers/rd-3-2002a2_-_research_strategy_paper_final.pdf

European Association of Textile Collectivities, 'Scenario 2005: Fair defence of the sector in trade negotiations and the promotion of local strategic textile plans', Conference paper presented at the European Commission's DG Trade conference on *The future of the textile and clothing trade after 2005*, Brussels, 5-6 May 2003, available at
http://trade-info.cec.eu.int/textiles/documents/96.doc

European Commission, *Plan of action to increase the competitiveness of the European textile and clothing industry*, COM (97) 454 final, Brussels, 1997, available at:
http://europa.eu.int/comm/enterprise/library/lib-competitiveness/doc/com1997_454_en.pdf

European Commission, *Report on the implementation of the action plan to increase the competitiveness of the European textile and clothing industry*, SEC (2000) 1531, Brussels, 2000, available at:
http://europa.eu.int/comm/enterprise/library/lib-competitiveness/doc/sec2000-1531_en.pdf

European Commission, *The future of the textiles and clothing sector in the enlarged European Union*, European Commission, COM (2003) 649 final, Brussels, 2003a, available at:
http://trade-info.cec.eu.int/textiles/documents/178.pdf

European Commission, DG Trade, *EU textile and clothing trade*, Sectoral issues, Textiles, Conference documents, Brussels, 2003b, available at: **http://trade-info.cec.eu.int/textiles/conf_docs.cfm**

Foo, J. F. and Fortunato Bas, N., 'Free trade's looming threat to the world's garment workers', *Sweatshop Watch Working Paper*, 30 October 2003, available at: **http://www.sweatshopwatch.org/global/SWtradepaper.html**

Fraiman, N., *Case study: Zara*, Report prepared by the Colombia Business School, 2002, available at:
http://www-1.gsb.columbia.edu/divisions/marketing/research/columbia_research/ZARA%20Case%20INSPECTION.pdf

International Labour Organisation (ILO), *Labour practices in the footwear, leather, textiles and clothing industries*, Report for discussion at the tripartite meeting on 'Labour practices in the footwear, leather, textiles and clothing Industries', Geneva, 2000, available at:
http://www.ilo.org/public/english/dialogue/sector/techmeet/tmlfi00/tmlfi-r.pdf

Institut Français de la Mode (et al), *Study on the implications of the 2005 trade liberalisation in the textile and clothing sector*, Consolidated report to the European Commission, DG Enterprise, February 2004, available at:
h**ttp://europa.eu.int/comm/enterprise/textile/documents/ifm_final_report_2005.pdf**

Liikanen, E., 'High-tech textiles – a new perspective for the European textile industry', Opening speech, International Symposium for high-tech Apparel Textiles and Fashion Engineering with Innovation Forum, Frankfurt, 27 November 2000.

National Textile Training Organisation, *Sector workforce development plan*, 2002, available at:
http://www.skillfast-uk.org/pdf/downloads/tex_swdp.pdf

Organisation for Economic Co-operation and Development (OECD), *Liberalising trade in textiles and clothing: a survey of quantitative studies*, Report from the Working Party of the Trade Committee, TD/TC/WP(2003)2/Final, Paris, OECD, 2003, available at:
http://www.olis.oecd.org/olis/2003doc.nsf/43bb6130e5e86e5fc12569fa005d004c/0f0e88e3f89f485ac1256d1a0048e754/$FILE/JT00143729.PDF

World Trade Organisation (WTO), *International trade statistics*, 2003, available at:
http://www.wto.org/english/res_e/statis_e/its2003_e/its03_bysector_e.htm

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