



**EUROPE
INNOVA**

Innovation and Financing

NetFinTex

Opportunities and Challenges for Financing Innovation in the European Textile and Clothing Industry



The European Apparel and Textile Organisation

NetFinTex

NETworking **FIN**ancial investors, business experts
and support organisations to foster enhanced
innovation activity among Europe's **TEX**tile
and clothing companies

SIXTH FRAMEWORK PROGRAMME

Structuring

the European Research Area

Research and Innovation



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About NETFINTEX

NETFINTEX is a European research project addressing Textile and Clothing (T/C) companies' needs and challenges of financing innovation. The project undertakes: 1) an analysis of T/C sector's specificities in innovation financing, 2) the development of tools and guidance material for companies, 3) the establishment of a network of experts of T/C innovation financing, 4) the set-up of an European database of funding sources. The ultimate goal of NETFINTEX is an easier access to financial resources for Textile/Clothing companies for exploiting their innovative business ideas.

NETFINTEX
www.custor.kce.vlv.org

In a highly fragmented structure of the Textile and Clothing (T/C) industry with mostly SMEs, Innovation activities often lack of continuity, strategic direction, human and knowledge resources and, above all, funds



1. A growing innovation financing network for T/C

2. Success factors and barriers **3. Funding instruments**

4. Tools for Companies guidance

5. Policy recommendations

NETFINTEX: Providing T/C companies with an easier access to financial resources to exploit innovative business Ideas

NETFINTEX, together with the “European Technology Platform for the Future of Textiles and Clothing” and the European INNOVA initiative, will also make recommendations to public authorities on how innovation activities and innovation financing can be stimulated and facilitated for the T/C sector by appropriate policies and programmes.

Launched in November 2005, the 30 months project is carried out by a consortium of 8 European partners (from Belgium, Germany, Italy and Poland), coordinated by the European Apparel and Textile Organisation EURATEX and financed by the European Commission's 6th Framework Programme for Research.

NETFINTEX partners



European Apparel And Textile Organisation - Belgium



D'Appolonia S.p.A. - Italy



Sächsisches Textilforschungsinstitut e.V. - Germany



Sviluppo Italia Toscana s.c.p.a. - Italy



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Intellectual Property Law Institute of Jagiellonian University,
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1. INTRODUCTION

1.1 Background of the NetFinTex project

The European Textiles and Clothing industry has a longstanding tradition of leadership in terms of innovation, fashion and creativity, and despite increasingly fierce global competition and significant relocation of manufacturing to low-wage countries; it continues to represent one of Europe's major industrial sectors.

“The European textile and clothing industry is at a crucial phase of development - it faces unprecedented competition from abroad, plus rising production costs. Traditionally an industry of very small, specialised companies, new production approaches are needed to speed up the supply chain. Exciting new technologies promise unexpected textile applications, but SMEs need encouragement to innovate.”
(<http://aoi.cordis.europa.eu/article.cfm?article=1426&lang=EN>)

The EU-27 Textile and Clothing Industry in 2006

		2005	2006 provisory data	EU-27 difference 06/05
Turnover - Billions €	e	202.7	207.1	2,2%
Employment - 1000 pers.	e	2.760.308	2.591.766	-6,1%
Added Value - Billions €	e	61.9	62.6	1,2%
Enterprises	e	197.919	159.937	-19,2%
Investment - Billions €	e	5.5	5.6	1,5%
Exports – Billions €	(1)	36,5	38,7	5,8%
Import – Billions €	(1)	73,2	81,1	10,7%
Commercial Balance – Billions €	(1)	-36,7	-42,4	15,6%
Investment / Turnover	e	2,72%	2,71%	
Employment/ Enterprises	e	14	16	
Added Value / Turnover	e	30,53%	30,23%	

e : estimated figures

(1): Textile and Clothing, including fibres

Source : Euratex calculation based on EUROSTAT data and National Associations trends

Due to the highly fragmented structure of the industry, innovation activities, with the exception of a handful of larger groups, often lack continuity, strategic direction, human and knowledge resources and, above all, funds. Companies' own financing capacities are often limited due to low or unstable profit margins and limited availability of excess capital reserves. Banks, which are the predominant providers of outside capital to the industry, appear to be increasingly reluctant to provide T/C SMEs with the required financial resources for innovation investments. This is a result of an elevated number of credit defaults and bankruptcies mainly from T/C companies in commodity businesses with recent fierce competition from low cost countries. The resulting negative image is often attached to the sector as a whole so that T/C companies tend to obtain a lower credit rating in the course of their bank's risk assessment processes. In addition many enterprises and especially founders of new businesses are unable to provide the collateral necessary to enhance their low degree of creditworthiness.

Another major challenge that the European textile and clothing sector needs to tackle in a coordinated way concerns the disappearance of the fruit of European industrial creativity and intellectual property through rampant counterfeiting of designs and brands. Therefore a major need concern the protection

and valorisation of intangible assets in global manufacturing and consumption, highlighting the added-value in products and services resulting from design innovation and to make this more visible for consumers.

To enable a more widespread exploitation of innovation opportunities in the textile/clothing sector across the enlarged European Union there is a need to “map” expertise in innovation financing as well as financial instruments and schemes suitable for this industry. In the process of rapid transformation of traditional textile clusters into larger, cross-national, cross-sectorial and even virtual industrial networks, companies need to easily find their most suitable innovation financing partners wherever they may be based in Europe.

To understand and respond to the innovation financing challenges in the European T/C industry it is very important to take into account the sector’s specificities. Sole reliance on “one-size-fits-all” approaches to industrial innovation financing through horizontal programmes and support schemes cannot be sufficient and even seems to put the textile and clothing sector at a systematic disadvantage. The analysis of literature and past projects makes clear that although there is quite a large body of knowledge and experience on innovation and SME-specific innovation support in general, there has actually been very little research into innovation financing aspects for T/C companies. This makes the various surveys and findings of the NetFinTex project presented in the present document very relevant.

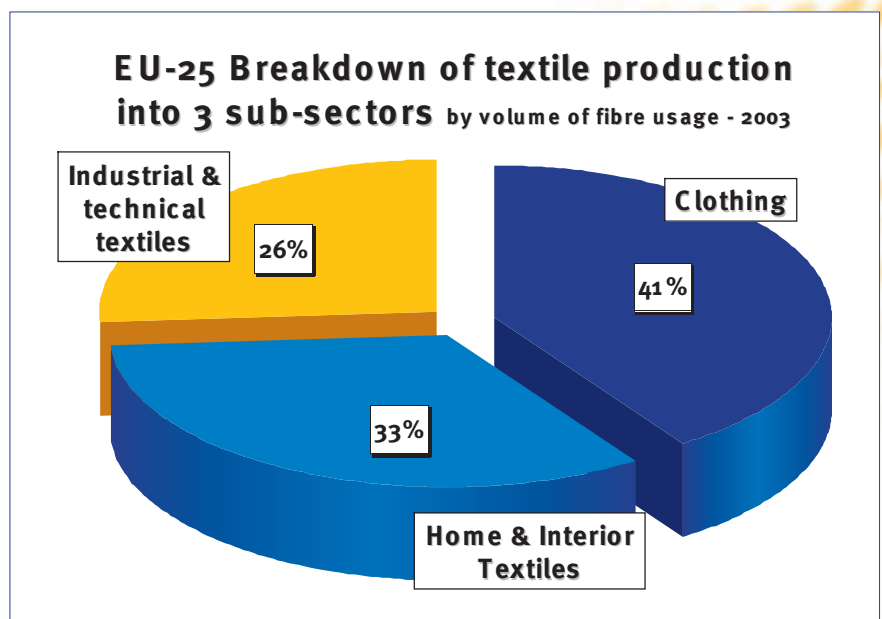
NetFinTex goes even beyond a total sectoral analysis by taking into account the differences existing within the textile/clothing sector itself depending on (1) industry structure/company size, (2) sub-sector of activity and (3) regional aspects:

(1) Industry structure/company size: While the EU T/C sector as a whole is predominantly an SME-based industry, average company sizes vary significantly across the different stages of the value chain. Enterprises of less than 50 employees account for 60% of the workforce in the EU clothing sub-sector and produce almost 50% of value added. Concentration and average company size is significantly higher in major textile production steps like spinning, weaving, knitting or dyeing/finishing and reaches very high levels of industry consolidation in activities like fibre production and manufacturing of certain home textiles like carpets. Such structural differences are mainly driven by different levels of productivity and competitive advantage that can be derived from factory automation and economies of scale.

(2) Sub-sectors of industrial activity:

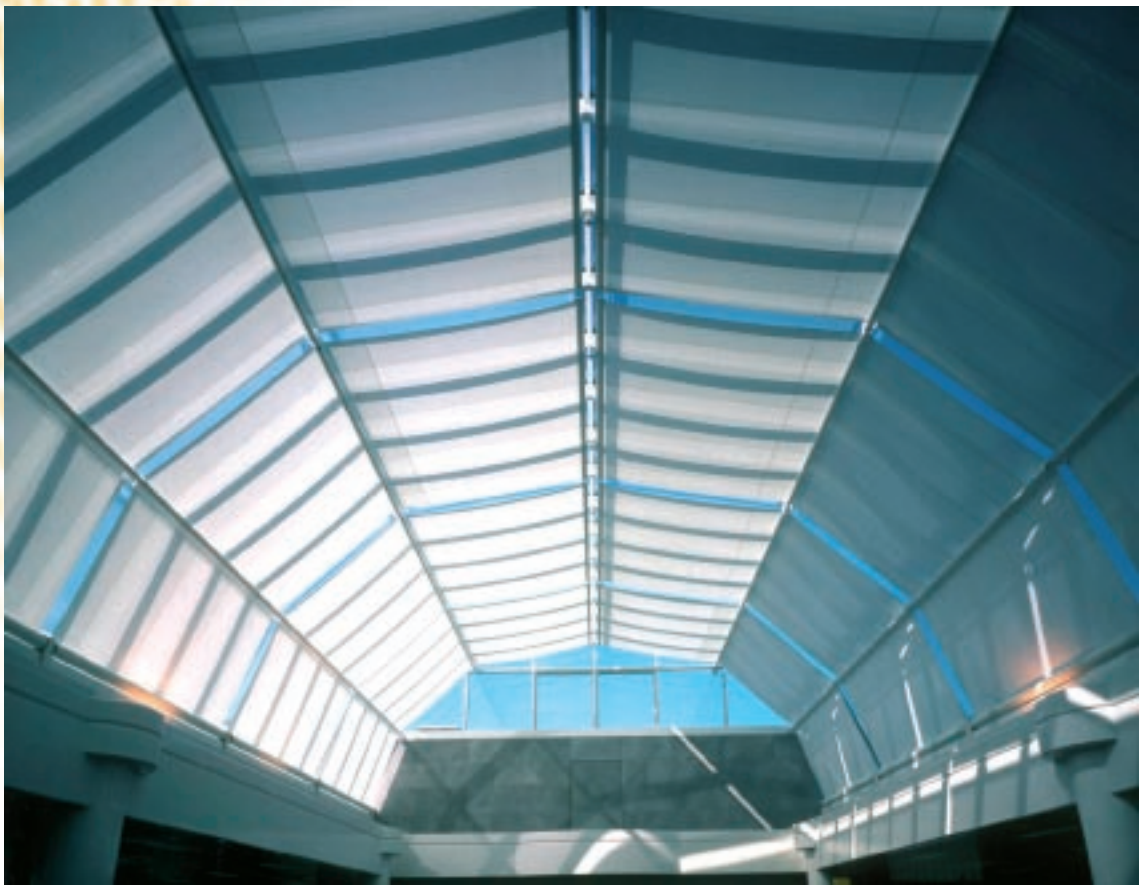
The sector is divided into the following 3 major sub-sectors of activity according to the end use of their products and which are characterised by different industry dynamics and success drivers:

- **Clothing and Fashion:** Is the largest sub-sector of activity accounting for more than 40 % of total industrial activity (based on fibre utilisation) however with a decreasing share. It is strongly driven by changes in volatile end market demand based on fast-changing fashion trends and seasons.



Main success drivers are constant non-technological innovation through design/creativity, high levels of flexibility and a quick response to demand changes. Levels of technology intensity and productivity are high in the (up-stream) textile supply chain and significantly lower in the (downstream) clothing manufacture.

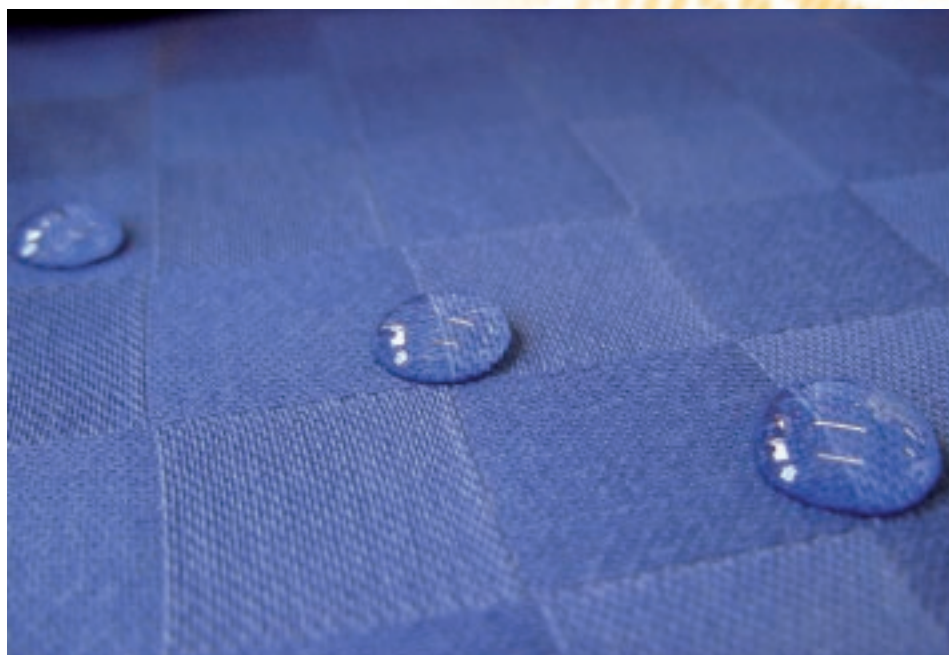
- **Home and Interior Textiles:** Is the second largest sub-sector of activity accounting for about one third of total industrial productivity with a stable share. It is strongly driven by longer term consumption and architectural trends (e.g. preference for textile versus hard floor coverings) as well as shorter term fashion/interior design trends. Main success drivers are a combination of constant productivity gains and excellence in design and product innovation.



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- **Technical Textiles:** Technical textiles - a common term describing a wide variety of textile materials/products which are used in non-conventional application areas like transport systems, housing and road-building, land reclamation, sporting equipment, protective wear, surgical and medical devices and others - today account for about one quarter of total industrial activity, albeit with an increasing share. This sub-sector is driven by end-market and regulatory developments which favour the substitution of conventional non-textile materials (like metals, plastics, wood etc.) by technical textiles. Main success drivers are a constant innovation in the functional properties of materials and products through research and development, a close collaboration with end users and a tight control on production to ensure consistent high quality and reliability of products often destined for high performance usage.

(3) Regional aspects: In the EU-15, the T/C industry is concentrated in the 5 most populated countries i.e. Italy, France, Germany, the UK and Spain, together accounting for about three quarters of EU-15 production of textiles and clothing. As regards the two sub-sectors, textiles and clothing, southern countries such as Italy, Greece and Portugal and, to a lesser extent, Spain and France contribute more to total clothing production while northern countries such as the UK, Germany, Belgium, the Netherlands, Austria and Sweden contribute relatively more to textile production including an above-average share of technical textile production. Compared to the EU-15, on average the T/C sector plays a more important role in the national economy and employment figures of the new EU Member States and candidate countries in Eastern and South-Eastern Europe.



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1.2 Method, nature and targets of this document

This document includes contributions, outcomes and findings of the NetFinTex project's work package 1 "Sector specificities assessment" which investigates innovation financing issues as a function of the specificities of the textile and clothing sector.

More specifically this work package analyses success factors and barriers to innovation financing in the textile and clothing sector, ranging from the needs and capacities of companies to invest in innovation depending on their business models and IPR strategies to the identification of the optimal sources for funding. In a European-wide survey T/C companies were queried about their experience and needs for innovation financing. Findings were compared with results from a parallel survey on the same subject among investment experts with direct experience in innovation financing in the T/C sector. Finally the outcome of this exercise was matched with knowledge obtained from an in-depth analysis of literature and results of previous projects in this domain.

Furthermore, this deliverable summaries main results presented in more detailed format in earlier deliverables of work package 1 namely: D1.2 "Data collection questionnaires", D1.3 "Business Models and Intellectual Property Rights strategies" and 1.4 "Innovation Financing Expert Database". The final chapter of trends and visions for future development of the T/C sector in Europe has drawn mainly from work carried out during 2004-2006 by the European Technology Platform for the Future of Textiles and Clothing³ and the EU Textile & Clothing High Level Group⁴.

³ See www.textile-platform.org for further information

⁴ See http://ec.europa.eu/enterprise/textile/high_level_group.htm for further information

2. SUMMARY OF SECTOR SPECIFICITIES

2.1 Specificities of the T/C sector in comparison to other economic & industrial sectors

The Textile and Clothing Industry (T/C) represents a key European manufacturing industry. The sector is dominated by more than 150.000 mostly privately-owned small and medium-sized enterprises with less than 100 employees, the average company having 19 employees. All these companies are networking within and increasingly also between European regions (clusters, districts), each one contributing a specific and complementary added value along the textile value chain.

To understand innovation financing specificities of this sector compared to other major economic sectors and industries one has to consider the key factors that drive a typical company's capacities to obtain and deploy the necessary financial resources required for innovation in this sector.

At first there are a number of key factors that distinguish the T/C sector as a typical manufacturing sector from non-manufacturing sectors. The T/C sector like other manufacturing industries but unlike most service sectors is relatively capital-intensive requiring regular investment in costly specialised infrastructure (factories, machinery, storage, logistics). To turn raw materials into a cash flow requires usually a lengthy and complex process involving multiple preparation, manufacturing, quality control, storage and distribution steps leading to a long cash conversion cycle (time from cash outflow for manufacturing input to cash inflow from manufacturing output). Higher capital intensity and longer cash conversion cycles result in generally higher financing requirements and related risk for innovation in manufacturing sectors like T/C in comparison to most service sectors.

Secondly there are a number of crucial specificities that distinguish the T/C sector from other manufacturing sectors (like machinery, transport systems, consumer electronics & appliances, ICT hard ware, medical equipment etc.) Those structural, market-related and financial specificities which determine companies' innovation capacities, innovation financing needs as well as inherent risk are listed in the table below:

T/C specificities compared to other manufacturing sectors

T/C	Other Manufacturing Industries
Structural specificities:	
- fragmented industry structure (sector dominated by SMEs)	- limited vertical integration and coordination along the supply chain
- limited access to end consumer/final customer	- important role of manufacturing-independent retail (large chains)
- consolidated industry structure (sectors dominated by big OEMs)	- strong vertical integration and control of the supply chain by the OEM
- good access to end consumer/final customer	- dominant role of manufacturer-owned/-controlled distribution channels
Market specificities:	
- short product life cycles (fashion seasons)	- volatile, unpredictable demand (short-term fads, weather patterns etc.)
- time-critical products and rapid value loss of un-timely products (end of season fire sales)	- difficult-to-control soft factors as market success drivers (tastes, trends...)

T/C	Other Manufacturing Industries
- mature markets (low volume growth, mainly market share competition)	- longer product life cycles (technology cycles)
- more predictable demand	- less time-critical products and longer value preservation of products (product/model phase-out)
- easier-to-control hard factors as market success drivers (technical features, use functions)	- younger markets (higher volume growth)
Financial specificities:	
- limited financial management competences/capacities especially in smaller companies	- low average profit/cash flow margins, limited self-financing capacity for innovation/growth investment
- limited access to sophisticated financing instruments	- limited public funding for non-technological innovation investments
- sophisticated financial management competences/capacities, specialised finance departments	- higher average profit/cash flow margins, greater self-financing capacity for innovation/growth investment
- access to broad range of financing instruments incl. the capital market	- available public funding for R&D investments

While those specificities do not apply to each and every T/C company (for instance many technical textile companies are part of OEM-driven supply chains or some branded clothing manufacturers dispose of their own retail operations), they are applicable to a vast majority of SMEs in the industry. They can serve as a relevant starting point for:

- investors interested in better understanding structures and dynamics of the T/C sector and their potential impact on investment results
- policy makers who wish to design policies and programmes which are relevant and suitable for solving industry-specific problems and market failures
- facilitators like innovation agencies, technology transfer organisations or consultants who wish to improve their innovation support services to T/C companies

In the following chapters a number of typical T/C business models and IPR strategies are described in more detail to illustrate sector specificities in a more concrete way.

2.2 Specificities of typical T/C business models and their industrial environments

The following exemplary Business Models for Textile and Clothing Industry have been identified:

Business Model 1 - Textile Producer (Yarn Producer)

The Business Model of a textile producer is exemplified by a spinning mill that produces different kinds of yarns that are usually sold to weaving mills or integrated production plants. It is characterised by the following:

- customers are all kind of companies big and small ones which process yarns,
- procurement of different kinds of fibres is mainly done by contracts from big suppliers or from spot markets (e.g. cotton markets) with focus on quality (process capability) and price,
- distribution is often done by contracts with the customers (weaving mills, knitting mills, etc),
- as yarn producers are mostly SMEs, external financing sources are usually limited to bank loans and the internal ones to reinvestment (profits are reinvested in order to finance innovation activities).

Business Model 2 - Non-Woven Supplier (Technical Textiles)

The Business model for Non-Woven Supplier is characterised by the following:

- suppliers of raw materials for non-woven production for technical applications are mostly chemical fibre producers in Europe and Asia or suppliers of natural wool felt and recycling materials (e.g. old clothes),
- the non-woven products are distributed and shipped according to the product or product group,
- as non-woven companies are often SMEs, external finance sources are usually limited to bank loans and the internal ones to reinvestment (profits are reinvested in order to finance innovation activities),
- the revenue generation works mainly in a traditional way: Direct revenues, depending on individual transactions of selling products (including profit margins).

Business Model 3 - Finishing Company (Functional Textiles)

The Business Model for a typical Finishing Company for functional textiles (non-fashion) is characterised by the following:

- presence of many competitors in a more or less fragmented market,
- finishing companies are mostly SMEs,
- most of the customers are technical textile companies e.g. working for OEMs (Original Equipment Manufacturers) of the automotive industry, i.e. the customers are so-called 2nd-tier suppliers and the finishing company is a 3rd-tier supplier,
- companies receive the incoming goods (fabrics) directly from their customers (2nd-tier supplier) according to the orders,
- after the production process the finishing company ships the product either back to the 2nd-tier supplier or directly to the 1-tier supplier (OEM),
- the finishing companies are often SMEs and thus external finance is usually limited to bank loans



and the internal ones to reinvestment (profits are reinvested in order to finance innovation activities).

Business Model 4 - Vertically Integrated Company (Home Textiles)

The Business Model for a typical Vertically Integrated Company is characterised by the following:

- fierce price competition driven by relocation of manufacturing to low-cost countries,
- customers are retailers and the hospitality market (hotels, restaurants, etc),
- the raw materials (especially yarns) are commodities and are bought very often in the frame of contracts with yarn producers (spinning mills),
- after weaving of fabrics using high-tech jacquard weaving facilities, embroidering and cut and sew operations usually follows the fulfilment of specific customer requirements,
- the products are sold to retailers by representatives in the domestic market and in the export market by sales agencies, as well as through direct delivery to major customers,
- the vertically integrated companies producing home textiles are often medium sized companies thus external finance is mainly limited to bank loans and the internal ones to reinvestment (profits are reinvested in order to finance innovation activities).



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Business Model 5 - Branded Clothing Company

The Business Model for Branded Clothing Company is characterised by the following:

- very high competition and competitors are spread all over the world,
- the company buys production inputs (fabrics, yarns, trimmings, etc.) globally (global sourcing) in order to receive best quality and price conditions,
- products are made in-house, by licensed partners, by joint venture partners and in special cases by subcontractors,
- the products are sold in two ways; (1) directly to the end-consumer through own shops (often called 'flagship stores') and/or outlets and (2) by selling to retailers (sometimes shop-in-shop system),
- the products are sold to the customers in different brands for different target groups, special offers and products for particular retailers are made,
- the products will be distributed and shipped in several ways (ships, trucks, planes, using distribution centres) because of the global production,
- clothing companies acting global are in most cases non-SMEs and thus have a broader range of financing sources incl. international financial markets. They do not suffer in such extent from the negative image the textile industry has,
- the revenue generation works mainly in a traditional way: Direct revenues, depending on transactions by selling products (including profit margins),
- a special problem for branded clothing companies is the copying/counterfeiting of individual products or whole ranges of products, which is difficult to solve because of different national legislations and weak international enforcement of IPRs.

2.3 Specificities in IPR strategies

The following typical IPR strategies and sub-strategies for Textile and Clothing Industry have been identified.

Strategy 1 - Building business on a recognized brand, trademark or product reputation

Brands, trademarks or a special product reputation are of special importance for fashion and clothing sector, where consumers are ready to pay more for the product just because it bears a certain brand or trademark. This IPR strategy is and should be a key business strategy element of clothing and fashion companies. Within this strategy a company might chose different sub-strategies of trademark protection and enforcement of IPR, such as:

- Sub-strategy 1.1** Protection of a registered trademark
- Sub-strategy 1.2** Protection against unfair competition including protection of unregistered trademarks
- Sub-strategy 1.3** Enforcement of trademark rights

Strategy 2 - Building clothing and fashion business on original designs

Designs have a great power in the apparel and (decorative) interior textiles sector, where an aesthetic and fashionable appearance of the product certainly counts in making a strong first impression on a customer and is a decisive factor determining eventual consumer choice. Thus, building competitive advantage on original designs through implementation of a good design and product development strategy is an important driver of market success in the fashion sector. This strategy might include the following sub-strategies:

- Sub-strategy 2.1** Protection of medium and long live cycle products trough registered designs
- Sub-strategy 2.2** Protection 'one fashion season' and clothing products through unregistered designs
- Sub-strategy 2.3** Copyright protection
- Sub-strategy 2.4** Protection against "slavish imitation"
- Sub-strategy 2.5** Enforcement of design rights

Strategy 3 - Monopolizing niche markets for technical and functional textiles through protection of technical innovations or information.

Innovative ideas developed and turned into new products is are a key for success in many businesses and sectors. The development of new functional materials, the discovery of innovative uses/applications of textiles and inventive changes in production technologies becomes an increasingly important element of an innovative business strategy of textile sector companies. Textile companies may consider implementation of the following sub-strategies of protection of the developed technical innovations and information:

- Sub-strategy 3.1** Patents
- Sub-strategy 3.2** Utility models
- Sub-strategy 3.3.** Trade-secrets

Strategy 4 - Exploitation of T/C company's IPR by external partners

Textile and clothing companies may profit from their established brands, trademarks, existing designs and technological IPR through a contractual exploitation of such IPR by external partners. The 2 major available options for an effective commercial exploitation of a T/C company's IPR are:

Sub-strategy 4.1 licensing and cross licensing

Sub-strategy 4.2 franchising

2.4 Matrix Business Models and IPR Strategies

Based on the above, the below matrix matching typical T/C business models with applicable IPR Strategies was elaborated:

Matrix matching typical T/C Industry Business Models with principal IPR strategies

IPR Strategy	1.Brands & trademarks			2. Registered & unregistered designs					3. Technological IPR			4. IPR exploitation	
	Sub-Strategy 1.1	Sub-Strategy 1.2	Sub-Strategy 1.3	Sub-Strategy 2.1	Sub-Strategy 2.2	Sub-Strategy 2.3	Sub-Strategy 2.4	Sub-Strategy 2.5	Sub-Strategy 3.1	Sub-Strategy 3.2	Sub-Strategy 3.3	Sub-Strategy 4.1	Sub-Strategy 4.2
1. Textile supplier (Yarn producer)	■								■		■		
2. Non-woven supplier (Technical Textiles)	■								■	■	■	■	
3. Finishing Company (Functional Textiles)									■	■	■		
4. Integrated company (Interior Textiles)	■	■	■	■	■	■	■	■	■		■	■	
5. Branded Clothing company	■	■	■	■	■	■	■	■	■		■	■	■

3. INNOVATION FINANCING

3.1. The entrepreneur's perspective

To gain first hand information on the current situation with regard to innovation financing in Europe's textile and clothing sector, the NetFinTex project conducted in 2006 a large-scale survey among T/C entrepreneurs and company managers. Responses were collected on the basis of a standard questionnaire (see annex 1) available in English, French, German, Italian, Polish and Dutch. An estimated total of 1500 companies in Italy, Germany, Poland and Belgium were reached with support of NetFinTex partners resulting in an approx. 10% return rate. Several of Euratex's national member federations forwarded the questionnaire to their member companies however only resulting in a very limited return. The total number responses received until end of 2006 was 141.

Preliminary remarks and composition of responses

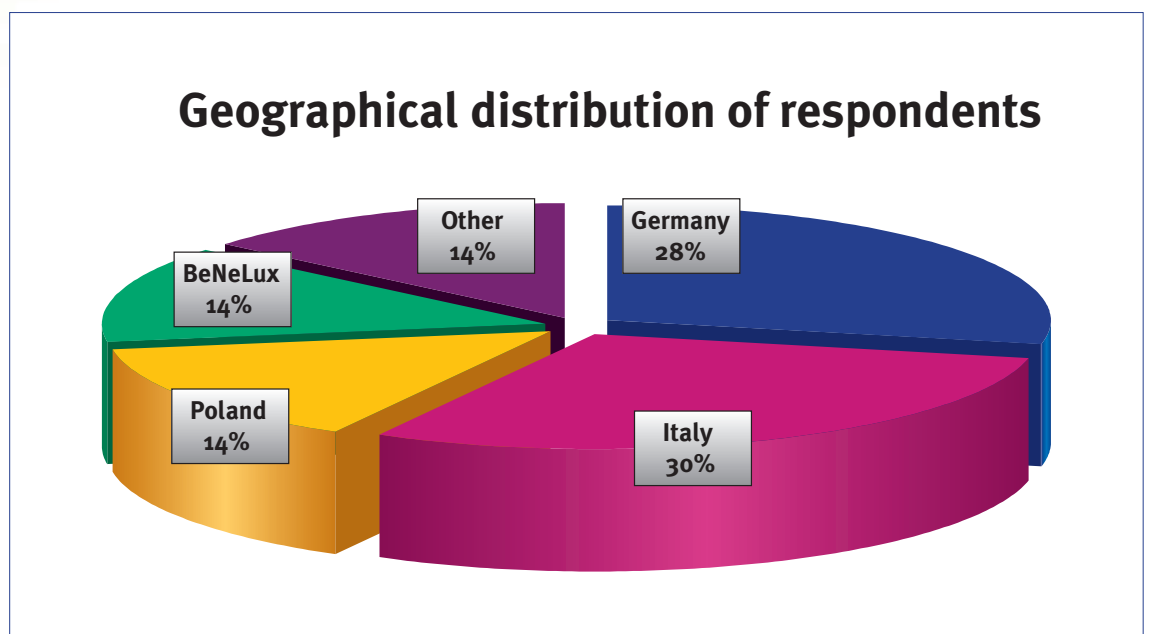
Detailed feedback was received primarily from companies which deal regularly with innovation in their business operations. Therefore findings might be biased due to an underrepresentation of less innovative companies.

All respondents had to categorise their companies according to country of establishment, branch of activity and company size (number of employees and annual turnover). All questionnaire responses have been analysed according to these 3 categories.

In addition companies were asked to provide basic information about their ownership structure.

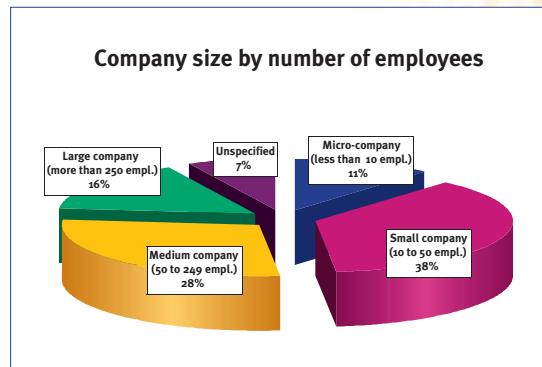
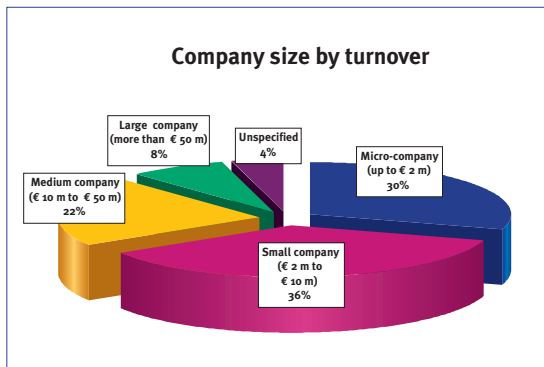
Analysis per country

The graph to the right shows the overall geographical distribution of responses received. Especially in Germany feedback came from companies with a history of involvement in collaborative research projects. Responses in the category Benelux originate mainly from the Flanders region of Belgium and the Netherlands on the basis of the Dutch questionnaire. The category 'other' comprises responses from the Czech Republic, Hungary, Ireland, Slovakia and Turkey.

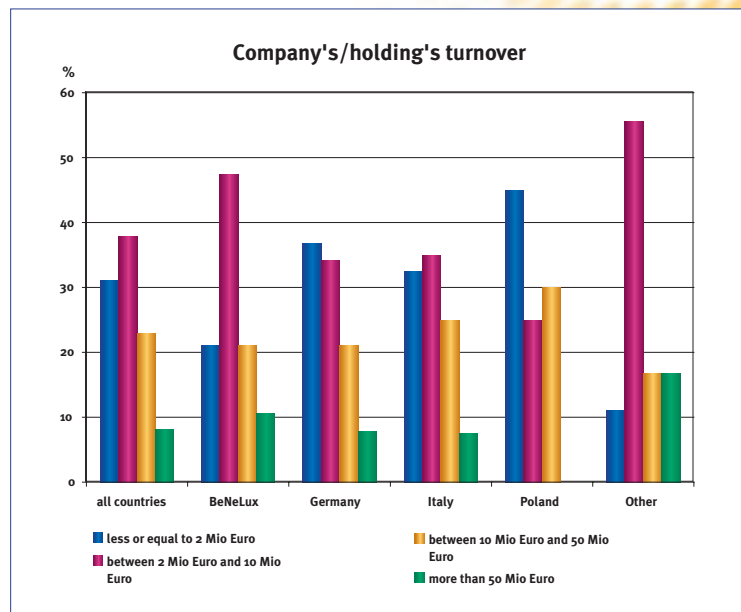


Analysis per company size

The graphs below show the distribution of respondents according to company size defined by either the number of employees or the annual turnover.



The detailed analysis of responses as function of the size of the company was carried out using the annual turnover figure as determinant for a company's classification into one size category. Close to 90% of respondents were SMEs according to the EU SME-definition (less than € 50 million in annual turnover) which reflects the actual situation in the industry as a whole very well. The right graph shows the distribution of feedback by country and company size in terms of annual turnover, showing a stronger presence of micro companies in Poland, Germany and Italy.



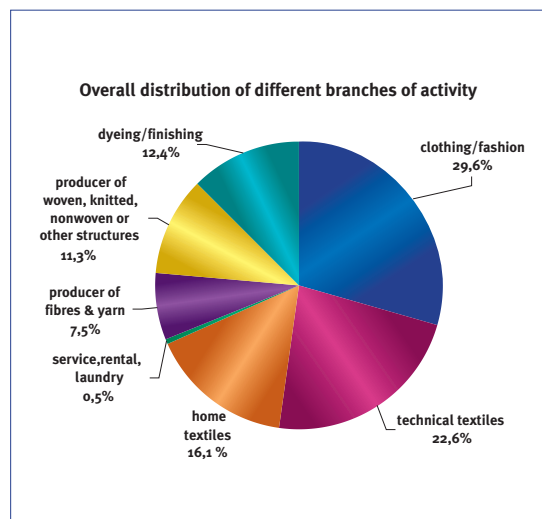
Analysis per branch of activity

The distribution of respondents according to branch of activity was the following:

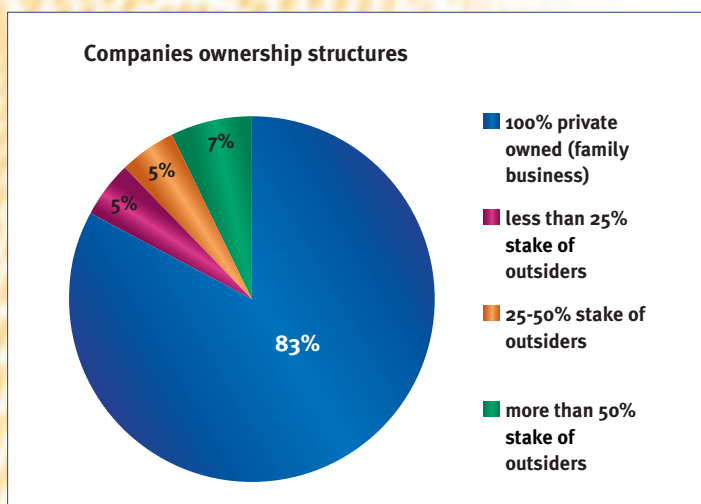
The main branch activities have been classified for further analyses in 4 sectors (1) clothing/fashion, (2) technical textiles, (3) home textiles and (4) textile processing including the 3 categories related to fibres/yarns, fabrics and dyeing/finishing.

The highest number of small companies (less than 2Mio Euro turnover) was found among clothing companies. Technical textile companies as well as fibre/yarn producers and dyeing/finishing companies fall mostly into the medium enterprise category with turnover figures between 10 and 50 Mio Euro and 50 to 250 employees.

Branch distribution across the different countries



did not deviate massively from the average except for Poland where clothing companies were heavily represented (75%) with corresponding underrepresentation of technical and home textiles. In Germany home textiles were slightly overrepresented as were technical textiles in Italy.



Company ownership structure

The picture below provides details of ownership structures in the surveyed companies.

It becomes evident that the vast majority of T/C companies are 100% privately owned often long established family-businesses. Ownership structures are very similar across different countries and company sizes. Also across the different branches of activity the ownership picture doesn't change dramatically, however technical textile companies tend to have a somewhat higher share of outside ownership.

Summary of findings of the NetFinTex entrepreneur's survey

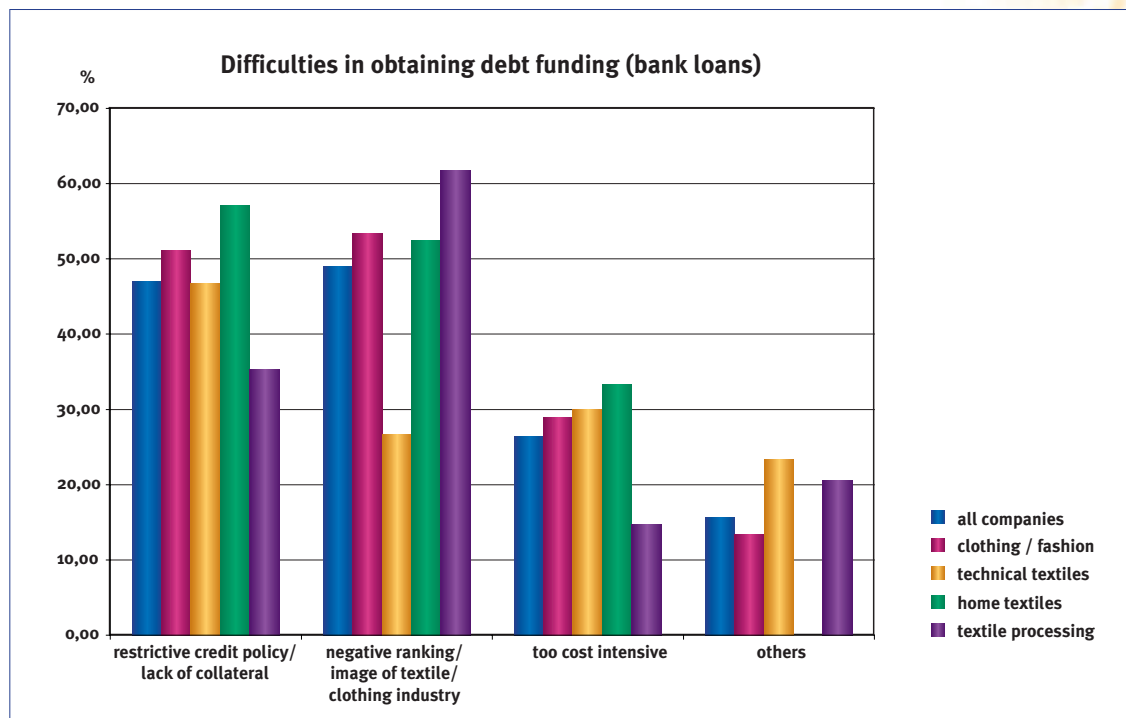
The overall analysis of all responses provides a number of clear findings:

- A clear reluctance by the majority of companies to turn to outside sources for equity funding
- Standard bank loans as the overwhelming source of choice for debt-based financing
- Almost 85% of surveyed T/C companies invest in innovation however with noticeable differences according to company size, branch of activity or country
- Investment in R&D and use of R&D funding schemes is also quite common, with more than 50% of companies involved in such activities
- Investment in IPR protection and exploitation of protected IPR is less common (approximately 40% of companies)

Use of different financing instruments

The mostly used source for equity capital is own capital/private means. External equity sources are accessed only in a minority of cases irrespective of branch of activity or country. In terms of company size there is an overwhelming reliance on internal/private (family) funding for all SME's up to the medium-sized companies, only among the large companies the role of outside shareholders increases significantly. Consequently the lack of internal resources in terms of reinvestable profits or available private capital was cited as the biggest difficulty on the equity capital side. Companies active in textile processing and the home textiles market seem to be specifically concerned by this. Technical textiles companies cited the least difficulties in obtaining equity capital.

The mostly used source for debt capital are bank loans, particularly in Italy. Small companies are more likely to invest with additional debt capital than with additional equity capital. The largest difficulties in obtaining debt capital are the restrictive credit policy of banks, the lack of collateral from companies



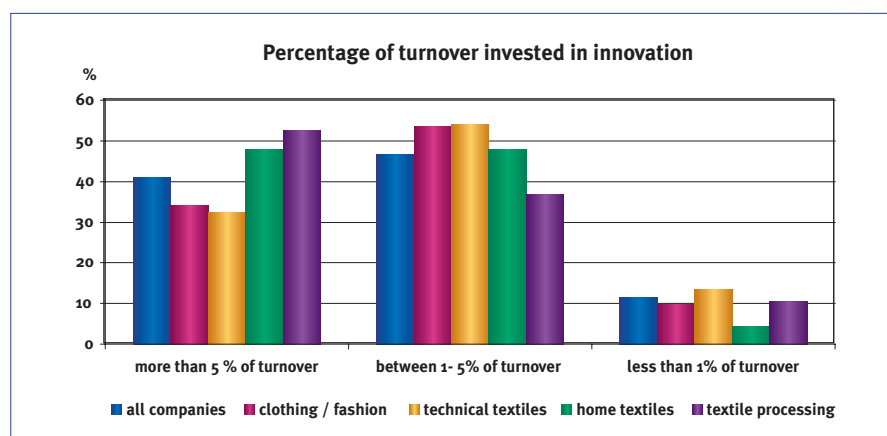
and the negative ranking/image of the textile/clothing industry among the financial institutions, although the latter seems less of an issue for technical textile companies (see chart).

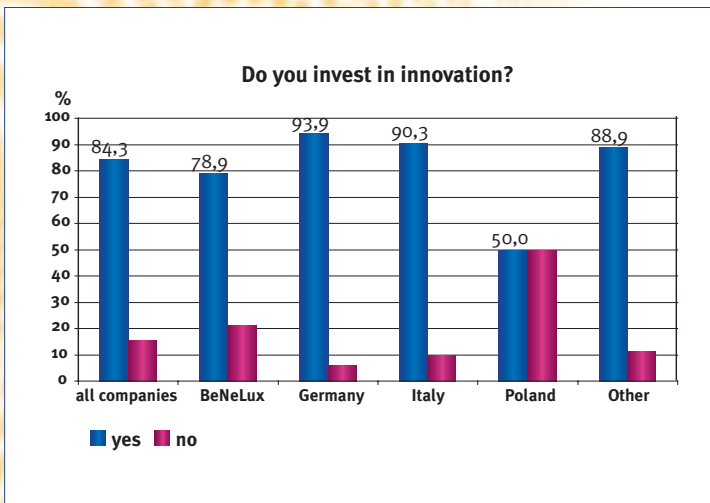
Particularly companies in Italy and Poland also cite cost factors that retain them from further debt-based funding which seems to point to higher interest rates or banking fees in these two countries. In terms of branch of activity, the clothing sector reported above average difficulties in obtaining loans whereas the technical textiles sector has clearly below average difficulties. In terms of company size there is a natural correlation between availability of bank loans and size of company with bigger companies having generally less difficulties.

Among all types of companies there is a fairly broad experience with various forms of early-stage financing. Seed financing specifically for pre-industrial R&D and prototyping work plays a more significant role in the technical textile branch. Company start-up and first stage financing for production and product marketing launch plays a significant role across all branches except for textile processing where there is a more limited activity in setting up new companies or production capacities in the surveyed countries.

Investment in innovation activities

Overall almost 85% of companies invest in innovation. Percentages vary from 79% of clothing/fashion companies to 97% for technical textile companies, implying that there is hardly any technical textile company which can afford not to invest in innovation. However, when looking at the innovation investment intensity (expressed in percentage of turnover) technical textile com-



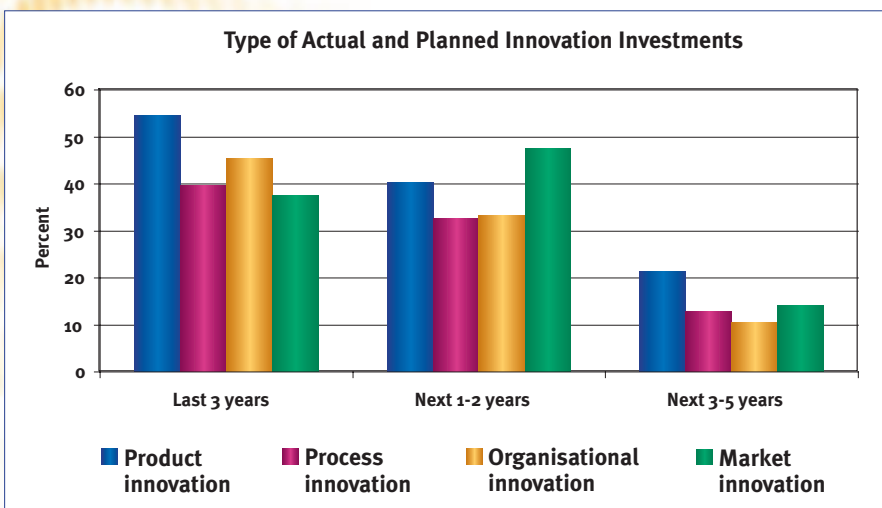


panies rank significantly below textile processing and home textile companies (see chart).

Company size seems not to correlate with the likelihood and intensity of innovation investment i.e. smaller companies are as likely to invest in innovation as bigger ones. Micro companies and larger companies showed unusually high rates of non-responses to innovation investment questions, which could either mean that respondents did not know the amount of innovation investments of their companies (more likely for larger companies with different activities and subsidiaries) or they do not invest nor intent to invest in innovation at all (more likely for micro enterprises).

Some geographic differences can be observed in innovation investment patterns. German and Italian companies are the most likely to invest in innovation with more than 90% of companies claiming to do so. Innovation intensity (percentage of turnover) is highest in Germany and Benelux countries. Polish companies score significantly lower in both respects with only 50% of companies making innovation investments.

The chart below details the types of innovation investments companies have made recently or intend to make in the near future.

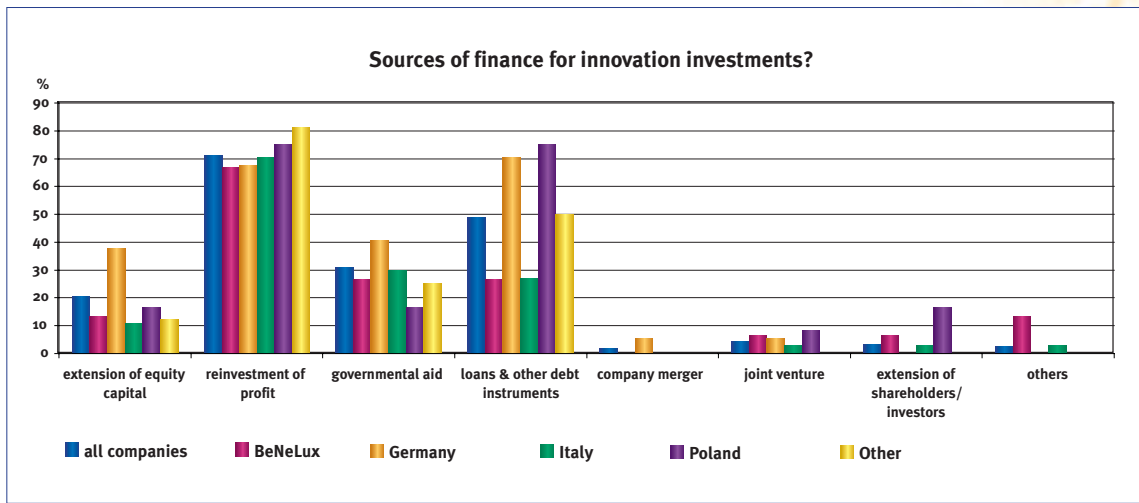


Product innovation is the most common type of innovation investment, however in the very near future (the next 1-2 years) companies intend to focus even more on investments that allow them to enter new markets (market innovation). Process innovations scores lowest overall. This may have to do with the capital intensity of process innovation which often involves the acquisition of costly new machines and other production equipment and facilities.

There are no significant differences

in the types of innovation investments according to branch of activity, geography or company size. However larger companies have shown significantly higher planned innovation investment activities in the next 3-5 years period which most likely simply reflects their longer planning horizons compared to smaller companies.

The predominant source of financing for innovation investments are internal means i.e. the reinvestment of profits as well as to a slightly lesser extend the use of loans and other debt-based funding. Governmental support schemes also play an important role especially for smaller companies and companies active in technical and home textiles. Clothing companies benefit less from governmental programmes which may be due to the scarcity of support schemes for non-technological innovation which plays a crucial role in the clothing and fashion business.

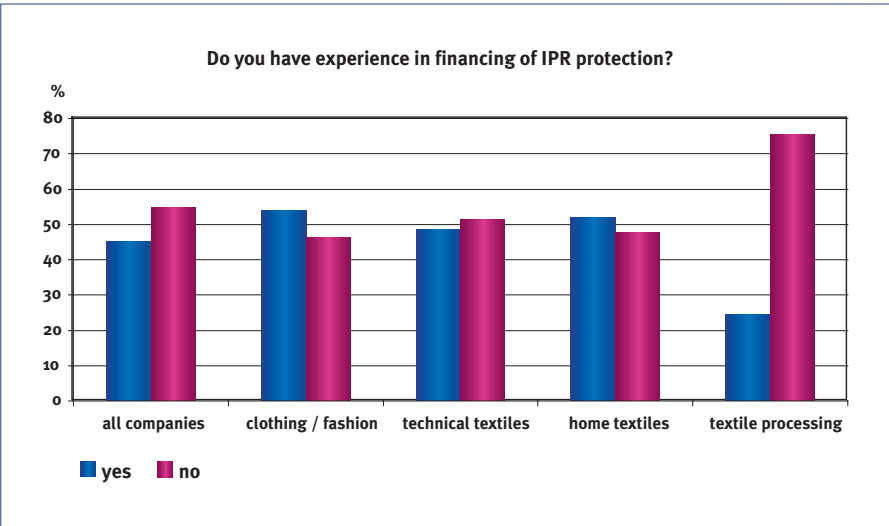


When comparing the sources for innovation investments in different countries (see chart above), some particularities become apparent. Governmental support seems to be specifically available and used in Germany and particularly unavailable/unused in Poland. Bank loans are popular for innovation investments in Poland and Germany but quite unpopular in Italy and the Benelux. The same situation is recorded for extension of equity or addition of equity investors - more popular in Germany and Poland than in Italy and the Benelux countries.

When asked to assess the overall difficulty in accessing finance for innovation clothing companies and to a lesser extend home textile companies recorded the biggest difficulties whereas technical textile companies seem to experience significantly lesser problems. In terms of size a clear negative correlation emerges i.e. the bigger the company the easier access to innovation finance becomes. Geographically Polish companies recorded greatest difficulty whereas Italian companies showed the least. However the overall average difficulty on a scale from 1 (very easy) to 5 (very difficult) results in value of 3.1 meaning that for the majority of companies innovation financing is a rather difficult problem.

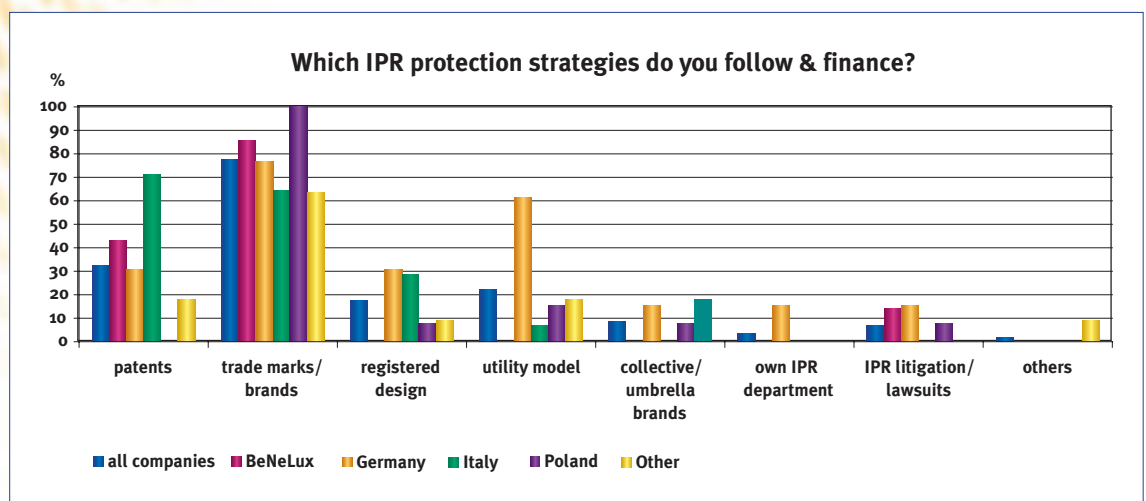
Investment in and exploitation of IPR

45% of companies state to have experience in financing of IPR protection. However a high percentage of companies left this question unanswered. Adding those to the inexperienced companies, would decrease the percentage of companies involved in IPR protection to only 36%. Some interesting differences are revealed when looking at branch and company size specifics. Company size is, not unexpectedly, positively related to IPR protection i.e. the bigger the company the more experience in IPR protection.



However when looking at the different branches one notices that over half of all clothing and home textile companies protect (some of) their IPR, whereas for technical textiles this rate is below 50% and for textile processing companies this drops to only 25%. (see chart). A quite different picture emerges when asking companies to assess the importance of IPR for their business success where textile processing together with clothing companies score highest. A possible explanation of this seeming contradiction in the case of textile processing companies could be a confusion between non-protected intellectual property in the form of knowledge, skills and know-how of company personnel kept secret without formal procedures on the one hand and legally protected IPR in the form of patents, trademarks etc. on the other.

Trademarks and brands are the most common IPR strategy, especially for clothing/fashion companies, followed by patenting, which is of greatest importance for technical textiles and textile processing companies. Utility models and registered designs also play a role albeit a less important one. In the latter two categories one can also find the greatest divergence in use according to company size and their geographic origin. None of the surveyed large companies seem to have a policy of registering their designs whereas over 20% of micro and small companies especially in Germany and Italy say to do so. Registered designs and utility models seem not to be used at all in the Benelux countries (see chart).



Most companies, especially the smaller ones have no IPR specialists or departments. Over 60% of the companies have no idea what are the main obstacles for more effective protection of IPR. Of those who specify their problems and obstacles, smaller companies are most concerned by the costs involved, medium sized companies are most worried by complex and lengthy IPR protection procedures whereas bigger companies see generally few obstacles. 35-40% percent of all SME's from micro to medium-sized companies doubt the effectiveness of IPR protection measures contrary to bigger companies among which not a single company lacks trust in such measures. Mistrust seems to be particularly high in Germany (almost 60% of respondents) but nonexistent in Benelux countries. Companies here seem to be most preoccupied by the complex and lengthy procedures. Interestingly among those 40% of companies responding to this question a very small minority across all countries seem to lack know-how about IPR protection procedures. However among the 60% non-respondents, lack of knowledge might be a much bigger issue.

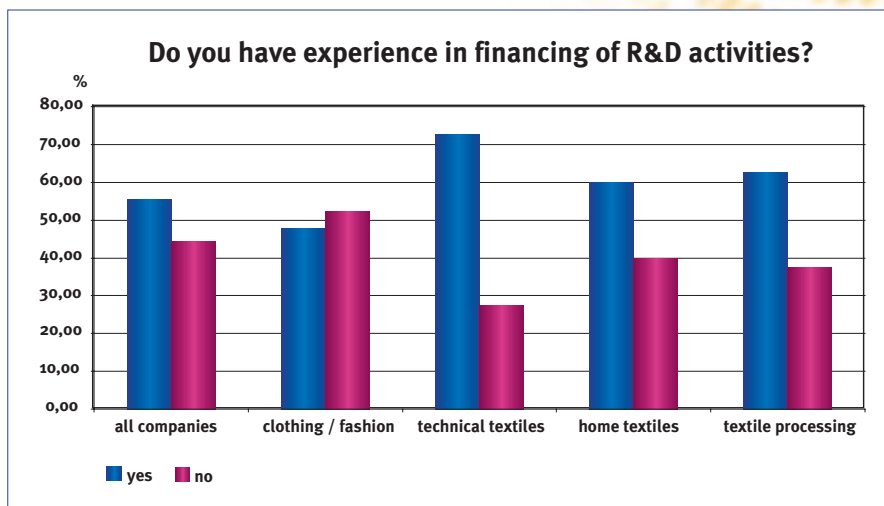
If companies finance IPR protection, they use own funds. There is generally limited knowledge/awareness of public support programs among companies even in countries where such programs exist.

A small minority of about 10% of surveyed companies transfer, license or otherwise exploit their IPR externally and an even smaller 5% of companies has already licensed or bought IPR from outside. However another 8% would be interested in doing so.

R&D Activity

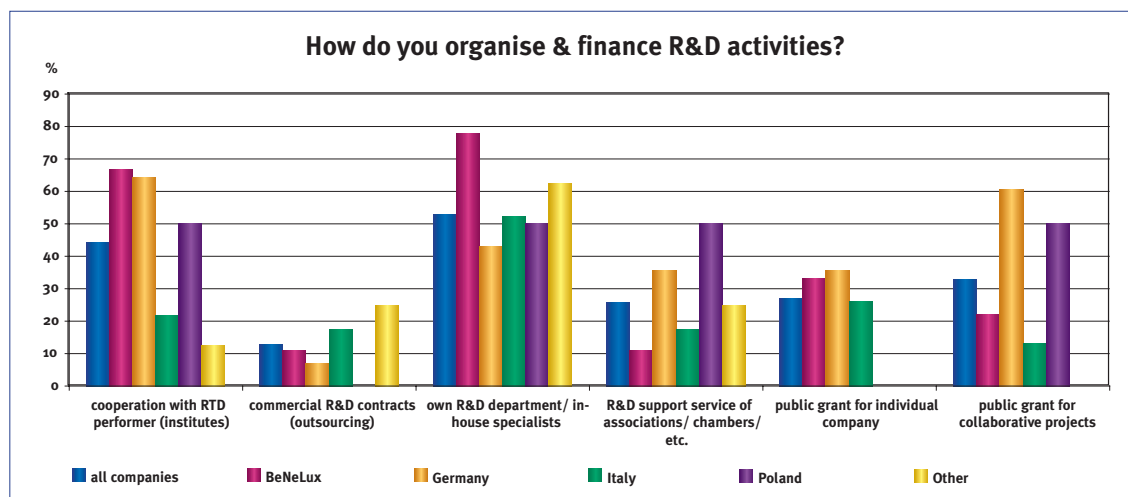
More than 50% of surveyed companies have experience in financing of R&D activities. There are however significant differences with regard to geographic origin and branch of activity. 70% of respondents from Germany and Italy report experience with R&D activities. This figure drops to just below 50% in Benelux companies and a very low 13% in Poland. Technical textiles companies are the most active in R&D followed by textile processing and home textile firms (see chart). In terms of company size the picture is less clear cut. While medium and large companies are more active in R&D than smaller ones, micro-companies also reported higher figures than small companies.

More than 50% of the companies consider R&D activities as of very high or high importance for their business. There are no big differences between the branches. For large companies R&D seems more important and German companies clearly attribute an above-average importance to R&D while Polish companies consider R&D much less important for the success of their business.



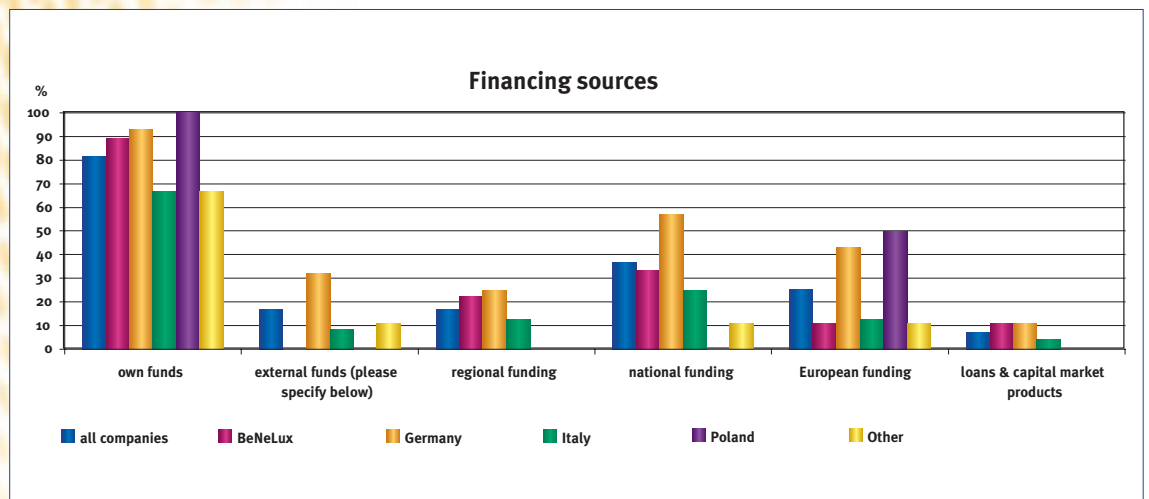
The management and funding of R&D activities is quite similar across different countries. For financing R&D, companies across all countries, branches and sizes use own funds in the first place which they often combine with national, regional and/or European public funding.

Of the companies involved in R&D, slightly more than half have internal R&D departments or at least in-house R&D specialists. Also co-operation with external R&D performers like research institutes is practised by 50% of companies except for clothing companies of which only 30% use such co-ope-



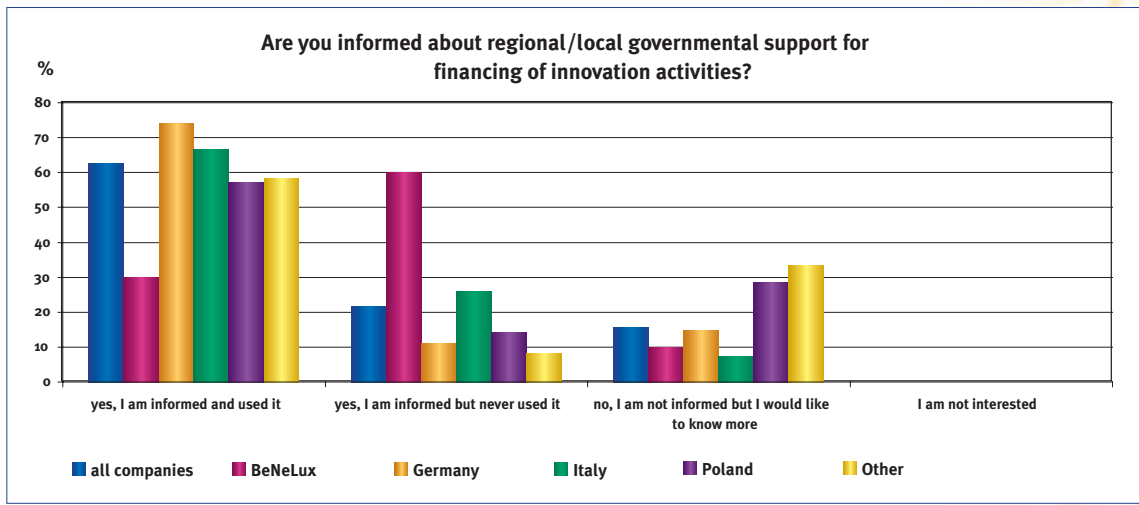
tions. Collaborative research projects supported by public grants are used by about 40% of companies, except again for clothing companies with only 20% use. In Benelux countries and Germany cooperation with external R&D performers (institutes) is highest whereas it is particularly uncommon in Italy (see chart). In Germany and Poland the use of public grants for collaborative projects is highest.

The first and foremost source of funding for R&D are companies' internal resources. Public funding also plays an important role especially in Germany where companies access regional, national and European funds. EU funds also play an important role in Poland where national and regional funds seem to be totally unavailable or unused. Use of EU funds is quite low among Italian and Benelux companies.



Local and regional infrastructures and support to innovation

55% of surveyed companies report experience with local and/or regional support mechanisms for innovation. There are no major variations across branches and company sizes but the picture differs quite significantly when looking at the different surveyed countries. In Italy more than 80% of companies report some experience whereas in Poland less than one third of companies reply positively. Lack of information about available public support mechanisms seems not to be a big problem generally although in Poland some 30% of companies feel to be insufficiently informed about available schemes. In Benelux countries almost two thirds of companies state that while they are informed about support mechanisms they don't use them. In all other countries the conversion rate from knowledge to use is much higher (around 60%). However all figures in the below chart have to be treated carefully as approximately 40% of surveyed companies did not complete this part of the questionnaire at all, so the actual rate of knowledge and use of public support schemes for innovation is likely lower than the graphs suggest.



Compared to public support schemes, specialised financing opportunities in the private market seem to be less well known and much less used.

When asked for the most common problems when dealing with local and regional support programmes and organisations, bureaucracy and lack of support/guidance was most widely mentioned across all countries and branches. Also the negative image of the industry seems to pose problems here, except for technical textiles companies. The size of the company was mentioned as a problem by 80% of the large companies which is most likely due to the fact that many support schemes target only or preferably SME's.

3.2. The financial expert's perspective

A structured interview plan has been developed in order to collect the expertise and evaluate the interest in the T/C sector by financial experts.

The group of experts responding to the questionnaire has the following profile: 65 experts from Poland, Italy, Germany and Belgium as well as single organisations from Switzerland, Spain and France have responded to our questionnaire. The type of organisations responding varies from financial institutions (24%), Business Innovation Centres (14%), consultancies (14%), IRC's/EIC's, (13%) incubators (4%), Chambers of Commerce (4%) and other (27%). About one third of these organisations work on a regional level, 39% on a national level and 22% on the European level.

Investment opportunities?

The general opinion of experts concerning investment opportunities in the T/C sector is relatively positive. The biggest overall problem does not seem to consist in a lack of available opportunities for innovation investment in textiles and clothing, but in the difficulty of bringing entrepreneurs and investors together to turn these opportunities into real projects.

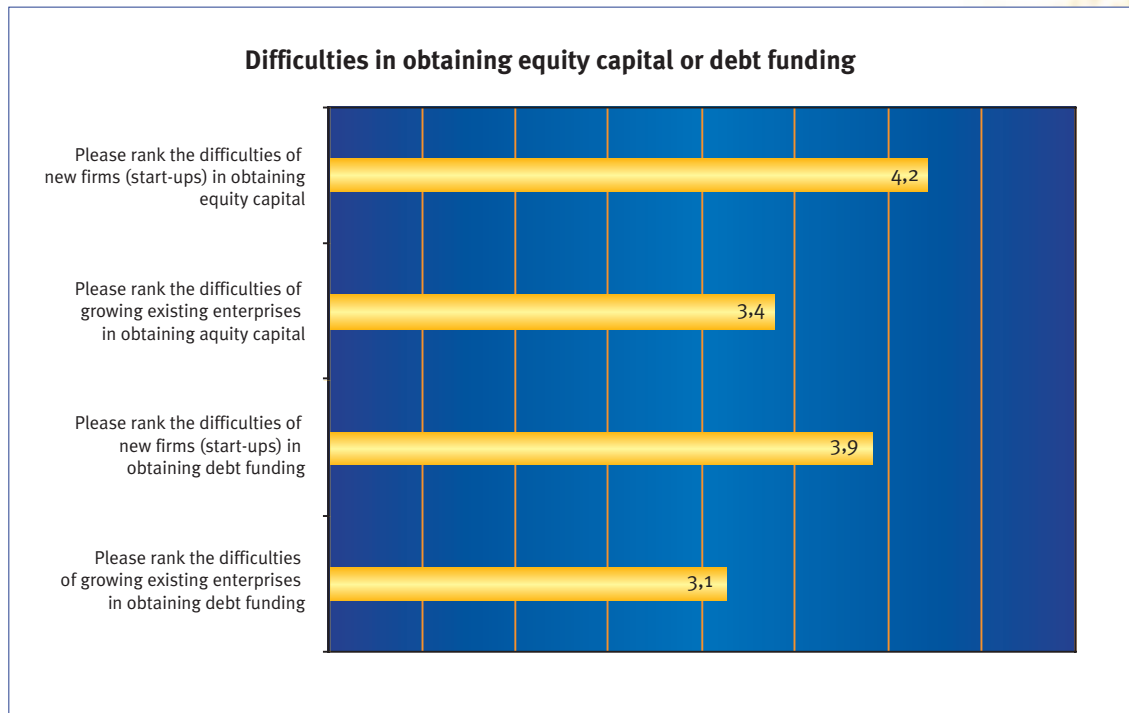
A gap between two worlds

The gap between the T/C industrial world and the financial community generally remains wide. A general mutual lack of knowledge and understanding of the details of the respective "worlds" makes it often difficult to interact effectively. While textile companies, especially the smaller ones lack knowledge and management capacity to pursue outside innovation financing opportunities professionally, investors rarely possess more than cursory know how about structures, business processes, trends and success factors in today's textile and clothing business. The latter seems to be confirmed by a high number of non-responses to various questions in the investor's questionnaire.

Difficulties in obtaining debt and equity capital

Investors generally judged it to be difficult for T/C companies to obtaining equity and debt financing, and although some sources for venture capital or seed capital from individual investors (business angels) exist, they remain out of reach for a large part of companies, especially for the start-up or younger companies. It is however interesting to note that companies' own assessment about their difficulties for finding innovation funding, as expressed in the company survey, is more positive than the assessment of the financial experts.

Difficulties in obtaining equity and debt capital (5 = very difficult)



An important reason for problems of access to capital seems to be the very local dimension of companies' search for funding which prevents them from getting in contact with potential specialised investors outside their regions or local districts.

Another important factor is the reluctance of T/C entrepreneurs to 'open up' to external capital - a finding which was very clearly confirmed by the company survey.

Instruments to support companies' capacities to invest in innovation and IPR protection

Financial experts, especially intermediaries like business innovation centres, IRC's, chambers etc., highlighted public support instruments as a means to foster innovation financing capacities of T/C companies. However, there should be more information on available funding and support schemes, for example in the area of joint-venture promotion.

In the area of IPR, most experts perceived a general difficulty of T/C companies in investing in IPR protection like the registration of patents, design or trademarks. This should be a stronger point of attention for support programmes especially on local and regional level.

3.3 Conclusions from the entrepreneurs and financing expert surveys

The T/C industry is economically still one of the major industries in Europe. Demand for ‘top products’, like high-quality branded clothing and interior textiles or innovative technical textiles, is increasing globally largely unimpacted by competition from low cost countries.

Many highly innovative and growing T/C companies are constantly investing in new products, processes, organisational structures and business models or the expansion into new markets, but don’t always find the necessary financial resources to make these investments in the most timely, effective and flexible ways. Many smaller companies do innovate but not necessarily on a very regular basis and therefore often lack the basic capacities for a professional search for outside innovation funds as well as the skills for an adequate presentation of their innovation ideas or projects to a potential investor. A vast majority of companies struggle when it comes to the protection of intellectual property arising from innovation, thereby endangering the long-term return of their innovation investments.

The financial community as well as intermediaries and various support organisations, including public authorities can address these needs in a variety of ways. However today this does not happen to a sufficient extend due to:

- a lack of communication and mutual understanding of the industrial and financial worlds
- a lack of available knowledge about detailed innovation financing needs of the diverse and fragmented T/C sector
- the inability or unwillingness of public authorities to tailor their programs to the specificities of a particular industrial sector like T/C
- widespread hesitation of industry management to place innovation at the centre of their business strategies and to approach outside investors in a pro-active way
- a habit of favouring recent trends, fashions or ‘hot sectors’ like IT, bio- or nano-tech by financial investors and policy makers alike at the detriment of more established industrial sectors

The upcoming NetFinTex report entitled “Integrated Innovation Financing Roadmap in Textiles and Clothing”, including an analysis of innovation financing gaps, future objectives, and short, medium and long term actions, will provide a more detailed view of existing challenges and propose concrete actions from all stakeholders to improve today’s unsatisfactory situation.

4. INDUSTRY TRENDS & A LONG-TERM VISION

4.1 Economic trends

The general economic dynamics characterising the 2006 economic evolution show widespread positive figures marking a strengthening or even a speeding up of previous economic development in the EU-25. In terms of *GDP*, an average growth of 2,7% during the first 3 quarters of 2006⁵ confirms the growing trend started in the previous two years with discontinuities at national levels. In the same period of time the *Private consumption volume*⁶ in the Euro area registered the highest growth rate (1,8%) of both the previous 2 years which is also by the way the highest average year figure ever since the common currency has been introduced. Likewise *employment growth* figures show slow but growing rates both across the majority of the EU-25 member states including U-turn trends, from the 2004 falling ones, in large countries as Germany, Italy, France whose population combined accounts nearly for half of the entire EU. Average employment growth rate in the EU reached the +1% during the first three quarters of 2006 which is higher than the positive evolution of 2005 and the falling trends observed in 2004.

According to the European Commission's autumn economic forecasts the "main impulses are robust growth in domestic demand, especially investment, and sustained global growth [...] GDP growth is projected to remain around potential in the next two years (EU: 2.4% in both 2007 and 2008; Euro area: 2.1% in 2007 and 2.2% in 2008)". The general economic positive tendency in short and medium term is confirmed by forecast of major international finance institution (2007 growth GDP + 2.1% according to EC, +2.2% according OECD)". These elements suggest a certain widespread positive trend across the EU-25 for final consumption demand and in particular in the Euro area.

"the short-medium term growth perspective shows positive features. There are reasons to believe that the Euro zone economy will growth along or even higher than the potential in both in 2007 and in the next year [...] latest insights on markets confidence foresight and estimations based on different indicators suggest economy will keep growing as well as employment will benefit of further improvement" and also concerning the exports trends

Most recent trends released on the European Textile and Clothing industry show interesting and promising tendencies in 2006 compared with constantly falling features noted during the previous years. This is particularly evident with respect of EU T/C industry New Orders and Turnover indices whereas the equivalent updated figures for Employment suggest only a slight reduction in the falling trend. Production also has also significantly reduced the previous lowering trend.

Such evolutions do reflect intrinsic capacities of responding to market conditions changes even though part of the benefits vanished because of the high energy costs supported and strong negative Euro/US dollar exchange rates that slowdown the companies ability to export in fast growing world markets EU-25 *New Orders* trends showed a timid rise as of summer 2005 for the Clothing sector and as of autumn 2005 for the Textile industry, such tendency continues throughout the entire 2006 in both sectors (textile: +0,4% and clothing +1,3% during the first 11 months). Likewise *Production* trend, stopped declining as of early 2006 and from summer 2006 in both sectors the improvements were more visible, particularly the clothing industry. Finally, estimated 2006 data confirmed also a slight increase in absolute terms of the *Turnover* values in both sectors (textile: +0,7%; clothing: +3,1%) with the making-up sector showing interesting signals of an U-turn evolution. (Source: *Euratex based on EU-25 national and Eurostat data*).

⁵ ECB Statistic pocket book December 2006

⁶ European Commission (DG ECFIN) and Eurostat

Nevertheless, strong differences are observed at national level⁷ across T/C sub-sectors. For instance, trends in the turnover among the Central and Eastern Europe member states and the EU-15 showed significantly different performances with the highest growing performances in textile registered in Latvia and Slovakia while the champions in the clothing industry were the Dutch, Danish and Polish companies.

Such trends tend to confirm that amid the continuation of the restructuring of the industry, companies are able to benefit from the globally improving economic situation in Europe.

4.2 A Vision of future developments

Trying to forecast industry developments over more than 1 or 2 years is obviously much more difficult due the sheer number of different interdependent factors which play a role.

The first concrete, albeit general, point to be made is that **international trade will continue to grow**, flowing both outwards and inwards, and that as a result the EU textiles and clothing industry will have to become leaner and meaner, enjoying higher productivity from a much reduced workforce, with a somewhat greater proportion of its turnover dedicated to exports.

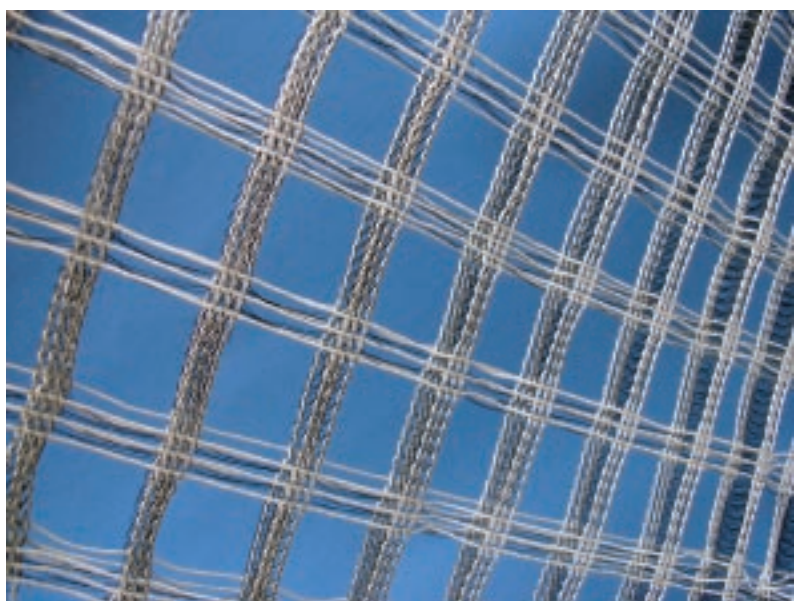
These exports will essentially consist of high quality or high fashion items in which Europe will retain design and distribution leadership on its domestic market, whilst at the same time benefiting from enhanced infrastructures, production and distribution networks, in part European owned, in many of the major population centres of the planet, in co-operation with and as part of the growth on those markets of major European retailers and distributors. These exports will also consist of an increasing range of “technical” items for use within newly created transport and infrastructure systems around the world, together with protective wear and goods for medical purposes. The actual level of consumption, a part-determinant of the size of the industry, will naturally be dependent to a significant effect upon overall economic growth, the strength of the Euro and the consumer “feel good factor”.

⁷ Concerning the four European countries participating in the Netfintex project (Belgium, Germany, Italy and Poland), generally positive trends can be observed during the first 11 months of 2006 with respect to: [a] New Orders: textiles increased in all partner countries from +3% to +5%; clothing growth was stronger (from +3% to +11%) except for Poland. [b] Production: growth is registered in the textiles for Belgium and Poland (about +7%) and for clothing in Italy, Poland and Belgium (increases from 1.5% to 5%). [c] Turnover: the increases are stronger in the clothing industry in Germany, Italy and Poland (from +1% to +10%) than for the textile industry where Germany, Belgium and Italy registered positive trends (from +1% to +4%).

The fragmented supply chain

The final years of import restraints under the ATC were characterised by an industry structure little changed from that of the previous century: an industry employing some 2.5 million people in more than 170.000 companies: average number of employees per company: 15. When quotas were finally dismantled in January 2005, the immediate result in Year 1 in company failures and job losses was bad enough but much less than might have been expected - 164.000 jobs in the year 2005.

Faced with this situation, a large number of firms have now and will increasingly in the future have to begin **to co-operate in a more structured manner**, for the most part voluntarily, although on occasions for lack of alternatives, moving their co-operation forward from mere supplier-customer relationships to more organic links, more focused innovation and development ef-



forts, leading over the period to 2010 to the formation of substantially larger company groups, having the essential **critical mass and credible business plans** to convince credit institutions that these groups are indeed worthy of support. The same types of phenomena will occur horizontally as well as vertically with similarly encouraging results.

Here there is **no one size fits all** solution. Many companies will accelerate their networking with other smaller operations and engineer multiple mergers in the same locality; others will do so further afield as the phenomenon of SME internationalisation becomes more widespread. Within the still fragmented supply chain, those companies that **exploit standardisation opportunities** will enjoy a head start over their rivals. Implementation of standards should lead to reductions in costs, an enhancement of quality, and a reduction of the risks they face - both technological and commercial.

Standards implementation, particularly in the field of ICT (Tex-Weave) will enable products, processes, systems and services to be more easily designed, developed, manufactured, specified, purchased and understood. These objectives will be more rapidly and easily achieved as a greater number of Federations representing the industry at national level take a more active role in the standardisation process on behalf of their member-companies.

A number of highly specialised producers of yarn, finished fabrics and end-products will be able to survive in particular niches, but the overall number of companies may be expected to be substantially reduced, and the average number of employees per company will significantly increase. Larger employee numbers and increased turnover will enable those companies to obtain better access to credit and also to make provision for enhanced training and investment in the latest technology.

Textiles in the post-quota world: the technology and innovation challenge

The realisation in 2000 that overall Europe was lagging behind other developed economies in innovation and in % of GDP devoted to research and development, coupled too with the recognition that the EU economy might be overhauled by major developing (emerging) nations for those same reasons, prompted the Commission to encourage industries to establish Technology Platforms and to develop

Strategic Research Agendas.

In textile and clothing terms these initiatives have coincided with the end of the quota period, which has forced companies to think over and beyond trade defence instruments as a means of ensuring their longer-term survival and security. The resultant Strategic Research Agenda which saw the light of day in 2006 would normally be expected to be completed and fully implemented by 2020, since the bulk of its objectives lie within the scope of FP7 - 2007 to 2013. The Platform is based on three essential pillars:

- From commodities to specialty products
- New Textile Applications
- From Mass Production to Customisation



In each of these three areas the next few years will be decisive. They may not prevent further job losses across the industry as a whole. They will however, if successful, stabilise the position for a significant number of companies in the following ways:

The **use of new technologies**, fibres and processes in functional, innovative ways - this innovation being constant rather than spasmodic - in growing partnerships with machine, machine tool and chemicals manufacturers, and in limited but potential growth markets to which foreign competition is still much less well adapted, coupled with greater speed, flexibility, resource efficiency and quality control, offers clear opportunities for companies who have properly researched the market and found the niches in such fields where they can develop and expand.

At the same time there will undoubtedly be a growth in **new textile or fibre applications** in areas outside the more traditional apparel and interior end-uses. These already represented up to 40% of textile activity in a number of member-states by the year 2005, and may be expected to continue to expand over the next decade. (Examples of these relate to composites for aircraft wings, lightweight non-metal components for motor vehicles, medical uses, insulation for buildings, heavy duty yarns, fabrics and non-wovens for transport infrastructures, land reclamation, artificial sports surfaces, together with innovative and functional applications in protective wear, and many others). As in other areas of manufacture, the successful companies will be those which make sure that they innovate uninterruptedly, since those who do not will be rapidly overtaken by foreign producers, and pushed out of the market place.

In the more traditional apparel areas, too, the move towards **mass customisation**, which has so far been very slow to take off, already provides apparel companies in particular with an opportunity to offer the consumer a prompt, personally tailored product in the fabric of his choice, in a style chosen through the virtual try-on technology, which must now become widespread. The two significant results of this development, linked to the automation of apparel manufacture described below, will be that the EU is placed in a much better position for geographic and speed of delivery reasons to manufacture the finished goods on its own territory, and use for that purpose fabrics which themselves have been woven in the EU. Overall this will not halt imports of cheaper commodity clothing but it will provide European manufacturers with an opportunity to pursue their own manufacturing along a complete and profitable pipeline within the EU, and thus offer the consumer a genuinely wide range of choices for a modest premium.



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Apparel - the technological breakthrough

Even after the end of the quota period in 2005, the *textile* industry of the EU still generated an overall surplus of exports over imports. This can in large part be attributed to the fact that the automation of spinning and weaving which had occurred over the period since 1970 had removed the labour cost handicap from the industry, and which, allied to the innovative and design capabilities of Europe right along the textile manufacturing pipeline, has gone some way, under normal trading conditions, to correct even greater potential imbalances. It is a moot point here as to what the extent of that export surplus might have

been, had earlier WTO and GATT Rounds delivered the open markets the industry had sought.

The most revolutionary development in apparel manufacture is set to occur in the first decade of the 21st century. The LEAPFROG project, if successful, will finally deliver automation in the arena of clothing

manufacture, together with widespread dissemination and demonstrator activities which will enable large numbers of garment-manufacturers where they still remain, and in particular in the new member-states and the southern parts of Europe, to invest and produce using the Leapfrog technology. At a stroke this can remove the wage-cost advantage from which many Asian (and other) nations have benefited for so long, and by the end of the second decade have created a perceptible shift back towards increased volumes of garment production within the EU-25+. This shift in turn will help to sustain demand for yarn and fabric which has been spun and woven internally in the EU. Such a success would hold out every prospect of further growth in export markets too, as the fault-free products emerging from the production line, their European reputation intact, find favour with increasing numbers of consumers across the world, even if the technology itself, for obvious reasons, would also find markets outside Europe. The use of this technology also links directly to **mass customisation** described in the previous section. These benefits will however only work to full effect if Europe has in place a general economic framework and policies which do not hamper its international competitiveness.

Fashion and image

Increasing international sophistication and the use of more “creative” machinery will over the years tend to further narrow the image gap between Europe’s fashion industry and that of its major N. and S. American and Asian competitors, aided in that context by ever greater access to satellite TV programmes in particular from English and other European language broadcasters in Asia, North America and Brazil, creating periodic fashion crazes for example for saris, Brazilian beach wear, and traditional/imperial Chinese-styled silks and brocades. Nonetheless, Europe as a whole can and must retain its image as a world fashion leader. The great French and Italian fashion houses in particular have continued to achieve worldwide success and notoriety, and the annual fashion weeks in major European capitals have fostered this ongoing success. In high-end apparel products for outerwear and underwear alike, fashion has swung from the simple to the ultra-complicated and back again, with the “little black dress” remaining the elegant centrepiece of most middle-class feminine wardrobes. There is little foreseeable likelihood of major change in this context.

However, linked to the growing take-up of mass-customised goods (see above), and B2C trade on the internet, there will be more competition than ever before in a growing higher end market segment, where quality and fit, linked to the need for “immediate” delivery, will become an ever more significant element in determining the consumer’s choice and where the consumer him- or herself will be prepared to pay a premium for quality, fit and customisation. As a result manufacture within the EU could well consolidate, albeit at a lower level than was the case at the turn of the century, and the less numerous jobs it provides will be more highly-skilled, more stable and better paid.

In tandem with the above, Europe can and must continue to enjoy a lead in terms of flair and creativity. Its designers must remain among the brightest stars in the international firmament, wherever they are working along the apparel pipeline (design, innovation, creativity apply to the production of yarns, fabrics, both woven and knitted, just as much as they do to the final consumer article); but, as in other areas of innovation, this lead can only be maintained if collections are renewed on a permanent basis. In this context, the work of the newly created “Fashion Forum” can provide producers with valuable insight into consumer choice, and offer independent fashion retailers further opportunities to communicate their needs to European suppliers. Here, too, the European sporting goods sector has continued to show strong growth and global leadership.

An ever greater awareness of the need to maintain, if not extend the “creativity” lead, on the part of companies in the industry, means that whilst internet commerce and mass-customisation will help to stabilise EU production, there will be a relative decline in the number of fashion fairs, as exhibitors and visitors find it more economic to concentrate on a limited number of major European events. Within

that reduced number, the issue of intellectual property rights has to be faced head on and progress in respect of IPR as a whole must be achieved in a number of important fields:

Intellectual Property Rights - the rule of law to replace the law of the jungle

The preceding paragraphs have clearly demonstrated that in future the EU textile and clothing industry will continue to rely upon innovation and creativity. This is needed in the more traditional apparel and interior textiles areas, just as much as it is in the new applications and specialty products fields. Common to both, and common to many other European activities, is the need for effective protection of Intellectual Property Rights.

These needs are clearly identified as being three-fold: firstly, the protection of those rights within the boundaries of the EU itself; secondly, their protection at the frontiers of the EU; and finally, but equally importantly, their protection on the export markets of EU producers. 2005 saw the beginning of a more widespread recognition of the scale of the problem and of its impact upon jobs and the economy of the EU as a whole. This recognition beyond the obvious - and essential - concerns of health and safety has begun to extend to the protection within textiles and clothing not merely of brands but also of textile designs. A series of measures taken by EU authorities in close co-operation with member-states and rights holders, or by rights holders themselves, and which may be summarised as follows will further help to stem this flow:

- The spread of national anti-counterfeiting cells using a common data base and the elaboration between the industry and the authorities of a clear action programme, setting out the role of each stakeholder and the deadlines to be met.
- The implementation of Article 25.2 of the TRIPS agreement in a growing number of WTO member countries.
- The control of counterfeiting at trade fairs, resulting in part from the smaller number of the latter and the growth of codes of ethics for exhibitors.
- Improved customs procedures, awareness seminars for police, customs authorities and the judiciary, etc., which were also part of the recommendations of the June 30th 2004 report of the High Level Group. Retailers and distributors insist that any measure taken needs to be appropriate, necessary and proportionate.
- The pursuit and extension of different EU initiatives already taken on IPR enforcement vis-à-vis two third countries (People's Republic of China and Russia) and a new common IPR initiative launched between the EU and the USA in November 2005.
- Added emphasis, where feasible, on product branding by manufacturers as a simpler form of protection than that of registering a multiplicity of individual designs and models

Even if all of the above can be satisfactorily carried out, the counterfeiting and piracy phenomenon will of course not be wiped out, but it might well be reduced to levels which no longer threaten the very existence of companies, and thus offer them a reasonable guarantee that they can produce, sell and export with a degree of certainty and protection, provided they themselves take proper precautions. Constant vigilance on the part of the authorities and rights holders will remain crucial if the progress achieved is not to become null and void. The expected growth of "e-commerce" counterfeiting is a field to which proper attention will need to be given too.

Skills and training - tackling the image problem

Reference has been made earlier in this text to the fact that the passing of the years will see a raised awareness of the importance of manufacturing to the EU, whether in textiles and clothing as such or in

other and wider areas of activity.

A number of programmes are set to be launched at European and national level to build upon this growing awareness, which are intended to stimulate a gradual but nonetheless perceptible move in favour of blue collar work in textile and clothing manufacturing plants; this would be further fostered by a clothing technology breakthrough, and the changed perception of textiles and clothing as no longer being part of those *dark satanic mills*. Such developments would in any case make employment more attractive and the quality of the intake in a more stable environment will improve as a result. The enhanced Europeanisation of the continent, the corresponding spread of genuine language skills as from primary school level may be expected to facilitate the further development of specialised training institutes (and universities), catering for a multinational student intake and capable as a result of sustaining expertise in areas where demand may be inadequate to justify courses in several EU countries. Internet-based systems too will encourage life-long learning and make the work force more mobile. Education as a whole will foster multidisciplinary training, adding to this mobility both within and outside the textiles and clothing industry.

Paradoxically, increased mobility will put increased pressure upon companies at all levels and all along the pipeline through to distribution to offer improved social conditions. Such an achievement would in itself create a virtuous circle which could be further enhanced if industry leaders are careful to make the right public pronouncements about the future of their industry, and to accept that management too must bear its share of responsibility when things may not go as well as one might wish.

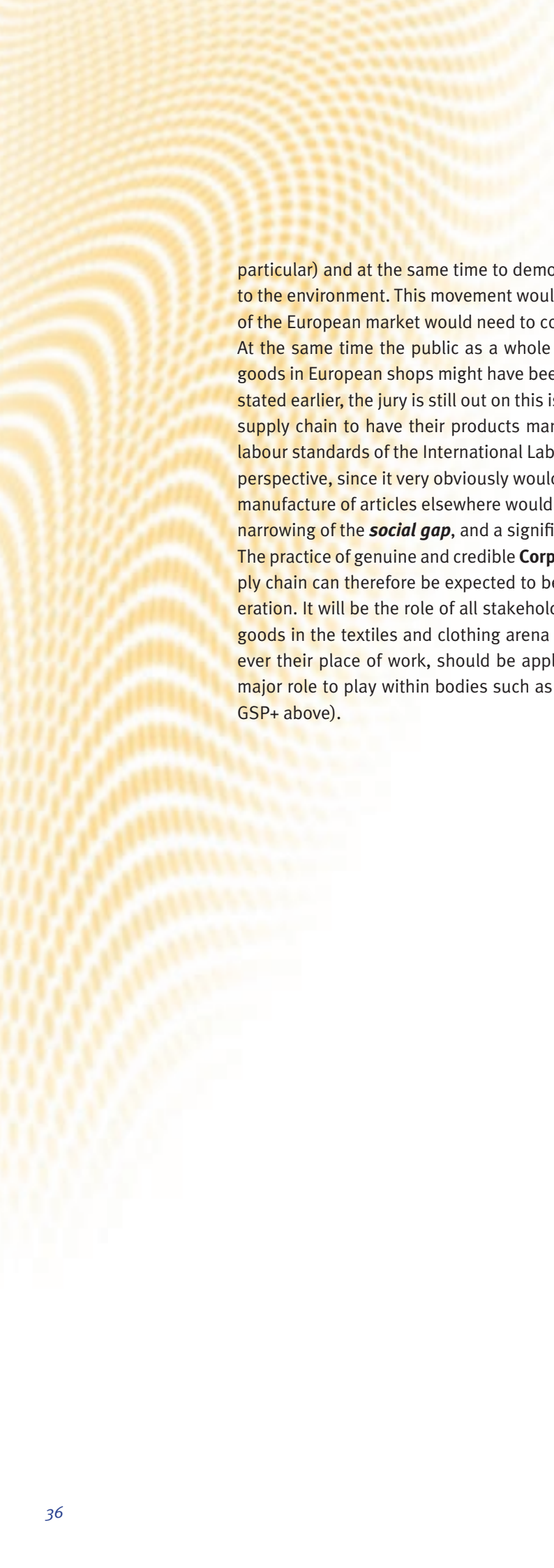
Enhanced environmental and social standardisation

Just as the twenty years preceding the end of the twentieth century had seen a move in textiles away from basic shop floor employment towards automation, quality surveillance and laboratory checks, so the early years of the 21st century can be expected to witness a different form of movement, with workers and executives concentrating ever more attention on **environmental correctness**, aided by the internationalisation of **environmental and social standards**. These latter two elements, taken in conjunction with a higher quality intake of employee, would be instrumental in providing a more level international playing field than has been the case for many years.

Even in the latter part of the twentieth century, it would have been unthinkable for heavy-duty and high quality “technical” textiles to be used in road construction, air bag manufacture, and for medical purposes, among many others, without the producer having to adhere to the strictest possible standards.

Precisely in the area of technical textiles, applications which make an active contribution towards environmental protection form an ever increasing part. Applications range from the sealing of disposal sites to filter systems for the precipitation of dust. In the wake of increasing environmental consciousness on the part of consumers as well as growing legal requirements in the environmental sector, “eco textiles” thus play a great role, not only in the sense of their environmental usefulness but also with regard to the competitiveness of the branch. At the same time, one must stress the positive role of the European textile and clothing industry with a view to environmental aspects in international cooperation and foreign investments. European investments often lead to improvement in the local environmental situation through know-how and technology transfer as well as a sharpening of consumer consciousness in countries with lax standards. Consequently, this leads to a growing recognition and thus competitiveness of European textile products which are regarded worldwide as “safe and clean” products.

In the environmental field, a similar move has been visible too in the interior textiles area where flammability, mothproofing and the use of “dangerous” dyestuffs are concerned. This movement will extend in scope over the years to cover most forms of apparel too, with manufacturers, traders and retailers coming under ever greater pressure to conform to new environmental constraints (REACH in



particular) and at the same time to demonstrate clearly to the public that their goods are not harmful to the environment. This movement would at the very least ensure that all those competing for a share of the European market would need to comply with such requirements.

At the same time the public as a whole may well become increasingly aware of the extent to which goods in European shops might have been produced under either **fair or abusive social conditions**. As stated earlier, the jury is still out on this issue, which would imply major additional efforts of the whole supply chain to have their products manufactured under social conditions compatible with the core labour standards of the International Labour Organisation (ILO). Whilst this awareness must be kept in perspective, since it very obviously would not imply that wage rates and social charges involved in the manufacture of articles elsewhere would become much closer to those of the EU, it will contribute to a narrowing of the **social gap**, and a significant reduction in abuse.

The practice of genuine and credible **Corporate Social Responsibility** along the textile and apparel supply chain can therefore be expected to become a more important factor over the period under consideration. It will be the role of all stakeholders to ensure that real efforts to employ workers to produce goods in the textiles and clothing arena under socially and environmentally decent conditions, wherever their place of work, should be applauded. The Commission and member-states will still have a major role to play within bodies such as WTO and ILO, and on a bilateral basis (see also reference to GSP+ above).

5. CONCLUSIONS

The present document synthesises the results of research work done by NetFinTex project partners to identify key specificities of the Textile and Clothing sector, which are relevant in determining the capacity of companies, particularly SME, of accessing financial resources for innovation activities.

The document begins with a background overview of T/C specificities as identified through literature review, analysis of on-going project and of partners' specific knowledge. Appreciating the current industry size, the first chapter highlights a fragmented sector, SMEs dominated, which faces a i) global market fierce competition as well as ii) growing difficulties in accessing capitals from well known and consolidated sources as bank loans.

In the second chapter insights on the sector's fragmented structure are provided, particularly with regard of the complexity of the supply chain and of most frequent Business models. The latter are matched with correspondent IPR (Intellectual Property Rights) protection strategies which, though are far from being uniformly applied in all European countries, they can be quite commonly observed in different T/C actors of the supply chain (textile suppliers, non-woven suppliers, finishing companies, integrated companies and apparel manufacturer)

The third chapter details on the results of two separate surveys carry out among actors of the major communities involved in T/C innovation financing, namely: the demand side i.e. T/C entrepreneurs seeking capitals and the supply side i.e. financial capitals providers or facilitators seeking attractive investment opportunities. Investigating the financial experts' perspective, the role played by intermediaries or facilitators to connect demand and supply side has been considered. Netfintex partners have addressed Entrepreneurs and Investors/Facilitators in two different phases (respectively by means of questionnaires and direct interviews) and with a view to understand both sides perspectives on the same elements characterising innovation financing.

It has clearly emerged as the addressed sample of T/C companies across the EU-25 Member States search for capitals with various methodologies and even drawing significantly different outcomes from very similar actions undertaken. Yet a number of frequent features have been identified and, to no surprise, these largely match with the correspondent features identified by other sources of information, facilitators in the first place.

Common perspectives on innovation financing include:

- i) A recurrently observed attitude of entrepreneurs to rely on traditional founding sources, especially bank loans which becomes more and more standardised or, if possible, reinvestment of own profits.
- ii) A sound awareness of the existence of alternative schemes (national or regional support, Business Angels and Venture Capitalists) does not seem to be reflected neither in companies availability of comprehensive information nor in entrepreneurs familiarity with such alternative schemes' tools and procedures.
- iii) The existence of a general "Gap" between the T/C entrepreneurial community and the investors appear therefore to be confirmed and characterised mainly by 1) underestimation of T/C growing potential in both groups, also influenced by a rather negative imagine of the sector as a whole; 2) scarce familiarity with the respective working methodologies and with 'Financial literacy'⁸ in the case of the entrepreneurial side; 3) unfamiliarity with IPR approaches and opportunities especially in the case of accession to equity capital, 4) lack of source of information both with a view to cooperate with Venture Capitalists/Business Angels and to access best practises of successful cooperation forms. 5) fragmentation characterises both the Industry supply chain and capital market.

⁸ Risk Capital Summit (2005), key conclusions

Collection of data “on the field” has also allowed to identify promising examples of mutually benefiting cooperation, particularly in some countries (e.g. Germany) and specific applications for instance in the field of technical textiles.

The study has finally noticed as financing facilitators appear to play a significant role among T/C regional clusters and small companies to detect needs of local entrepreneurial communities, performing early assessments, signposting entrepreneurs ideas towards the most appropriate financing tools.

An outlook on recent (January - October 2006) economic tendencies of the sector is provided in the last chapter of this report. The previous years, constantly falling, trends appear to be in the process of improving the European sector dynamics, either in the form of slow down of production falls or as increase of turnover in absolute terms.

The attempt to analyse sector specificities is finally concluded with a comprehensive, visionary, yet realistically possible, scenario of the sector development over the next 10-15 years. In such attempt, all key T/C areas are considered including supply chain integration, environmental and social standardisation, IPR, Fashion and image, training, technology and innovation challenges.

The identified T/C sector specificities, size and dynamics towards innovation along with the potential availability of founding providers largely reflect opportunities for mutual benefit investments. Yet a number of challenges appear to emerge from both stakeholders’ perspectives and in terms of frequent barriers to match the capitals demand-offer. Proper address of identified challenges including “bridging” the communities concerned appear to be determinant for an effective access of European Textile and Clothing companies to new form of innovation financing which can be safely expected to become more and more relevant for the sector development.

REFERENCES AND ACKNOWLEDGEMENTS

- Innova - European Commission DG Enterprise and Industry <http://www.europe-innova.org>
- European Central Bank, Statistic Pocket Book December 2006, Frankfurt 2006
- Strategic Research Agenda of the European Technology Platform for the Future of Textile and Clothing Industry – EURATEX, Brussels, June 2006 <http://www.textile-platform.org>
- High Level Group follow-up report and recommendation executive summary, EURATEX, Brussels 2006
- Risk Capital Summit (2005) Investing for Growth and Competitiveness in Europe, London October 2005, Conference Report





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