

**IN-DEPTH ASSESSMENT OF THE SITUATION
OF THE EUROPEAN FOOTWEAR SECTOR
AND PROSPECTS FOR ITS FUTURE DEVELOPMENT**

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Task 7: Synthesis Report

Revised Final Report

prepared for

DG Enterprise & Industry

RPA

July 2012

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DG Enterprise & Industry, European Commission

by

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EXECUTIVE SUMMARY

Introduction

The European footwear industry has been subject to an elongated period of transition since the early 1990s. During these years, EU manufacturers have maintained their competitiveness by offshoring¹ the most costly production processes from their home countries to cheaper locations, both within and outside the EU, and introducing cost cutting measures, which have included a reduction in employment within the sector.

In response to the challenges the footwear industry is facing, the European Commission has contracted Risk & Policy Analysts Ltd (RPA) to undertake an assessment of the situation of the footwear sector in the EU and prospects for its future development. The study involved a combination of literature research, a questionnaire survey of key stakeholders in the sector and case studies in nine different footwear-producing regions in seven Member States of the EU.

Situation of the European Footwear Industry

The footwear sector is an important part of the European manufacturing industry and it plays a crucial part of the economy and social well-being in numerous regions within the EU27.

In 2010, the EU was the second largest market in the world by volume, with annual sales of over two billion pairs and a value of around €50 billion. The footwear market is subject to considerable fashion-related and seasonal fluctuations. Customers are seeking increasing variety in styling and price.

The European Union is a major producer and exporter of footwear and footwear related products, particularly in the luxury footwear segment. Total EU production in 2008 was valued at €18 billion (863 million pairs). Production declined sharply in 2009, but there was some recovery in 2010; the number of firms declined by around 25% between 2004 and 2009. Around two thirds of the total EU footwear production is concentrated in three key countries: Italy, Spain and Portugal, with Italy accounting for around 50%. The footwear industry is a labour intensive industry, heavily dominated by small and medium-sized enterprises (SMEs) and most footwear companies comprise around 10-15 employees.

The liberalisation of world trade has had a significant impact on the EU footwear sector. The footwear industry has become highly globalised, which has created strong competition, particularly between producers in the EU and in Asia. In 2010, China was the leading shoe exporting country in the world, accounting for 73% of the 13 billion pairs exported worldwide. Imports of footwear into the EU grew by 17% in

¹ The term 'offshoring' refers to the relocation of an activity, such as footwear production, from the company's home country to another country, generally with lower costs. This includes 'nearshoring', to another EU Member State or proximity country, and 'farshoring', to distant countries such as China or India. Offshoring may take the form of outsourcing (sub-contracting activities to another company) or may be to factories owned by the company itself in offshore locations.

both volume and value between 2006 and 2010, to a total of nearly 2.5 billion pairs with a value of over €14 billion. China is the largest source of footwear imports into the EU market; in 2010, it accounted for 50% in value and 76% in volume of all imports into the EU. Exports from the EU in 2010 consisted of 177 million pairs of shoes valued at €5 471 million. Despite a sharp downturn in 2009, the overall figures (for both volume and value) show a slight increase over the period 2006-2010. The USA, Switzerland and Russia are the most important markets by both value and volume.

Despite the increasing competitive pressures it faces, the EU footwear industry has a number of significant advantages. These include proximity to the largest footwear market in the world and a well-developed infrastructure including industry associations, trade unions, research development and innovation centres and training institutes. However, it faces a range of barriers including:

- competition and finding new markets;*
- the pace of fashion-related change;*
- environmental drivers;*
- counterfeiting and piracy;*
- costs and financing; and*
- availability of skilled staff.*

Restructuring and Modernisation in the EU Footwear Industry

The competitive pressures that the EU footwear industry has faced have resulted in significant restructuring of the sector. Restructuring can involve a range of activities, as footwear companies seek to address the barriers they face. The main restructuring activities of the EU footwear sector have involved:

- **operational restructuring:** the current focus is on innovation in equipment to enable greater flexibility, as well as organisation of factories and more effective production management to meet the demand for smaller batches and faster response times;*
- for companies that continue to manufacture in the EU, primarily SMEs, the focus in **product restructuring** has been on moving into markets where price is less of a consideration. Innovative design is a key factor, including rapid response to fashion trends and a greater range of styles and colours. EU manufacturers are also targeting niche markets, such as safety footwear;*
- the key elements in **reorganising sales channels** are developing new sales channels and moving into new markets. This includes companies opening their own stores as a way of ensuring access to sales channels and focusing on exporting. Although some companies are embracing internet retailing, others are more reluctant due to concerns about competing with retail customers and the practicality of internet retailing for footwear;*

- *locational restructuring* has been a feature of all of the case study regions, with companies offshoring production from their home countries to cheaper locations, both within the EU (e.g. the Czech Republic, Hungary and Romania) and outside (particularly China). One interesting recent trend is for some companies to move at least some of their production back from China, in particular to the lower cost areas of Europe. The main reasons for this are the rising costs in China and the increasing importance of proximity to the market;
- *closure* of footwear companies has been a feature of all of the case study regions; and *mergers and acquisitions* have also been important.

Over the last 10 to 15 years, restructuring of the EU footwear industry has led to steady reductions in production, in the number of companies in operation and in employment. These job losses are partly attributable to investment in modernisation but also to the transfer of production sites to non-EU countries with lower labour costs and the closure of companies that could not compete in current market conditions. This has been experienced in all the case-study regions, particularly in Rhône-Alpes, where only a few footwear companies remain. The economic crisis exacerbated the barriers already being faced by the footwear sector. Competition has been the key driver of restructuring; despite technology advances, footwear manufacture remains highly labour intensive so is vulnerable to competition from low-wage economies.

Despite the turmoil of recent years in the footwear sector, and the difficult economic outlook, the overall view of most companies and organisations that we interviewed was quite positive. The major stages of restructuring appear to be largely complete; the level of output, the number of firms and employment appear to be stabilising. A number of different factors had contributed to this, particularly the close partnerships that exist in regions such as Norte and Veneto, both within industry and with government. Where such partnerships do not exist, as in Southern Poland, the restructuring process faces further problems. Also important are flexibility of companies in adapting to the new market conditions, the ability to differentiate products, focusing on fashion, comfort and safety and ensuring access to marketing channels. Most companies we interviewed see the focus of the next few years as consolidating their position in the market. Nevertheless, companies recognise that they need to continually adapt to market changes to stay in business.

Research, Development and Innovation

Research, development and innovation (RDI) have a strategic importance for the competitiveness of EU Industry. Footwear manufacturing has benefited from both process and product innovations. These include innovations made to the production line that improve the efficiency and effectiveness of footwear production and that of complementary services.

There has also been significant investment into the development of new materials, components and technologies, especially for specialist footwear such orthopaedic, protective and sports footwear. The importance of RDI was recognised as a key

factor to sustainable and economic growth in each of the case study regions. In all the case study regions, product-related developments are being combined with improved business models and marketing innovations.

Another important trend was the increasing pace of incorporating IT into footwear production. This includes the use of IT in the production process, to facilitate small production runs and to customise the products in a cost effective way, as well as in sales and logistics. Some footwear companies are also exploring different sales and marketing strategies and trying to approach international markets in different ways, including internet sales, to maximise opportunities to sell their goods.

In regions where RDI in the footwear sector has been successful, such as Norte in Portugal and Lombardia in Italy, it is actively supported through partnerships between companies and with research centres. Such partnerships cover the full supply chain. For example, producers of shoe manufacturing machinery have focused on developing technological improvements that offer more flexibility to their customers in the process of shoe production and maintain high quality products. The close geographical proximity of machinery firms contributes to the spread of knowledge to footwear firms in each cluster.

The footwear research centres can play a key role in this process, by bringing together different organisations that can then work together on implementation. Their close partnerships, not only with footwear companies but with the wider supply chain, enable them to do this. Companies have also worked closely with their suppliers and customers to ensure that RDI meets the market needs of the industry.

Where there is no such pattern of partnerships, RDI has been less successful. For example, in Southern Poland there is a formal 'technology platform' for the leather industry which was established to encourage technological development and co-operation between industry, institutes and academia with a focus on conducting research and implementation of the results. However, in practice, there appeared to be a very limited amount of partnering between companies and institutions with respect to RDI.

Training

Training within the footwear sector plays an essential role as manufacturing companies look to strengthen their position in European and other markets. Design skills are especially important for companies that produce their own brand; however, the main barrier is in recruiting skilled production staff. Marketing, sales and customer service are also important for the industry in all case study regions. Some loss of customer service and sales skills has been experienced, because some retailers have scaled back on employee training in response to the economic crisis.

There is a variety of training institutes in the case study regions, although in Timis (a case-study region for SMEs) there were no specialist training institutes and few training programmes available. Training is available from secondary to tertiary level, with specialist courses ranging from design to marketing and IT. Apprenticeships and

on-the-job training play an important role. This is one area that has been impacted by the reduction in manufacturing operations in Europe. In addition, the less significant an industry becomes in terms of production capacity, the less emphasis the education and training system will put on related courses.

Training institutes, and their partnerships with industry, provide opportunities for students to participate in research projects, exhibitions, competitions and apprenticeships. These partnerships are particularly close in Veneto and Rheinland-Pfalz. Partnerships with industry can also serve as a vital source of information for policy makers and training institutes on the changing skill requirements of the industry. An additional important aspect is the potential to develop projects that can encourage young people to seek employment in the sector. A number of best practice initiatives were identified in the case study regions which could be transferred elsewhere. As with RDI, these involved close partnerships between training institutes and local footwear companies, and with companies in the wider supply chain.

One of the most serious barriers for the industry in the EU is the aging workforce and the difficulties in attracting young workers. This is a particular problem in Veneto, where young people are turning away from the footwear manufacturing sector for various reasons, including that the nature of manual work in the footwear manufacturing sector is not appealing, salaries are uncompetitive and the industry is seen as having no future. An example of best practice to address this barrier involved publicity campaigns involving the industry associations, training institutes and research centres in Rheinland-Pfalz.

Small and Medium-Sized Enterprises

While the footwear sector in general is working to adjust to the changing market environment, the economic constraints have had a particular impact on SMEs which make up the majority of footwear firms. Increased competition, together with the economic crisis of recent years, has forced many SMEs out of business. However, current footwear market conditions can also offer opportunities for SMEs. Identifying niche markets and upcoming trends and responding to these in a timely fashion could help footwear SMEs to take advantage of these opportunities.

In response to the barriers they face, the SMEs in the case study regions have adopted various business strategies. For Emilia-Romagna and Valencia, these include seeking reorganising market access, by expanding exports and new marketing approaches, including e-commerce; product restructuring by moving to higher quality and price segment and stopping production of low-performing product lines, and some outsourcing of production, either to other companies within the region or offshoring it to a lower-cost country. By contrast, Timis is heavily reliant on production for foreign (mainly Italian) companies, under the lohn system.

Traditional industrial clusters, composed of manufacturers, suppliers and other participants in the supply chain, can play a key role in assisting SMEs to address the barriers they face, by developing partnerships. Where clusters of footwear manufacturers can negotiate with a supplier, this may also result in better payment

terms and potentially lower prices. The clusters in Emilia-Romagna and Valencia have worked successfully, whereas in Timis there is effectively an Italian cluster, with limited benefits for local companies.

The supporting services most frequently used by SMEs within the case study regions to help them maintain and develop their businesses include access to technology and training institutes. Partnerships with regional institutes to develop training programmes and on research and innovation projects have been successful in Emilia-Romagna and Valencia but in Timis there is little scope for such partnerships as the majority of the training institutes have closed. Export assistance services have also proved important including, in particular, subsidies to attend export fairs to identify new markets. Industry-led campaigns in Spain and Italy to promote locally-manufactured products were also valued by SMEs as a useful contribution to their marketing and brand identity efforts.

Conclusions and Recommendations

The EU footwear industry has undergone a period of major restructuring over the past 40 years, in response to significant changes in the international market. This has resulted in a major contraction of the industry, with reductions in numbers of companies, output and employment across many EU countries.

The major stages of restructuring appear to be largely complete, and the level of output, the number of firms and employment appear to be stabilising. Most companies we interviewed see their focus in the next few years as consolidating their position in the market. This is one reason why the economic crisis appears to have had a short-term effect and the industry appeared to be recovering by 2011/12.

Nevertheless, footwear companies recognise that they need to continually adapt to changes in the market in order to stay in business. The key success factors for the industry include a move to the higher quality end of the market and focus on exporting, the presence of clusters and effective partnerships between stakeholders, the availability of support services and an effective infrastructure for innovation.

It is clear from our case studies that international competition has been the key driver of restructuring in the EU. Because of their more limited resources, SMEs are likely to be most impacted by changes in market conditions. Another major barrier is a growing issue of skill shortages. The current workforce has a high proportion of older workers and it is proving difficult to attract young people into the industry. Innovative approaches will be needed to overcome the perception by young people that footwear is an industry with no future. Access to finance is also an important factor.

Innovation is critically important to the industry to address the continuing competitive pressures it faces, but there are a number of barriers. These include the difficulty of involving SMEs in research and the increasingly short timescales to which the industry works. Despite the apparent successes in transferring the results of RDI into marketable products, stakeholders agreed that more needs to be done to ensure the

uptake of innovation by the European footwear industry, to help to ensure its long term competitiveness.

Together, the case studies show that, while the footwear industry does face significant barriers, there are strategies that can help to overcome these. Choosing the right market niche, operating flexibly and working closely with the supply chain can help companies to remain profitable. Companies in most regions have concluded that competing on cost alone is not a viable option long-term. Table.1 summarises the strengths, weaknesses, opportunities and threats for the EU footwear industry in future.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Restructuring has left the industry resilient, more stable and more efficient • Proximity to one of the major world footwear markets • Closeness to the most influential centres of fashion • Skills and experience in high-quality design and production • Well-developed research and training infrastructure • Established footwear clusters providing mutual support • Well developed and innovative supply infrastructure (including equipment supply, leather and chemicals) 	<ul style="list-style-type: none"> • The industry has shrunk significantly in size, employment and output and is no longer a leading producer • Remains a highly labour-intensive industry in a labour-cost economy so always vulnerable to cost competition • Footwear is part of a highly-developed world market but most companies remain highly dependent on EU markets • Low wages and a history of redundancies make the industry unattractive to younger people
Opportunities	Threats
<ul style="list-style-type: none"> • The markets for quality and fashion footwear appear relatively unaffected by the global recession and provide an attractive opportunity for expansion • Targeting niche markets, which may be too small for large producers, provides opportunities for smaller firms • The trend to fast fashion, a wider range of styles and shorter production runs can be met more easily by local EU firms than importers • Increasing focus by Chinese producers on domestic markets may make switching production back to the EU more attractive 	<ul style="list-style-type: none"> • Development of fashion capabilities in China could challenge EU producers at the top end of the market • Improved production efficiency and quality in non-EU suppliers could increase competition in future • Continuing recession in Europe threatens local markets and affects the availability of finance • The ageing workforce and failure to attract young people could limit production in the EU • Competition for raw materials, and consequent price rises, could add to the cost burden

The study has highlighted that the EU footwear industry will continue to face a series of barriers in the coming years. The study has therefore identified ways in which the various stakeholders could assist the industry to address these barriers whilst supporting its strengths, particularly the well-developed infrastructure and the high level of partnerships between different actors. These are summarised in Table 2.

Table 2: Study Recommendations for Additional Support to Footwear Sector

Barrier	Solution	Recommendation	Delivery Partner
<i>Increased international competition</i>	<i>Develop new export markets</i>	<i>Raise awareness of accessible information on export markets (including tariffs, customer requirements, distribution structure), for example the DG Trade Market Access Database</i>	<i>European Commission, Industry associations, national and regional governments</i>
		<i>Provide export credit guarantees</i>	<i>National and regional governments</i>
		<i>Provide funding support to SMEs to attend trade fairs to regions where it is not already available and ensure SMEs are aware of the availability of support</i>	<i>National and regional governments, industry associations</i>
		<i>Provide training in export management</i>	<i>Industry associations, education institutes</i>
		<i>Encourage SMEs to work with existing exporters to take advantage of their partnerships</i>	<i>Industry associations, regional governments</i>
	<i>New marketing approaches</i>	<i>Provide training in marketing and sales</i>	<i>Industry associations, education institutes</i>
		<i>Showcase the industry's products and qualities at key locations</i>	<i>Industry associations, national and regional governments</i>
	<i>Strengthen brand identity</i>	<i>Provide assistance in market research, branding and accessing niche markets through 'best practice' seminars</i>	<i>National governments, industry associations</i>
	<i>Skill shortages</i>	<i>Improved staff training</i>	<i>Encourage partnerships between industry and training institutes to customise training to local needs</i>
<i>Encourage cross-border initiatives between training and educational institutes to exchange experience</i>			<i>European Commission, training institutes</i>
<i>Evaluate funding mechanisms for training to ensure support is properly targeted at industry needs</i>			<i>National and regional governments</i>
<i>Promotion of the industry to young people</i>		<i>Develop promotional campaigns aimed at young people, focusing on opportunities within the industry</i>	<i>Training institutes, industry associations, national and regional governments</i>
		<i>Provide advice on recruitment and HR management techniques</i>	<i>Training institutes, industry associations</i>
<i>Access to private sector finance</i>		<i>Provide advice on finance for SMEs</i>	<i>Provide information on mechanisms to finance new equipment purchase, e.g. leasing</i>
	<i>Improve communication with banks, e.g. through inviting bank representatives to industry activities</i>		<i>Industry associations</i>
	<i>Encourage SMEs to negotiate with suppliers through clusters</i>		<i>Industry associations, national and regional governments</i>
<i>Access to public funding support mechanisms</i>	<i>Improve targeting of, and access to, public funding</i>	<i>Provide better information on available funding support mechanisms</i>	<i>Industry associations, national and regional governments</i>
		<i>Reduce the administrative burden on accessing funding</i>	<i>European Commission, national and regional governments</i>

Table 2: Study Recommendations for Additional Support to Footwear Sector

Barrier	Solution	Recommendation	Delivery Partner
<i>The need for innovation</i>	<i>Focus R&D to cover the full scope of industry needs</i>	<i>Ensure research centre activities address the significant future issues, including innovation in customer service and marketing</i>	<i>Research centres, industry associations</i>
		<i>Continue to focus EU funding on more ambitious projects, which are unlikely to receive funding from other sources</i>	<i>European Commission</i>
		<i>Require EU-funded projects to develop methods for effective dissemination of results</i>	<i>European Commission</i>
	<i>Ensure effective partnerships between stakeholders</i>	<i>Focus on communication and partnerships with SMEs. This requires a different approach to that adopted for large firms.</i>	<i>Research centres, industry associations</i>
		<i>Consider developing virtual ‘Centres of Excellence’ to encourage closer cooperation between existing researcher centres, educational institutes, industry and policy-makers</i>	<i>Research centres, national and regional governments, education institutes, industry associations</i>
		<i>Encourage greater cross-border exchange of experience between research centres</i>	<i>European Commission</i>
	<i>Facilitate participation in RDI, especially by SMEs</i>	<i>Develop innovation training, especially for SMEs, through modifying existing training programmes and providing new short courses</i>	<i>Industry associations, research centres</i>
		<i>Provide easily accessible advice and online support tools to assist companies to take advantage of e-commerce opportunities</i>	<i>Industry associations, research centres</i>
	<i>Support protection of innovations</i>	<i>Provide advice and administrative support for companies wishing to apply for patents</i>	<i>Industry associations, research centres, national and regional governments</i>
	<i>Variations in support infrastructure</i>	<i>Strengthen infrastructure</i>	<i>Encourage a proactive role by industry associations</i>
<i>Consider the development of ‘virtual clusters’, in the form of online platforms to exchange information, for isolated companies, especially SMEs</i>			<i>Industry associations, national and regional governments</i>
<i>Assist succession planning for family firms</i>		<i>Develop information platforms to bring together family firms lacking succession planning and potential buyers/partners</i>	<i>National and regional governments, industry associations</i>
		<i>Provide risk capital to support staff buy-outs of family firms</i>	<i>National and regional governments</i>
		<i>Train footwear students in management techniques and encourage them to take on businesses</i>	<i>Education institutes</i>
<i>Assist firms to move production back to the EU</i>		<i>Consider developing a more effective platform to bring producers and potential EU subcontractors together</i>	<i>European Commission, national and regional governments, industry associations</i>

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LIST OF ABBREVIATIONS

AEDT	European Association of Fashion Retailers
ANCI	Associazione Nazionale Calzaturifici Italiani (Association of Italian Footwear Manufacturers)
APICCAPS	Associação Portuguesa dos Industriais de Calçado, Componentes, Artigos de Pele (Portuguese Footwear, Components & Leather Goods Manufacturers' Association)
ATC	Agreement on Textiles and Clothing
AVECAL	Asociación Valenciana de Empresarios del Calzado (Valencia Regional Footwear Association, Spain)
BRICs	Brazil, Russia, India and China
C2I2 a.i.e.	Calzado, Componentes, Investigación e Innovación (Industry Group for technological innovation, Spain)
CBI	Centre for the Promotion of Imports from Developing Countries, Ministry of Foreign Affairs, the Netherlands
CAD	Computer assisted design
CAM	Computer assisted manufacturing
CEC	European Confederation of the Footwear Industry
CEC managers	European Confederation of Executives and Managerial Staff
CEDDEC	European Confederation of Shoe Retail Trade Associations
CIMAC	Centro Italiano Materiali di Applicazione Calzaturiera (Italian Centre for Footwear Application Materials)
CIP	Competitiveness and Innovation Programme
CNR	Consiglio Nazionale delle Ricerche (Italian National Research Council)
COTANCE	European Confederation of National Associations of Tanners and Dressers
CTC	Centre Technique du Cuir, Chaussure, and Maroquinerie (Technical Centre for the Leather Industry, France)
CTCP	Centro Tecnológico do Calçado (Technical Centre for the Leather Industry, Portugal)
ECLA	European Classification System
ECTS	European Credit Transfer and Accumulation System
EIS	European Innovation Scoreboard
EPO	European Patent Office
EQF	European Qualifications Framework
ESF	European Social Fund
ETC	European Territorial Cooperation
ETUC	European Trade Union Confederation
ETUF:TCL	European Trade Union Federation of Textiles, Clothing and Leather
EU	European Union
EURIS	European Union of Research centres for Shoes
Eurostat	statistical office of the European Union
Eurofound	European Foundation for the Improvement of Living and Working Conditions
FP7	Seventh European Framework Research Programme
GDP	Gross domestic product

GERIC	Grouping of European Leather Technology Centres
HDS	Bundesverband der Schuh und Lederwarenindustrie (Federation of the German Footwear Industry)
ISCED3	successfully completed upper secondary education
ICEX	Instituto Espanol de Comercio Exterior (Spanish Institute for Foreign Trade)
ICT	Information and communications technology
IHK	Industrie – und Handelskammer für die Pfalz (Chamber of Industry and Commerce, Germany)
INDACO	Industrial Design, Arts, Communication and Fashion Department, Politecnico di Milano
ILI	Instytut Przemyslu Skorzanego (Institute of the Leather Industry, Poland)
INESC Porto	Instituto de Engenharia de Sistemas e Computadores do Porto (Institute of Systems and Computer Engineering, Porto)
INESCOP	Instituto Tecnológico del Calzado y Conexas (Technological Institute for Footwear and Related Industries, Spain)
IPR	Intellectual property rights
ISC	International Shoe Competence Centre (Pirmasens, Germany)
IT	Information technology
ITIA-CNR	L'Istituto di Tecnologie Industriali ed Automazione – Consiglio Nazionale delle Ricerche (Institute of Industrial Technology and Automation, Italian National Research Council)
IVEX	Instituto Valenciano de la Exportación (Valencia Institute of Export, Spain)
MEG	monoethylene glycol
MFA	Multi-Fibre Arrangement
NIAT	New International Division of Labour
NMP	Nanotechnologies and Nanosciences, Knowledge Based Multifunctional Materials and New Production Processes and Devices
OHIM	Office for Harmonization in the Internal Market
PFI	Prüf- und Forschungsinstitut für die Schuhherstellung e.V. (Test and Research Institute for Footwear Production Pirmasens, Germany)
PROsumer.NET	a Coordination Action funded by the 7 th Framework Programme of the European Commission
PTA/DMT	purified terephthalic acid/dimethyl terephthalate
PU	Polyurethane
PVC	Polyvinyl chloride
RDI	Research, development and innovation
RPA	Risk & Policy Analysts Ltd
SATRA	UK footwear technology centre
SMEs	Small and medium (-sized) enterprises
TCCIA	Timis Camerei de Comert, Industrie si Agricultura (Timisoara Chamber of Commerce, Romania)
VLC	Ochotnicze Hufce Pracy (Voluntary Labour Corps, Poland)
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation

1. INTRODUCTION

1.1 Background

The European footwear industry has been subject to an elongated period of transition since the early 1990s, following increasing international competition, particularly from China. During these years, EU manufacturers have maintained their competitiveness by offshoring² the most costly production processes to Asia or to Eastern European countries (such as Romania, Hungary and Slovakia) as well as through a number of bilateral trade restrictions on imports of footwear. Nonetheless, industries in the Far East have gained a competitive advantage and European manufacturers have been forced to introduce cost cutting measures, which have included a major reduction in employment within the sector.

In response to the challenges the footwear industry is facing, the European Commission has contracted Risk & Policy Analysts Ltd (RPA) to undertake an assessment of the situation of the footwear sector in the EU and prospects for its future development. The assessment focuses on the current trends in restructuring, research and innovation, education and training and on small and medium-sized enterprises (SMEs), with specific focus on selected EU regions. The main goal of the study is to better equip stakeholders, including national/regional authorities as well as social partners and the business community, to respond to a potential crisis and minimise its socio-economic consequences, particularly in the less-favoured regions which are heavily dependent on footwear manufacturing.

The study consists of seven tasks:

- Task 1: EU survey;
- Task 2: Research and Innovation Centres;
- Task 3: Small and Medium Enterprises;
- Task 4: Restructuring and Modernisation;
- Task 5: Training;
- Task 6: Research and Innovation; and
- Task 7: Preparation of a Synthesis Report.

This report comprises Task 7, which brings together the findings of the previous six Tasks to provide an overall view of the situation of the European footwear sector and prospects for its future development.

² The term ‘offshoring’ refers to the relocation of an activity, such as footwear production, from the company’s home country to another country, generally with lower costs. This includes ‘nearshoring’, to another EU Member State or proximity country, and ‘farshoring’, to distant countries such as China or India. Offshoring may take the form of outsourcing (sub-contracting activities to another company) or may be to factories owned by the company itself in offshore locations.

1.2 Objectives of the Study

The aim of Task 7 of the study, as set out in the specifications, is to produce a report drawing on the findings of the independent reports on the six previous tasks to describe the ways forward to improve the competitiveness of the European footwear industry. In particular, the report shall describe which trends are emerging, in particular with respect to business models, type of products, jobs, type of enterprises, markets, what challenges lie ahead, what shape the European footwear industry is taking and how will it look by 2020. The report should cover the following:

- on basis of the detailed analysis/assessments (Task 1 to Task 6), highlight the developments that took place in each of the key competitiveness areas (research and innovation, training, restructuring, SME support, etc.);
- describe how these developments have been carried out and which actors were involved, in particular, the business community and social partners, training/research centres and universities, public authorities (regional/national/European);
- describe the outcomes, the main success factors and difficulties;
- describe what was done in particular at regional level and what were the success factors that can be transposed to other regions/areas and under which conditions;
- analyse what type of partnerships have proved to be more successful at regional level (private/public partnerships, partnerships along the value chain, business/innovation centres or educational centres partnerships, etc.); and
- analyse the current situation of the EU footwear sector and the prospects for its future development.

The conclusions of the report shall highlight the way forward for the EU footwear industry, taking into account structural developments as well as the situation created by the financial and economic crises. It shall also underline support policy measures that have emerged from the assessment made to fulfil Tasks 1 to 6.

1.3 Approach to the Study

This report draws on the findings of the previous tasks of the study. The overall approach to the study involved a combination of literature research, a questionnaire survey of key stakeholders in the sector (enterprises, European national/regional footwear business associations, trade unions, research centres, training institutes, financial institutions, etc) and case studies in different regions of the EU.

Task 1, the EU survey, involved a survey of stakeholders within the footwear sector. Table 1.1 provides a summary of the organisations invited by e-mail to take part in the survey.

Table 1.1: Invitations for the EU Survey		
Target Group	Number and Type of Invitation	Comment
Companies	Invitations were sent to 320 companies (both large and small) in 20 EU Member States.	In 65% of cases, e-mails were sent to named individuals. Particular attention was given to those countries selected for country case studies.
Industry Associations	Invitations were sent to 7 European associations and to 65 national associations in 21 EU Member States.	In nearly all cases, e-mails were sent to named individuals. All associations were asked to disseminate information to their members. No Associations were identified in Malta, Luxembourg, Ireland, Latvia, Lithuania and Slovakia
Training Institutes	Invitations were sent to 44 training institutes in 17 EU Member States with specific courses in shoe design and/or manufacture.	In most cases, e-mails were sent to named individuals.
Research Centres	Invitations were sent to 35 research centres in 14 EU Member States with specific interests in the footwear sector.	In 65% of cases, e-mails were sent to named individuals.
Trade Unions.	Invitations were sent to 8 European union organisations and 77 national trade unions in 24 EU Member States.	In nearly all cases, e-mails were sent to named individuals. Suitable organisations were not identified in Malta, Luxembourg, and Ireland.

Stakeholders were contacted directly in 25 EU Member States. No appropriate stakeholders were identified in Malta and Luxembourg. After the initial invitation, there were reminder e-mails and, in some cases (in particular the national industry associations), follow-up telephone calls to encourage participation.

The response rate to the questionnaires was lower than expected, with 35 usable responses. Nevertheless, the respondents represented the traditional and significant footwear manufacturing regions of the EU. In addition, responses from companies in Romania and the UK ensure that there is a diversity of opinions in relation to the market environment and challenges. A summary of the responses by target group and location of respondent is presented in Table 1.2.

Target Group	No. (usable) Responses	Location of Respondents
Companies	25	Spain (9), Italy (6), Portugal (6), Romania (2) and UK (2)
Industry Associations	4	Germany, the Netherlands, Italy and UK
Training Institutes	1	Romania
Research Centres	4	France, Spain, Poland and Hungary
Trade Unions.	1	Italy
All	35	

For the remaining tasks, nine regions were selected for case studies in agreement with the Commission. These are shown in Table 1.3.

	Task 2	Task 3	Task 4	Task 5	Task 6
Rhône-Alpes (France)	✓		✓		
Rheinland-Pfalz (Germany)			✓	✓	
Emilia-Romagna (Italy)		✓			
Lombardia (Italy)	✓				✓
Veneto (Italy)			✓	✓	
Southern Poland (Poland)			✓	✓	✓
Norte (Portugal)			✓		✓
Timis (Romania)		✓			
Valencia (Spain)	✓	✓			

1. Task 1 involved the completion of an EU-wide survey of stakeholders within the footwear sector. As this task was not limited to the specific regions, it is omitted from Table

The case studies involved face-to-face interviews with local stakeholders. Table 1.4 sets out the number of organisations we interviewed in each region. The differences in numbers reflect the scale and nature of the footwear sector in each region, the focus of the different tasks and the willingness of local organisations to participate in the study (in some cases we contacted a large number of stakeholders but only a few were willing or able to participate). In addition to the case study interviews, we also interviewed two UK footwear companies, to gain additional insight into restructuring processes, and a European association representing independent retailers of footwear and fashion, to understand the retailer’s perspective.

Table 1.4: Number of Stakeholders Interviewed in the Case Study Regions		
Region	Number of Stakeholders Interviewed	
	Companies	Other Organisations
Rhône-Alpes	3	1
Rheinland-Pfalz	5	4
Emilia-Romagna	3	-
Lombardia	1	3
Veneto	5	2
Southern Poland	4	2
Norte	6	2
Timis	4	1
Valencia	4 ¹	2
Others	2	1
Total	37	18
<i>Notes</i>		
1. In addition to individual interviews, a round table with 10 participants was held		

Brief descriptions of the nine regions are given in Box 1.1

Box 1.1: The Case Study Regions
<p>The Rhône-Alpes region of south-west France is a traditional footwear production area, focusing on the luxury segment. The sector has seen a decline in production volume as well as value and some long established businesses in the region were forced out of business. It has only seven manufacturing companies with around 400 employees in 2012. The region hosts the Centre Technique du Cuir, Chaussure, and Maroquinerie (CTC).</p> <p>Rheinland-Pfalz is located in Germany, on the borders of France, Luxembourg and Belgium. The West Pfalz sub-region is characterised by medium-sized businesses and industries, including shoe-making. Pirmasens is known as the capital of Germany’s footwear industry. Shoe production has a long tradition in Pirmasens but production has declined significantly since the 1980s. The region hosts a range of research and vocational and higher education institutes.</p> <p>In Italy, there are two main footwear clusters within the region of Emilia-Romagna; San Mauro Pascoli and Fusignano-Bagnacavallo. There are other enterprises spread out in and around Bologna, Rimini and Ravenna. Production in the cluster of San Mauro Pascoli is focused on the manufacture of women’s shoes for the luxury/premium segment of the market. The majority (approximately 80%) of products manufactured in Bagnacavallo-Fusignano still target the low priced segment of the market.</p> <p>The main footwear clusters in Lombardia in Italy are Vigevano – just south of Milan - and Bassa Bresciana close to the city of Brescia. Vigevano is a traditional cluster composed of footwear and component manufacturers as well as research laboratories, including CIMAC, the research centre of the Italian Footwear Association (ANCI). Bassa Bresciana is mainly a leather industry cluster. The Vigevano district has been negatively impacted by the emergence of low cost imports as well as shifting market trends.</p> <p>The Veneto region is highly industrialised and is one of the most important footwear manufacturing centres in Europe. There are several footwear clusters within the region, each specialising in different types of footwear. The Brenta Valley is one of the most prestigious centres for footwear manufacturing, with 600 firms specialising in the production of luxury shoes. It also houses the Politecnico Calzaturiero which was founded in 2001. Montebelluna is a footwear cluster specialising in the production of sports footwear, particularly ski boots.</p>

Box 1.1: The Case Study Regions

Southern Poland, comprising the regions of Malopolska and Silesia, hosts nearly half of all footwear manufacturing companies in Poland and accounts for 70% to 80% of all employment in the industry. The high density of footwear companies in the area is partly linked to the fact that, during communist times, the major state owned shoe manufacturers were located in this region. The region also hosts the Krakow branch of the Institute of Leather Industry (ILI), a research and development organisation that has been active for 40 years.

The **Norte** region, focused around the city of Porto, is Portugal's main footwear-producing area. It contains 96% of all Portuguese footwear companies and employs 98% of people working in the industry. Footwear companies are located in three areas: the "old" industrial district around Sao Joao da Madeira where most of the very small companies and the Centro Tecnologico do Calçado (CTCP) are located; the fringes of the city of Porto which hosts the larger factories of foreign companies and the Felgueiras and Guimaraes area, where more medium sized Portuguese companies are located.

The footwear sector in **Timis**, Romania has undergone major changes. Prior to 1989, the area was a centre for the footwear and textile industries. By 2012 it had become a hub for Italian manufacturers outsourcing all or part of their manufacturing process. Although 364 footwear companies are registered, many of these are no longer thought to be active. The main advantage of the region remains the competitiveness of its products on the international market. The area offers a cheap and skilled workforce and a competitive infrastructure.

The **Valencian** footwear manufacturing industry in Spain includes the clusters of Elda and Elche. The two industrial districts play a key role in the region's economy. These two manufacturing districts account for about 40% of all footwear companies in Spain. Elda also houses INESCOP, one of the most prominent footwear research centres in Europe and many component manufacturers, including ICT providers.

1.4 Structure of this Report

The remainder of this Report has been organised as follows:

- Chapter 2 summarises the current situation of the footwear sector in the EU and recent trends;
- Chapters 3 to 6 summarise the findings of Tasks 1 to 6 on restructuring, research and innovation, training and SME support;
- Chapter 7 provides the overall conclusions and recommendations of the study; and
- Chapter 8 contains a list of references.

2. CURRENT SITUATION OF THE EUROPEAN FOOTWEAR INDUSTRY

2.1 Introduction

A considerable amount of information is available on the EU footwear industry. This includes a range of statistical data, from Eurostat and other European Commission sources, surveys, research reports, evaluations and impact assessment documents. This chapter of the report summarises information gathered from these sources to provide a background to the results of the EU survey of key stakeholders and the regional case studies.

The remainder of this chapter provides:

- a review of footwear markets;
- a description of the size and structure of the EU footwear sector;
- an evaluation of trade in footwear; and
- a review of the advantages of and challenges facing the sector.

2.2 Footwear Markets

2.2.1 Definition of Footwear

The European Commission defines the term footwear as: “*all articles designed to protect or cover the foot, with a fixed outer sole, which comes into contact with the ground*³”.

For the purposes of this study, we have identified a number of market segments, which are listed in Table 2.1 (please note that the categories are independent and should not be read horizontally).

End user	Type of footwear	Price	Material
Women Men Children	Casual	Super Premium Segment	Leather
	Formal	(Luxury)	
	Evening	Premium Segment (Fine)	Textile
	Sport	Medium Segment (Medium)	Plastic/rubber
	Safety/protective	Lower Segment (Economical)	Other
	Comfort/functional	Super Economical Segment	

³ European Commission (2002)

There appear to be no clear-cut definitions of the various price segments presented in Table 2.1, even in the academic literature. Most sources talk about price segments, and the terms seem to be well understood in the industry, but without further explanation. The definition is also tied to national markets; thus what is meant by ‘low’ and ‘medium’ price varies between Member States depending on domestic purchasing power, consumer behaviour, competition in domestic markets and even currency exchange rates. Price segments cannot, therefore, readily be defined in terms of euro ranges at the EU level.

However, a recent article⁴ by economists on the cluster of Alicante, in Spain, identifies three levels of value creation for customers (luxury, high street and supermarket) relating these types to price levels:

- luxury: €150 per pair and above;
- ready-to-wear/high street: €60 to €150; and
- mass production/supermarket: less than €60.

Examples from the case studies broadly support this conclusion:

- the retail prices for men’s and women’s shoes in the super premium segment produced by two companies (in Italy and Portugal) were €800 - €1000 per pair;
- medium segment women’s fashion shoes and sports shoes, produced by a Spanish, a German and a French company respectively, retailed at €90 - €180, €70 - €150 and €70 to €125 per pair;
- lower-mid price ranged shoes produced by a German company retailed at €59 - €79 per pair; and
- super-economical segment polyester shoes produced by an Italian company retailed at €10 to €17.

2.2.2 Global Markets

Figure 2.1 summarises the main global markets for footwear by volume in 2010. Together, 10 countries account for 62% of world footwear consumption.

⁴ Verdu et al (2012)

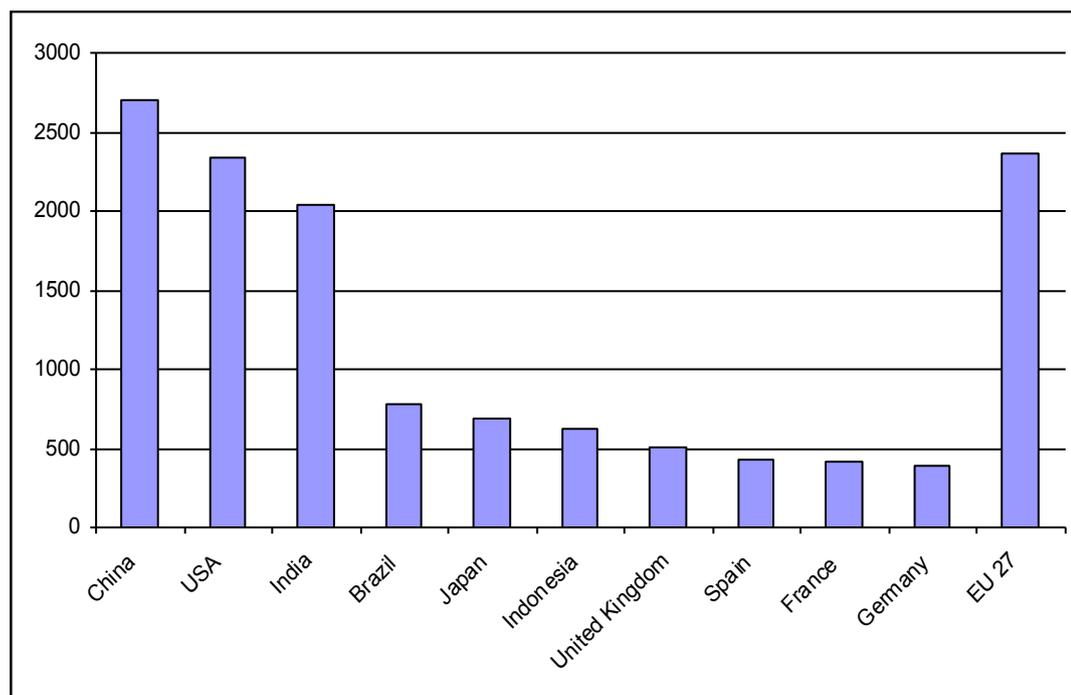


Figure 2.1: Top Global Markets for Footwear by Volume, 2010

Source: APICCAPS, 2011b

In 2010, the EU 27 was the second largest market for footwear by volume, after China. The four EU countries with the largest consumption accounted for 9.9% of the total world market. These were the United Kingdom, Spain, France and Germany.

However, the EU market is the largest single market for footwear in the world by value, with consumption of €49 billion 2008⁵ (an average of over €100 per person). The highest per capita expenditure was in Luxembourg and France, while spending was considerably lower in the newer Member States. In contrast, per person expenditure is much lower in the main producing countries, at €16 in China and €1 per person in India.

2.2.3 Market Outlook

The footwear market is subject to highly unstable demand, with fashion-related and seasonal fluctuations. Customers are seeking increasing variety in styling and price. The main features of the market are extreme fragmentation and diversification of purchase, strong price-sensitivity and low loyalty, request for differentiation and, relative to traditional retail, an increasing importance of new distribution channels such as specialised stores, mono-brand shops and discount outlets⁶.

⁵ CBI (2010)

⁶ CBI (2010)

The overall EU footwear market grew slightly by value between 2004 and 2006 but contracted between 2006 and 2008. It then grew again between 2008 and 2010. Most companies responding to our EU survey of stakeholders were positive about future market prospects, with over 70% of companies considering that their market position will become stronger over the next five years; this optimism was shared by two of the four industry associations.

To explore this in more detail, respondents were asked to identify growing export markets. As Figure 2.2 shows, the picture is mixed with predictions of both growth and reduction in all geographical areas. On balance, the most positive prospects are expected for the markets of the EU-27 and Russia, with Asia also of increasing importance.

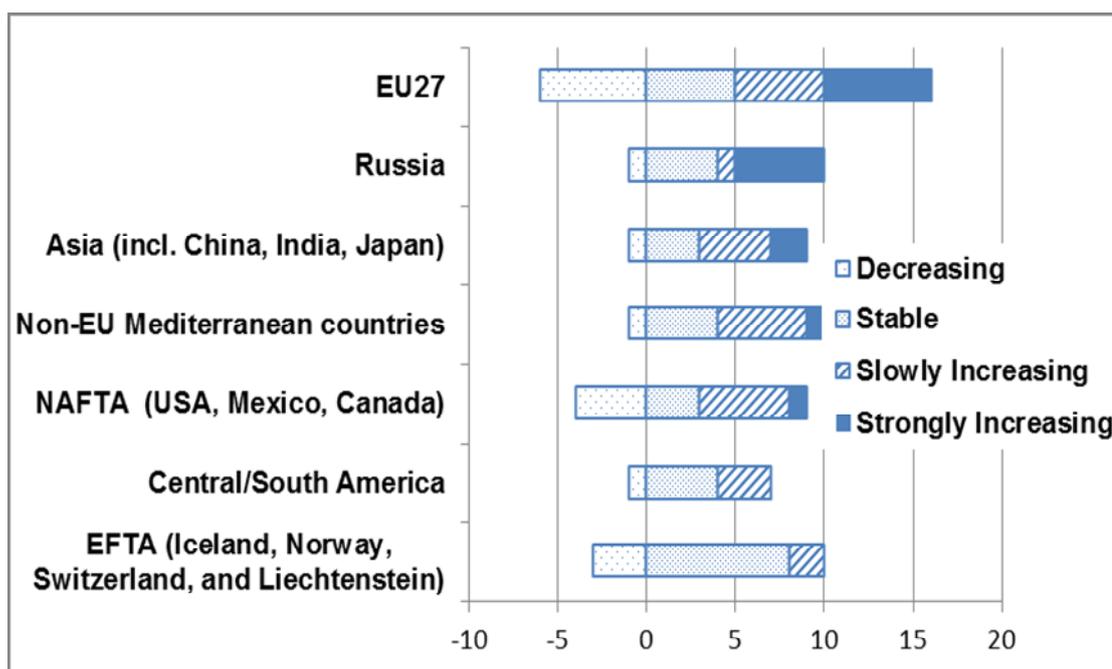


Figure 2.2: Responses from 24 Companies to: *If your company has exported products in the last 5 years (2006 to 2010), how would you describe your position with respect to the key export markets?*

2.3 Size and Structure of the EU Footwear Industry

2.3.1 Introduction

The European Union is a major producer and exporter of footwear and footwear related products, particularly in the luxury footwear segment. The footwear sector is an important part of the European manufacturing industry and plays a crucial role on the economy and social well-being in numerous regions within the EU27. It generates over €25 billion annually in turnover. Around two thirds of the total EU footwear production is concentrated in three key countries: Italy, Spain and Portugal, with Italy accounting for around 50%.

2.3.2 Numbers of Companies and Employees

Our detailed case studies, particularly for the task on restructuring and modernisation, showed that there is considerable uncertainty about the numbers of footwear companies currently active and the numbers of people they employ. As the report on the task on restructuring and modernisation demonstrates, different sources can provide very different data for the same country; this appears to be linked mainly to definitional differences. In this chapter we therefore draw primarily on data from Eurostat, as this uses a consistent definition across the Member States.

As shown in Table 2.2, Eurostat data for 2009 (the latest available) indicates that around 22 000 footwear enterprises were operating in the EU27 employing 291 000 people⁷ directly. The data suggest that the footwear industry is characterised by small and medium-sized enterprises (SMEs), employing on average around 10-15 workers and with an average turnover of just over €1 million. Table 2.2 also indicates that employment in the footwear industry fell by nearly 35% between 2004 and 2009 and the number of firms reduced by nearly 25%. Figure 2.3 shows the continuous reduction in the number of footwear firms in the EU between 1999 and 2009.

	2004	2005	2006	2007	2008	2009
Number of firms	28 941	27 125	26 624	26 100	24 000	21 716
Turnover (€m)	26 389	25 921	26 233	30 296	26 515	21 972
Employment	443 900	404 500	388 100	368 600	325 700	291 000

Source: Eurostat data as presented on DG Enterprise website: http://ec.europa.eu/enterprise/sectors/footwear/statistics/index_en.htm, with estimated figures for 2008 from Eurostat structural business statistics (sbs_na_ind_r2-2)

⁷ European Commission (2009a)

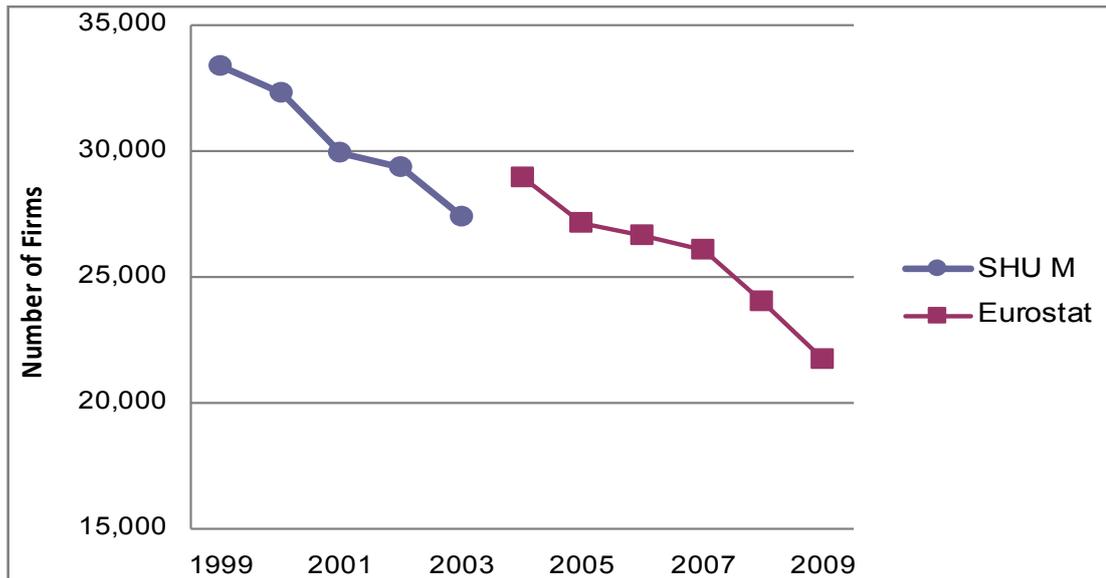


Figure 2.3: Number of Footwear Firms in Europe

Source: Eurostat and, for pre-2004 data, Shu M, 2010

2.3.3 EU Production

According to Eurostat data for 2009 (the latest available), total EU footwear production value was €20.3 billion and production volume 555 million pairs. Figure 2.4 shows the changes in EU footwear production of between 2004 and 2008. Over this period, the annual production of EU footwear fell by 4.0% on average in volume and by 2.7% in value.

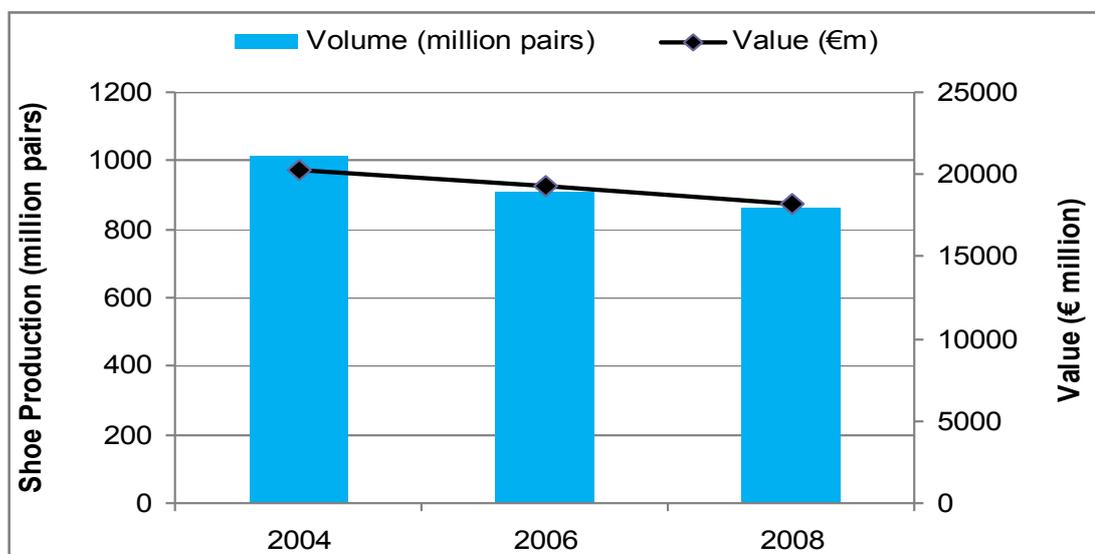


Figure 2.4: Changes in EU Footwear Production, 2004 – 2008

Source: CBI, 2010a

More recent data for some countries of the case study regions indicate that production declined sharply in 2009 but that there was some recovery in 2010, as shown in Table 2.3.

Country	2007	2008	2009	2010
France	83.49	71.50	61.32	61.20
Germany	93.95	88.50	82.53	90.95
Italy	87.62	78.99	62.14	59.67
Spain	83.05	74.98	58.04	61.08

Source: Eurostat
**Only limited data for the EU27 countries were available from the Eurostat website*

2.3.4 Supply Chain

The footwear sector is part of a complex global supply chain consisting of suppliers of raw materials, tanneries, components, accessories, machinery manufacturers, model makers and designers. Figure 2.5 (over page) illustrates the embeddedness of the footwear manufacturing sector⁸ in this value chain.

However, this diagram does not take into account the division of labour within footwear manufacturing which can be used by companies for outsourcing within their region, and/or offshoring to other countries, production steps such as stitching, cutting, assembly, finalization (which later has been called fragmentation in manufacturing). This is discussed further in Section 3.1 of this report.

2.3.5 Key Manufacturing Regions

The complexity of the supply chain has resulted in a concentration of companies and the formation of footwear producing clusters, such as the Marche and Emilia Romagna in Italy, Elda and Elche in Spain and Norte in Portugal. This geographic concentration is one of the strengths of the footwear industry, driving the spread of knowledge and the formation of partnerships between companies, both formal and informal.

The main footwear manufacturing regions in the EU are situated within Italy, France, Poland, Portugal, Romania and Spain. Table 2.4 sets out key data for these countries, based on information gathered during the case studies for the tasks on SMEs and on restructuring and modernisation. Romania, Poland, Slovakia and Bulgaria are the largest footwear producers within eastern Europe. Partnerships between these two sets of countries also exist, through outsourcing parts of the manufacturing process.

⁸ Source: based on Tripathi A and others (2010)

For instance, Romania is the preferred outsourcing location of footwear firms in Veneto⁹.

Country	Production (million pairs)	Production Value (€m)	No. of Companies	Key Regions
Italy	202	6 730	5 800	Marche, Tuscany, Veneto, Lombardia, Campania, Puglia and Emilia Romagna
Spain	95	1 600	1 500	Valencia, Castile-La Mancha, La Rioja, Zaragoza
Romania	89	1 450	2 000*	Timis/Timisoara, Bihor
Portugal	62	1 400	1 350	Norte
Poland	37*	250*	250*	Silesia, Malopolska
France	26	861	90	Aquitaine, Pays de la Loire, Rhône-Alpes
Germany	29	756*	80*	Rheinland-Pfalz, Bayern

Sources : Information gathered during case studies for Tasks 2 to 6 (see Task reports for details)
*Notes: * estimates with some uncertainty due to definitional differences in statistics*

⁹ Amighinia A & Rabellotti R, 2006

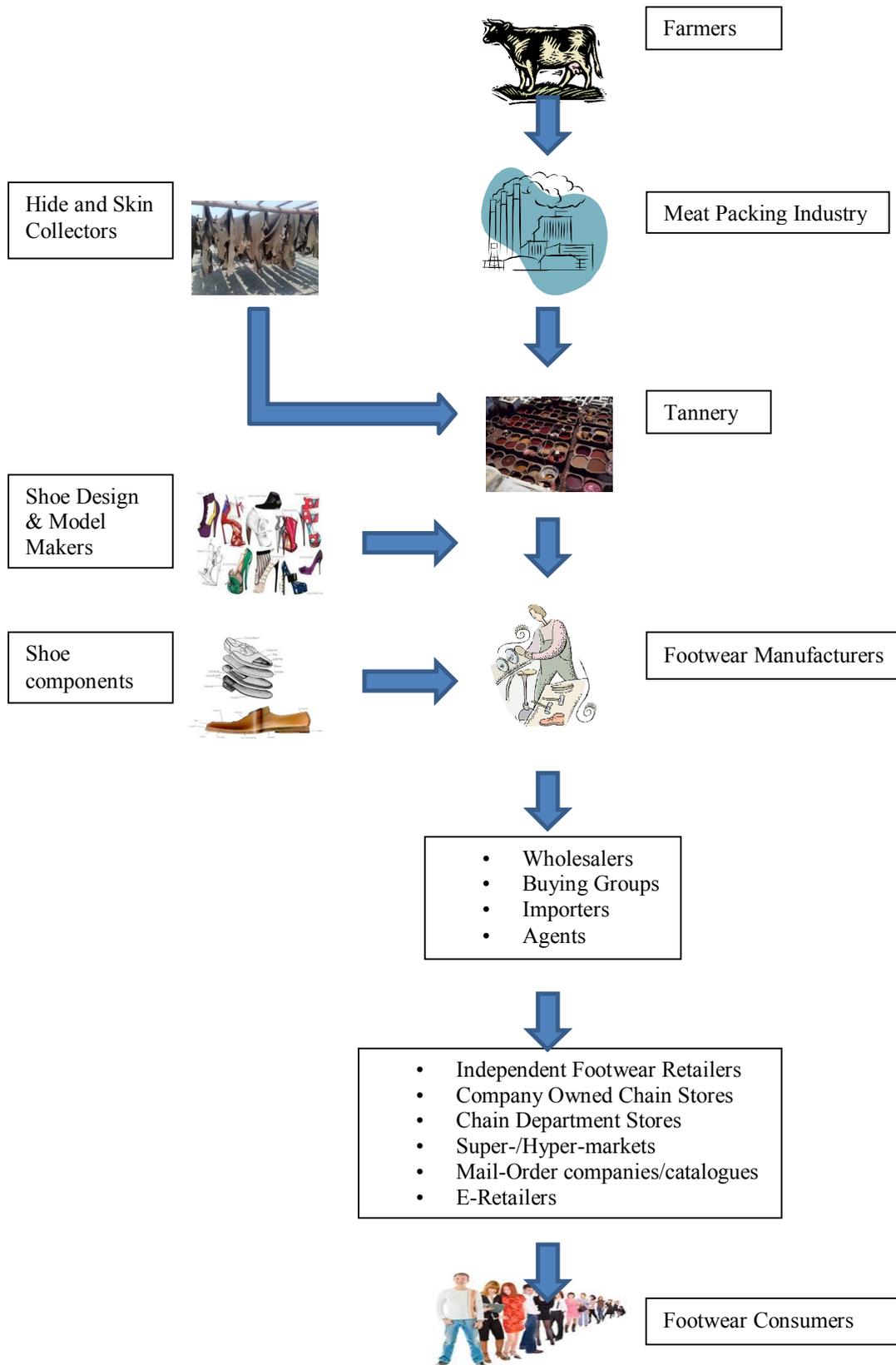


Figure 2.5: Supply Chain Structure for the Footwear Industry
 (Source: Tripathi, A et al, 2010)

2.4 International Trade in Footwear

2.4.1 Introduction

The liberalisation of world trade has had a significant impact on the EU footwear sector. The footwear industry has become highly globalised, which has created strong competition, particularly between producers in the EU and in Asia. In 2010, China had become the leading shoe exporting country in the world, accounting for 73% of the 13 billion pairs exported worldwide¹⁰.

European policy makers have sought to protect the interest of EU manufacturers against unfair competition through a series of measures. These are summarised in Table 2.5. The measures were fully phased out in 2011.

Year	Trade Agreement
1974-1994	Multi-fibre Arrangement (MFA) - The MFA governed the world trade in textiles and garments from 1974 through to the end of 1994, imposing quotas on the amount developing countries could export to developed countries
1995-2004	Agreement on Textiles and Clothing (ATC) – the WTO Agreement on Textiles and Clothing, negotiated in the Uruguay Round, became operational on 1 January 1995
2006-2009	The EC placed anti-dumping duties in 2006 to protect the EU footwear manufacturers from import surges. The EC imposed duties of up to 16.5% on Chinese and 10% on Vietnamese leather footwear for two years in 2006
2010-2011	The anti-dumping duties were due to be lifted on 1 January 2010 but on 22 December 2009 the EC took the decision to extend the duties for a further 15 months until the end of March
2011	The anti-dumping duties were phased out on 1 April 2011

Whilst some footwear companies that we interviewed regretted the phase-out of protection measures, those that had invested in cost-cutting production chains around the world opposed the anti-dumping tariffs. These companies claimed that tariffs were limiting economic growth and economic recovery as well as harming the EU's own companies and consumers through increased prices.

2.4.2 Imports

Figure 2.6 shows that imports of footwear into the EU grew by 17% in both volume and value between 2006 and 2010, to a total of nearly 2.5 billion pairs with a value of over €14 billion. Imports grew by 10% in volume and 14% in value between 2009 and 2010, after reducing in 2009 compared to 2008.

¹⁰ APICCAPS (2011b)

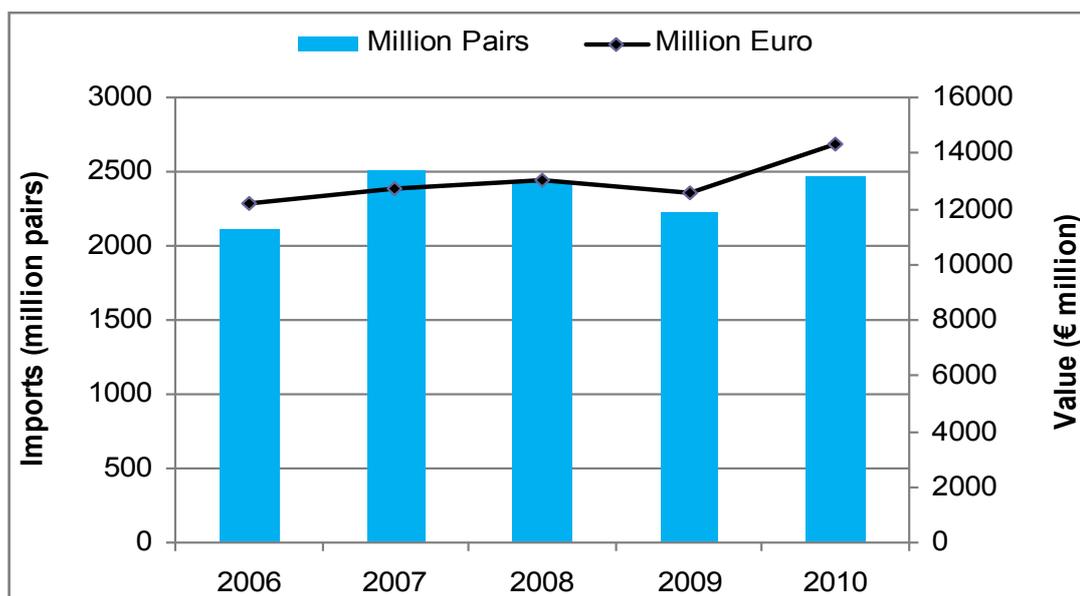


Figure 2.6: Imports of Footwear into the EU, 2006 – 2010

Source: Eurostat

Tables 2.6 and 2.7 show the top 10 sources of footwear imports into the EU in 2010 by value and volume respectively.

	2006	2007	2008	2009	2010	Share of 2010 imports	% growth 2006-2010
Extra-EU Total	12204	12757	13055	12559	14288	100%	17%
China	5579	5797	5924	6031	7149	50%	28%
Vietnam	2132	2101	2287	1873	1884	13%	-12%
India	862	960	971	950	1138	8%	32%
Indonesia	624	645	702	770	865	6%	39%
Tunisia	385	434	459	416	485	3%	26%
Brazil	442	468	507	410	394	3%	-11%
Morocco	221	240	241	247	281	2%	27%
Thailand	279	295	252	230	245	2%	-12%
Bosnia and Herz.	157	188	202	194	224	2%	43%
Cambodia	74	106	113	144	206	1%	179%

Source: Eurostat data as presented on DG Enterprise website:
http://ec.europa.eu/enterprise/sectors/footwear/files/statistics/footwear_en.pdf

Table 2.7: Top 10 Sources of Footwear Imports by Volume into the EU-27 (million pairs)

	2006	2007	2008	2009	2010	Share of 2010 imports	% growth 2006-2010
Extra-EU Total	2111	2512	2430	2235	2465	100%	17%
China	1492	1845	1761	1665	1868	76%	25%
Vietnam	259	278	292	217	207	8.4%	-20%
India	61	66	67	71	80	3.3%	33%
Indonesia	56	64	76	76	80	3.2%	42%
Brazil	33	36	35	26	27	1.1%	-16%
Tunisia	20	23	24	22	26	1.0%	25%
Cambodia	9	14	14	16	22	0.9%	129%
Turkey	28	31	24	19	20	0.8%	-27%
Thailand	29	29	23	20	20	0.8%	-31%
Morocco	15	17	15	14	15	0.6%	-1%

*Source: Eurostat data as presented on DG Enterprise website:
http://ec.europa.eu/enterprise/sectors/footwear/files/statistics/footwear_en.pdf*

China is the largest source of footwear imports into the EU market; in 2010, it accounted for 50% in value and 76% in volume of all imports into the EU. The next most significant source of imports is Vietnam, with 13% by value and 8.4% by volume of the total; however, imports from Vietnam reduced by 12% in value and 20% in volume between 2006 and 2010. Imports from Brazil, Thailand and Turkey also fell. The fastest growing sources of imports were Cambodia (growth of 179% by value and 129% by volume over the period), India and Indonesia.

The trend of sourcing footwear from low labour cost countries, together with price pressure on EU manufacturers, has enabled customers in the EU to benefit financially. Over the period 1997 to 2005, the average retail price of footwear sold in the EU increased by an average of only 1%. Since these price changes were significantly less than the prevailing rate of inflation, there was a fall in real terms.

However, by the 2010s there was little likelihood of average footwear retail prices continuing to rise at below the rate of inflation, given the rising costs of materials and components, of energy, etc. as well as increasing labour costs in China. Thus, it seems inevitable that the EU consumer can expect to see price increases in the short term. Some companies have responded to increased costs in China by moving their production to countries such as India. However, few, if any, other countries have the infrastructure to produce footwear consistently in the quantities required by the major brands as China. So, if China is to continue to supply the majority of footwear into the EU, it is likely that there will be serious pressure on prices.

2.4.3 Exports

Exports from the EU in 2010 consisted of 177 million pairs of shoes valued at €5 471 million (see Figure 2.7). This is less than 10% of the volume of shoes imported, but more than 33% of the value of imports, indicating that the EU in general imports cheap shoes and exports those with a higher value. Despite a sharp downturn in 2009, the overall figures (for both volume and value) show a slight increase over the period 2006-2010, although the pattern varies by export market.

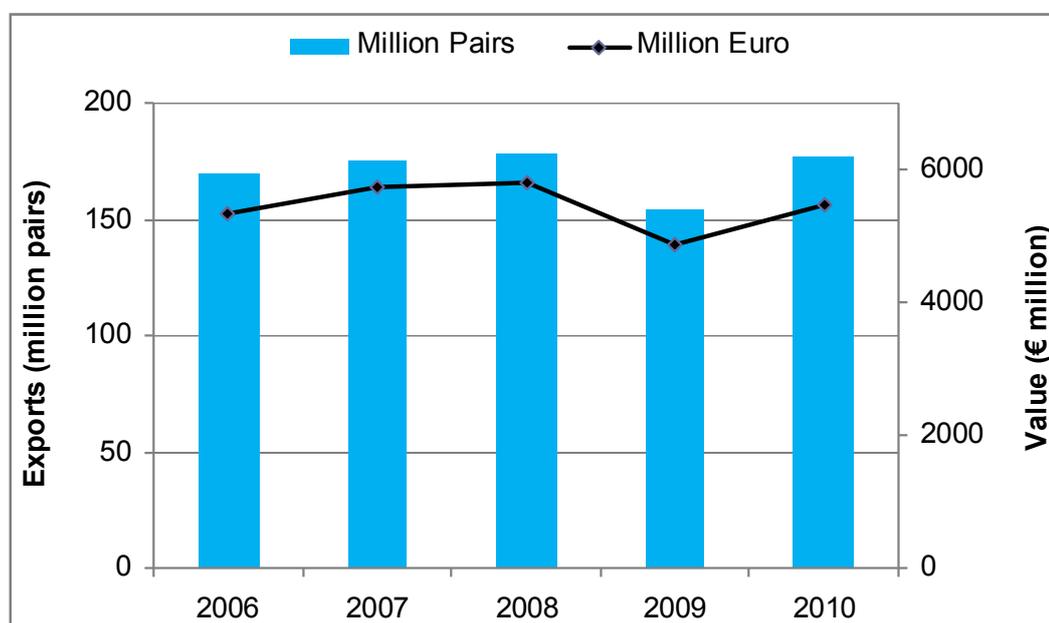


Figure 2.7: Exports of Footwear from the EU, 2006 – 2010

Source: Eurostat

Over the four-year period, the largest reduction in exports has been to the USA, falling by 28% in value and 45% in volume, although it remains the largest single export market. The main reason for this change appears to be increased imports into the US from China, which now accounts for 75% of US footwear imports by value (87% by volume) and a growth in imports from Vietnam and Mexico between 2006 and 2010.

The largest increase in exports from the EU has been to Turkey, with 100% increase in value and 58% increase in volume between 2006 and 2010. The reason for this is unclear; it may be linked to a growing demand for higher-quality and fashionable footwear in Turkey, as the economy develops, as well as closer links with the EU. Similarly, Hong Kong has seen a 56% increase in value and an 83% increase in volume of EU footwear imports over the period. Hong Kong mainly acts as an entry point for the Chinese market, so this change may reflect an increase in demand for not only shoes in the super-premium segment, but those in the fashionable premium segment.

Figures 2.8 and 2.9 show the development of the top five export markets for EU footwear, by value and volume respectively. The USA, Switzerland and Russia are the most important export markets by both value and volume. Although, in the coming years, it is likely that China will become an important export market.

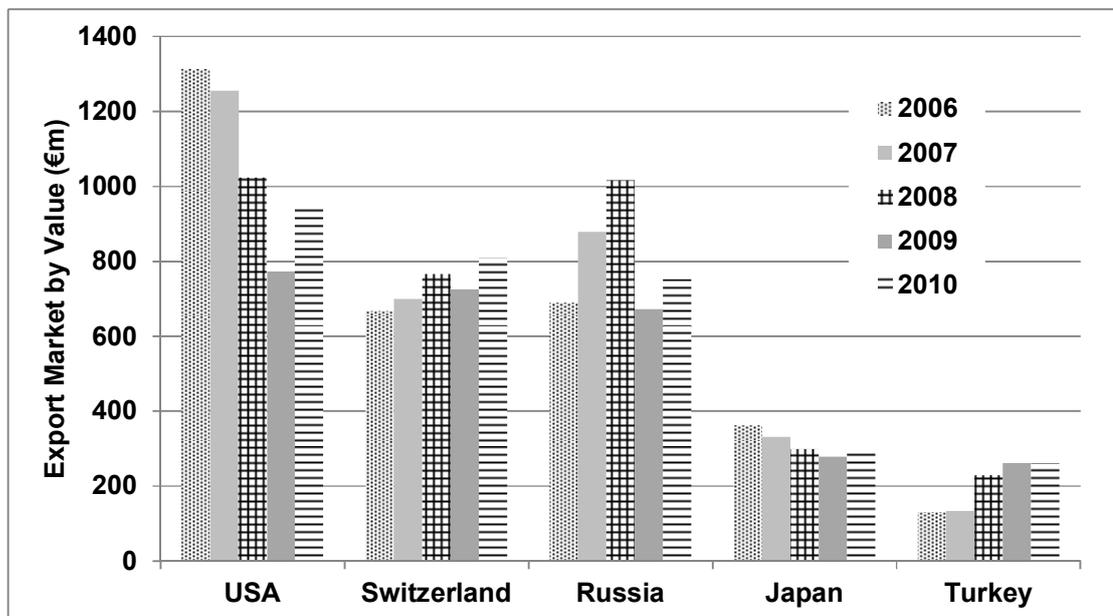


Figure 2.8: Trends in Top 5 Export Markets for EU Footwear by Value

Source: Eurostat

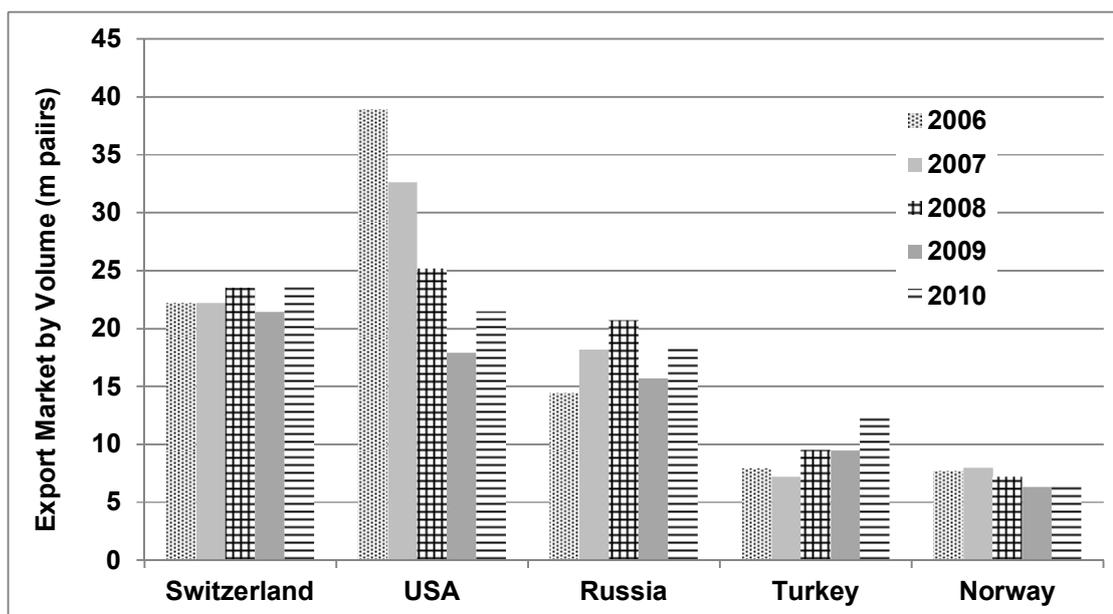


Figure 2.9: Trends in Top 5 Export Markets for EU Footwear by Volume

Source: Eurostat

2.5 Success Factors of the EU Footwear Industry

2.5.1 Introduction

As Section 2.2 indicated, the EU footwear market is the largest single market in the world by value and one of the largest by volume. Proximity to this valuable market offers EU footwear manufacture (and others in the supply chain) potential advantages in maintaining their competitive position. The footwear industry in the EU also benefits from a strong support structure in the form of industry associations, research centres and trade unions.

Industry associations responding to our EU survey identified ‘cooperation within the supply chain’, ‘innovation’ and ‘proximity to market’ as specific advantages, as shown in Figure 2.0.

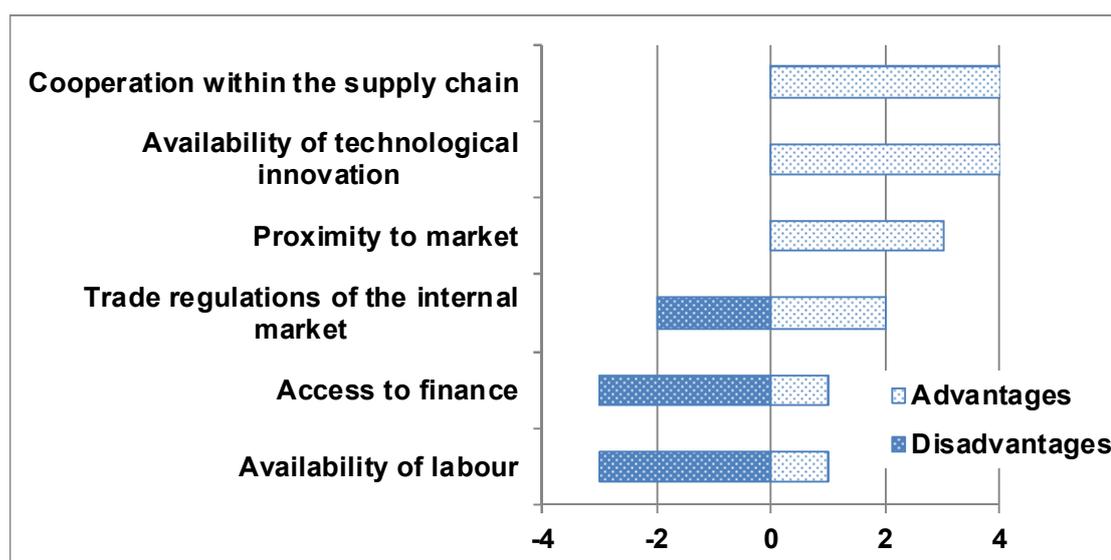


Figure 2.10: Responses from four Industry Associations to: *In your view, what are the key advantages and disadvantages of the EU footwear industry in comparison to its competitors?*

The interviews carried out for case studies also emphasised the advantages of cooperation within the supply chain, innovation and proximity to market for the EU footwear industry and they are discussed throughout the remainder of this report. The implications of these factors for the future prospects of the industry are discussed in Section 7.1.

2.5.2 Industry Associations

Footwear industry associations’ activities focus on promoting the economic growth and sustainable development of the European footwear industry. This includes work in non-EU markets in order to maintain the reputation, image and the presence of EU footwear manufacturers, as well as emphasizing the benefits of EU brands in their

home markets. Associations also support companies in their day to day activities by providing advice on development strategies and assistance to enter new markets as well as providing services such as training, regulatory and legal advice.

The key European footwear associations are described in Table 2.8.

European Confederation of the Footwear Industry (CEC)	Represents the interests of the European footwear industry. Its members are the national federations in the European Union and associated eastern European countries. Currently, the CEC represents over 13,500 footwear-manufacturing companies in 15 EU countries and four associate federations
European Confederation of National Associations of Tanners and Dressers (COTANCE)	The representative body of the European Leather Industry. It is a non-profit organization established in order to promote the interests of the European tanning industry at international level
European Confederation of Shoe Retail Trade Associations (CEDDEC)	Represents the major national footwear retail federations in the European Union, and in a number of other south and eastern Europe countries. At present CEDDEC represents 13 footwear retail Federations, with more than 80,000 footwear shops in the EU, and 6 observer Federations
European Association of Fashion Retailers (AEDT)	The association representing European retail enterprises specialising in fashion and footwear. AEDT represents around 530,000 independent retailers; its members are the national associations

Our case studies for Tasks 2 to 6 also demonstrated the important role played by national and regional associations in supporting the footwear industry. Some of the main EU national footwear associations by country are listed in Table 2.9.

Country	Acronym	Organisation
Austria	VS	Verband der Schuhindustrie (Association of the Austrian Footwear Industry)
Belgium	FEBIC	Fédération Belge de l'Industrie de la Chaussure/Federatie van de Belgische schoeiselindustrie (Belgian Federation of the Footwear Industry)
Czech Republic	ATOK	Asociace textilního-oděvního-kožedělného průmyslu (Association of Textile, Clothing and Leather Industry)
Finland	FLIA	Kenkä- ja Nahkateollisuus ry (Finnish Leather Industry Association)
France	FFC	Fédération Française de la Chaussure (French Federation of the Footwear Industry)
Germany	HDS	Bundesverband der Schuh- und Lederwarenindustrie (Federal Association of the Footwear Industry)
Greece	ELSEVIE	Ελληνικός Σύνδεσμος Εργοστασιαρχών Βιοτεχνών-Βιομηχάνων Υποδημάτων και Εξαγωγέων (Hellenic Association of Footwear Manufacturers and Exporters)

Table 2.9: National Footwear Industry Associations		
Country	Acronym	Organisation
Hungary	BSC	Bőr- és Cipőipari Egyesülés (Association of the Leather and Shoe Industry)
Italy	ANCI	l'Associazione Nazionale Calzaturifici Italiani (National Association of Italian Footwear Manufacturers)
Netherlands	FNLS	Federatie van Nederlandse Schoenfabrikanten (Federation for Leather Products and Shoes)
Poland	PIPS	Polska Izba Przemysłu Skórzanego (Polish Chamber of Shoe and Leather Industry)
Portugal	APICCAPS	Associação Portuguesa dos Industriais de Calçado, Componentes, Artigos de Pele e seus Sucedâneos (Portuguese Footwear, Components and Leather Goods Manufacturers' Association)
Romania	PINC	Organizația Patronală Pielărie-Încălțăminte (Leather and Footwear Employers' Association)
Slovenia	STU	Sekcija za Tekstil in Usnje (Section for the Textile and Leather Industry)
Spain	FICE	Federación de Industrias del Calzado Español (Spanish Federation of the Footwear Industry)
Sweden	SSF	Svenska Skofabrikantföreningen (Swedish Federation of the Footwear Industry)
UK	BFA	British Footwear Association

Source: Eurofound (2010a)

2.5.3 Trade Unions

Employment in the European footwear industry has shrunk markedly over the last couple of decades, as shown in Section 2.3.2. Such a development has also reduced the number of trade union members within the sector. In turn, declining trade union members may have caused the trade unions to dedicate fewer resources to the sector, given the small level of employment in the footwear industry¹¹. The main European trade unions covering the footwear sector are summarised in Table 2.10 (over page).

Competitive pressure from low labour cost countries has prompted the European sector-related social partners to seek joint strategies to cope with the challenges of increasing imports from the Far East and the need to successfully compete on quality, without diminishing existing employment standards. The CEC on the employers' side and ETUF:TCL on the employees' side have, therefore, launched joint initiatives in the framework of social dialogue. A series of joint programmes and guidelines, including a code of conduct, have been drawn up since 2000.

¹¹ Eurofound (2010a)

European Trade Union Federation of Textiles, Clothing and Leather (ETUF:TCL) ¹²	The ETUF:TCL brings together 70 trade union federations from 40 European countries (mainly the European Union, the European Economic Area, accession countries as well as EU candidate countries, but also from the Balkans and a number of other eastern European countries). The ETUF:TCL represents more than one million workers, one in three in TCL sectors within the area delimited by the Council of Europe
European Confederation of Executives and Managerial Staff (CEC managers) ¹³	CEC brings together national organisations (trade-unions, employee associations, professional federations) representing executives and managers operating in the industry, services and public sector.
European Trade Union Confederation (ETUC) ¹⁴	The ETUC has in membership 83 National Trade Union Confederations from 36 European countries, as well as 12 European industry federations, making a total of 60 million members. The ETUC is recognised by the European Union, by the Council of Europe and by EFTA as the only representative cross-sectoral trade union organisation at European level.

2.5.4 Research Centres

The footwear industry in Europe benefits from an extensive network of research centres that work with industry to introduce new products and processes. Some of the leading research centres on material and process innovation within the footwear sector can be found in Europe. Table 2.11 (next page) lists the institutes in Europe engaged in research and innovation in relation to footwear.

The case studies for the task on research and innovation centres identified that the research centres have different structures and models of financing but have evolved similar ways of working with industry. Many of the research centres were founded by industry associations, and all of them work very closely with industry partners at regional, national and, in some cases, international level. These close partnerships help to promote the uptake of research results by companies.

European and global partnerships dedicated to the leather industry are particularly dynamic. The European Union of Research centres for Shoes (EURIS) and the Grouping of European Leather Technology Centres (GERIC) meet once or twice a year. They carry out benchmarking exercises to ensure that the leather and shoe industry is visible across Europe, particularly in calls for proposals from the European Commission. Furthermore projects such as PROsumer.NET, a Coordination Action funded by the 7th Framework Programme of the European Commission help bring together and disseminate knowledge for and amongst the technology and research platforms that are related to the design-based consumer goods industry.

¹² ETUF:TCL (undated)

¹³ CEC managers (undated)

¹⁴ ETUC (undated)

Table 2.11: Institutes for Footwear Research and Development in the EU		
Location	Acronym	Institute
Finland	VTT	Teknologiasta liiketoimintaa
France	CTC	Centre Technique du Cuir, Chaussure, Maroquinerie
France	-	Institut Colbert
Germany	PFI	Prüf- und Forschungsinstitut Pirmasens
Germany	DITF	Deutschen Institute für Textil- und Faserforschung Denkendorf
Germany	FH	Fachhochschule Kaiserslautern
Germany	FILK	Forschungsinstitut für Leder und Kunststoffbahnen
Germany	LGR	Lederinstitut Gerberschule Reutlingen
Greece	-	ELKEDE Technology and Design Centre SA
Hungary	-	TechnOrg Consulting Ltd
Hungary	-	BIMEO Testing & Research Ltd Co
Italy	SSIP	Stazione Sperimentale Industria Pelli
Italy	ITIA-CNR	L'Istituto di Tecnologie Industriali ed Automazione – Consiglio Nazionale delle Ricerche
Italy	-	Politecnico di Milano
Italy	-	European Footwear Products and Processes Technology Platform
Italy	-	Politecnico Calzaturiero
Italy	CIMAC	Centro Italiano Materiali di Applicazione Calzaturiera
Italy	AICC	Associazione Italiana del Chimici del Cuoio
Italy	-	Polimoda, Firenze
Italy	SSIP	Stazione Sperimentale Industria del le Pelli e delle Materie Concianti
Poland	ILI	Centralne Laboratorium Przemysłu Obuwniczego w Krakowie ILI
Portugal	CTCP	Centro Tecnológico do Calçado
Portugal	CTIC	Centro Tecnológico das Industrias do Couros
Romania	ICPI	Institutul de Cercetare Pielarie si Incaltaminte
Slovenia	IRCUO	Industrijsko Razvojni Center Usnjarske in Obutvene Industrije
Spain	INESCOP	Instituto Tecnológico del Calzado y Conexas
Spain	AIICA	Association de Investigación de las Indus. del Curtido y Anexas
Spain	-	Fatronik
Spain	IBV	Instituto de Biomecanica di Valencia
UK	-	Anthony Vrahimis Ltd
UK	BLC	Leather Technology Centre Ltd
UK	-	Leather Training & Technical Dept. Ltd
UK	-	Leather Wise Ltd
UK	NRI	Natural Resources Institute, University of Greenwich at Medway
UK	GCU	Glasgow Caledonian University
UK	-	W2O Environment Ltd
UK	NESTA	National Endowment for Science, Technology and the Arts
UK	ITS	Intertek Testing Services UK Footwear & Leather goods Testing
<i>Source: EURIS (undated)</i>		

2.6 Barriers to Development of the Footwear Industry

2.6.1 Introduction

Across the literature surveyed, there is considerable consensus on the most important barriers that are facing the EU footwear manufacturing industry. These include:

- *increasing competition* involving the emergence of new competitors and the further integration of global markets. This has led in turn to *increasing outsourcing within the region or offshoring of production*, which introduce fragmentation of production processes, i.e. the splitting of the production cycle over production sites located in different countries;
- *increasing pace of fashion related changes* leading to shorter product cycles and the need to produce multiple collections per year, forcing firms to continuously innovate and design, but also enabling new organizational forms and processes;
- *environmental drivers* such as climate change, the depletion of natural resources and pollution caused by industrial activity, impacting on how footwear is manufactured as well as increasing requirements from large customers (such as retail chains) for ‘environmentally friendly’ products and production; and
- continuing issues with *counterfeiting and piracy* resulting in significant financial losses; and
- *costs of raw materials*, particularly leather.

As part of the EU survey, respondents were asked to identify their most significant challenges over the past five years (see Figure 2.11).

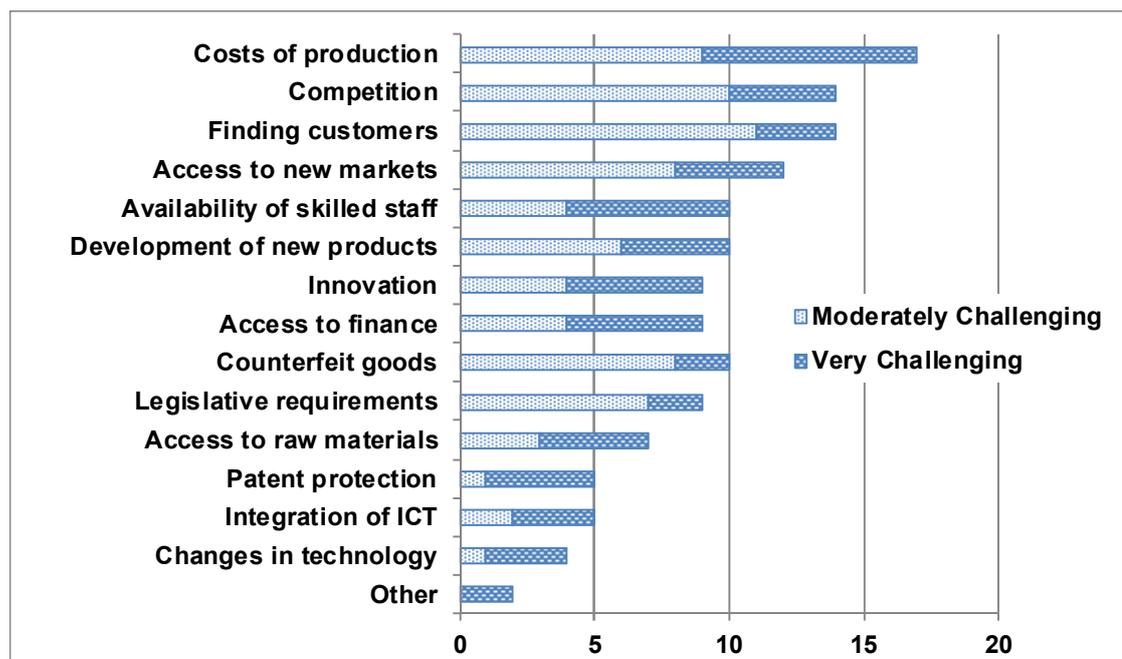


Figure 2.11: Responses from 23 Companies to: *What have been the most significant challenges for your company in the last 5 years?*

There were 23 responses to this question from companies. As can be seen from Figure 2.13, the highest rated challenges were costs of production; competition; finding customers; access to new markets; and availability of skilled staff.

For the four industry associations, the main challenges were seen as access to new markets, availability of skilled staff and access to finance. For the responding trade union, competition and access to new markets were seen as very challenging. Most of the six challenges identified as moderately challenging were also in the top eight of those identified by companies.

The key challenges faced by respondents surveyed were broadly consistent (albeit in a different order) with those identified in the general survey for the Eurobarometer ‘Access to Finance’ report as shown in Table 2.12.

Challenge	% Identifying Challenge
Finding customers	29
Access to finance	16
Competition	13
Availability of skilled staff	8
Costs of production or labour	8
<i>Source: Flash Eurobarometer (2009). In total 9063 companies representing all sectors were interviewed across the EU, Croatia, Iceland and Norway</i>	

We discuss the different challenges in more detail below, covering:

- competition and finding new markets;
- the pace of fashion-related change;
- environmental drivers;
- counterfeiting and piracy;
- costs of production (including raw materials) and financing;
- availability of skilled staff; and
- future challenges.

2.6.2 Competition and Finding New Markets

International Competition

As indicated in Section 2.4, the footwear industry is subject to strong international competitive pressure. In response to our survey, most companies indicated that competition from non-EU countries had increased over the past five years and was likely to become stronger over the next five years, a view shared by most of the industry associations. Companies considered that the greatest threat was from China and India (see Figure 2.12). Although the four industry associations also rated the greatest threat to be from China, together with Vietnam, they identified Brazil as the third greatest threat.

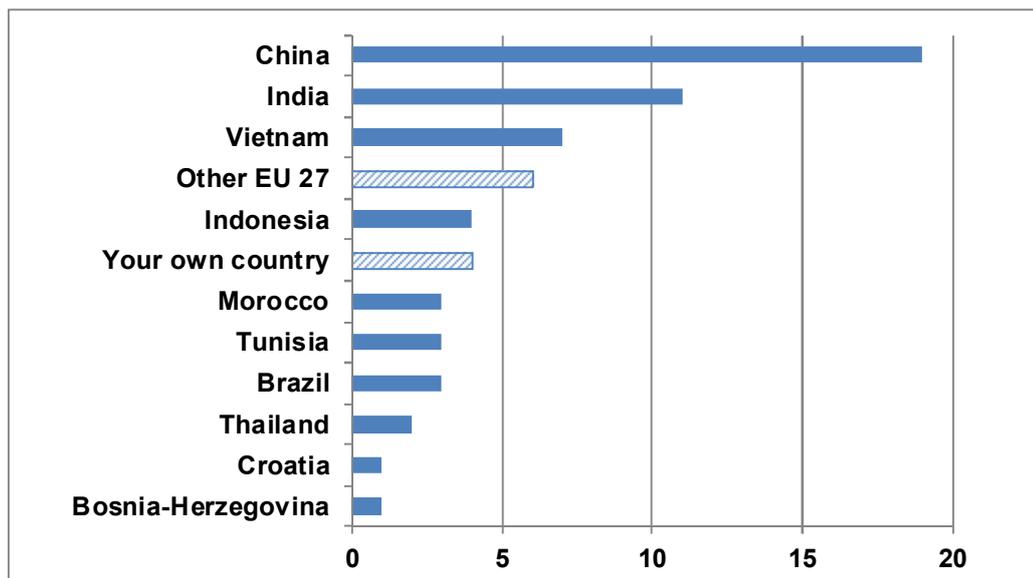


Figure 2.12: Responses from 23 Companies to: *Which competitor countries pose the greatest threat to your company?*

However, while many domestic markets are dominated by low cost imports, EU producers are discovering that they can find markets for (branded) luxury footwear in emerging economies such as Russia, China, Brazil, India and the Middle East. In China and India, the growing wealth implies that half a billion consumers could in future have a similar disposable income to consumers in the EU and USA¹⁵, leading to increased consumption of luxury footwear.

In order to compete on a global level and share some of their costs, smaller producers have been joining with other companies, designers and trade associations to compete with Asian suppliers.

Competition within the EU

Rabelotti¹⁶ identifies three sources of competition from new actors in the footwear sector within Europe:

- in the luxury segment, by high value fashion brands, which added shoes to their product range during the 1990s (such as Gucci and Louis Vuitton);
- from vertically-integrated large fashion chains (such as Zara); and
- a new low priced segment outside the specialist footwear retail sector, with cut-price supermarkets selling very low-price imported shoes (the super-economical segment indicated in Table 2.1).

¹⁵ CBI (2010)

¹⁶ Rabelotti R (2004)

The luxury fashion market went through important changes in the late 1990s and early 2000s, turning it into an oligopoly dominated by a few multi-product giants. The growth strategy of many companies was characterised by a similar pattern: first of all successful firms established their brand names in specific product lines (for example LVMH, Gucci and Prada began producing and selling leather goods), then they capitalised on their brand names and diversified to other segments (in the cases named above, they entered into clothing, footwear, glasses, perfumes, wines) and finally, they have also grown through the acquisitions of other well known existing brands. The economic logic behind these growth strategies is a search for economies of scale in activities other than manufacturing, such as branding, marketing, advertising and retailing.

The entry of such brands into the footwear market introduced a new form of competition for shoe manufacturers focusing on the luxury end of the market. However, it also brought opportunities, as in the case of Brenta, Italy (see Chapter 3 of this report). In this case, the fashion labels outsourced manufacturing of their branded footwear to companies in Brenta. This enabled Brenta companies to remain in business and even expand, as the luxury market has been an area of growth, even through the economic crisis. However, as the fashion labels provide the designs and undertake sales and marketing, this could be seen as a form of functional downgrading for the firms in Brenta.

The second area of competition, from vertically-integrated fashion chains within the EU, is more focused on the lower and medium-range segment of the market. A further development of this area of competition is the trend for large footwear retail chains to develop their own footwear designs and offshore production directly to manufacturers in lower cost countries, either to Asia or to eastern European countries. For example, German retail chains have outsourced production of children's footwear to Poland and ladies fashion shoes to China (see Chapter 3 of this report).

In response to the reduction in footwear prices over the last 10 years, as cheaper imports have become increasingly available (see Section 2.4), the retail chains in the EU have become more powerful. They are introducing new requirements, such as the use of IT based order systems, increased flexibility in deliveries, including an increase in the number of collections per year and fast fashion, and keener prices combined with quality.

2.6.3 Increasing Pace of Fashion-Related Change

Traditionally, the footwear market has made a distinction between two seasons: summer and winter. However, the influence of media and celebrities on footwear styles has meant that EU producers have had to adapt to a more rapid turnover in footwear styles, whereby lead times are greatly reduced. Some producers market more than two collections per year; in some cases, the market requires four or even six collections per year, leading to extreme fragmentation of production batches. Indeed, some retail chains are demanding extremely rapid changes in collections (fast fashion), with delivery times in days or weeks rather than months.

This development makes product life-cycles increasingly short, making it more difficult for producers as well as retailers to keep up with new developments and at the same time trying to get rid of their old stock.

However, the rapid pace of change in collections can also provide an opportunity for EU producers to compete with Asian producers. One response from manufacturers has been to increase offshoring to nearby countries, rather than to China or India, or even to maintain manufacturing processes within their own country, in order to supply smaller quantities and guarantee a time-to-market of two to three weeks. Suppliers are also affected by these changes; for example, many tanneries have become more flexible and can adapt to the rapid changes in demand.

2.6.4 Environmental Drivers

Environmental concerns continue to move up the priority list for footwear producers in Europe. EU legislation is increasing the requirements for footwear manufacturers and their suppliers to take account of environmental issues, which can require investment in new technologies.

For example REACH, the chemicals regulation, will impact the sector by introducing downstream user obligations. The use of large volumes of water by the leather industry in the tanning process is an increasingly important issue. Pollution of the water supply, as well as shortages of water in some countries such as Spain, is forcing major changes to working practices.

Nevertheless, EU producers¹⁷ also see environmental issues as a business opportunity, as Box 2.1 illustrates. A number of companies are manufacturing eco-friendly footwear to gain a competitive advantage against Asian producers. Vegetable tanning¹⁸ is increasingly used, particularly for luxury goods but also in the upper-medium segment, where clients are more environmentally aware (for example in Germany).

Box 2.1: Ferragamo's Eco-friendly Footwear
Salvatore Ferragamo is an Italian manufacturer of luxury shoes and accessories made from high-quality leather and skins. Ferragamo has produced an eco-friendly range of shoes using sustainable and bio-friendly materials. For example the sole of the shoe is made of a bio-friendly rubber material. The manufacturing process is eco-friendly because the skins are finished using a new water-tanning process, as opposed to chemical dyes, and water-soluble adhesives, in place of glues, to eliminate the harmful waste typically associated with the shoe-making process.
<i>Source: Kissel W (2010)</i>

¹⁷ Kissel W (2010)

¹⁸ Ellis L (undated)

2.6.5 Counterfeiting and Piracy

Brand and product piracy is a major threat to EU industry. European clothing and footwear companies lose an estimated €7.5 billion per year to counterfeiting¹⁹. In 2010, EU custom officials intercepted over 79 000 cases of counterfeit and pirate products; a dramatic increase from 43 500 in 2009, due in part to a greater use of the internet for consumer purchases. The main intercepted categories included clothing, and footwear. Table 2.13 shows the top five counterfeit goods seized by customs at a global level and at the EU level. It is apparent that counterfeiting is a major issue for footwear manufacturers at the EU level.

Category of Products (HS code)	Seizure ¹ (%)	EU Cases ² (%)
Articles of apparel and clothing accessories (61, 62)	30.6	38.2
Electrical machinery and equipment, telecom, equipment, sound and TV recorders (85)	26.8	20.5
Articles of leather, saddlery and harness, handbags, articles of gut (42)	7.9	5.1
Footwear, gaiters, etc. (64)	5.4	23.4
Tobacco and manufactured tobacco substitutes (24)	5.4	0.1
<i>Sources:</i>		
1. OECD (2008)		
2. European Commission (2011)		

Table 2.14 shows that, in 2010, footwear accounted for nearly one quarter of the reported cases, with 2.5 million pairs of shoes seized, at a retail value of over €166 million²⁰. Similarly, a 2011 US Customs and Border Protection report²¹ indicates that footwear was the top commodity seized (for the fifth year in a row) in 2010, accounting for more than 24% of the total IPR seizure value (around \$46m in domestic value). For both sports shoes and other types of shoes, the vast majority of confiscated products (95% and 83% respectively) come from China.

	Number of Cases	% of Total	Number of articles*	% of Total
Sport Footwear	3,631	4.6%	1,444,230	1.3%
Other Footwear	14,919	18.8%	1,160,589	1.1%
* One pair is counted as one article. <i>Source: European Commission (2011)</i>				

¹⁹ ICC (2005)

²⁰ European Commission (2011)

²¹ US Customs and Border Protection & US Immigration and Customs Enforcement (2011)

2.6.6 Costs and Financing

The growth of international competition has meant that cost competitiveness has become one of the most critical drivers of the sector, focusing attention on efficiency in the management of the supply chain as well as internal production mechanisms.

Industry respondents to our survey were asked to comment on changes in the costs of production in recent years. Most companies indicated that production costs had increased by 25-50% over the past five years (see Figure 2.13), which is also consistent with the responses from the industry associations.

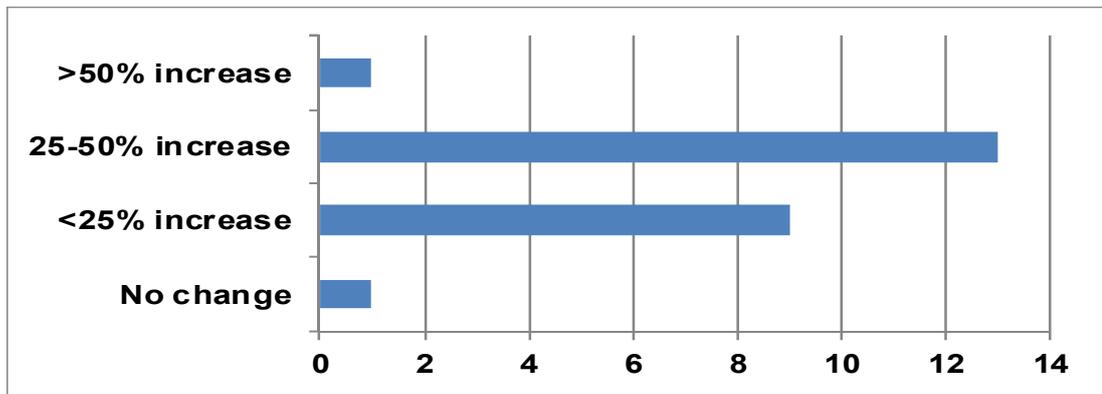


Figure 2.13: Responses from 24 Companies to: *Have the costs of production changed significantly over the last 5 years?*

Such increases were mostly associated with increases in raw material costs and labour costs, as indicated by Figure 2.14.

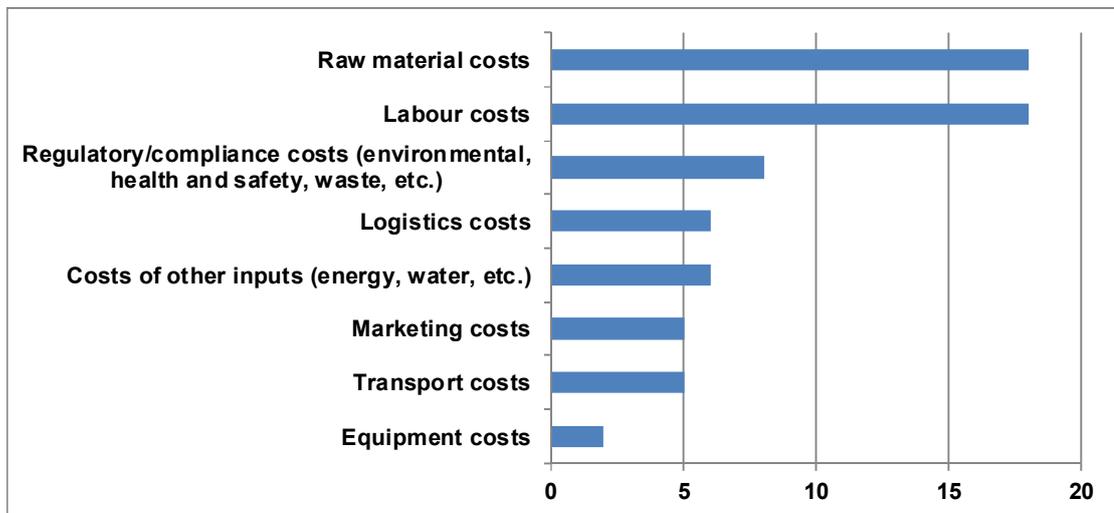


Figure 2.14: Responses from 24 Companies to: *Among the different costs faced by your company, which one(s) do you believe are the most challenging?*

Production costs in the footwear sector have traditionally been ascribed mainly to labour costs. Labour costs have substantially increased in most European countries in recent decades, both absolutely and relatively compared to Asian countries. European footwear companies have responded either by seeking lower waged production within the EU, for example through outsourcing to nearby home workers, or seeking compensation for high wages by focusing on higher-priced market niches.

As footwear production is so heterogeneous, though, non-labour costs can be even more important. These include costs of technology (through investments in automation and replacement of labour) and costs of entry into new sales channels. The costs of raw materials, particularly of leather, have also increased significantly. For example, leather prices have increased in Germany by 7.9% since the 2000s. According to the leather industry association, Cotance²², this is because prices of raw hides and skins have rocketed since the beginning of 2009 reaching unsustainable levels risking jeopardising the incipient post-crisis market recovery. Figure 2.15 shows the general monthly index of prices for raw hides and skins from March 2009 to September 2010.



Figure 2.15: General Monthly Indices for Prices of Raw Hides and Skins
 Source: Cotance (2010)

²² Cotance (2010). **Cotance Council Calls on the European Commission for Urgent Action in the Area of Leather Industry Raw Materials.** Press Release, Cotance, October 2010.

Adequate access to finance is crucial for the growth of companies in the EU. A Flash Eurobarometer, conducted in 2009²³, showed that a considerable proportion of SMEs did not have sufficient finance to enable them to complete their projects. Three in ten companies considered that there had been a reduction in the willingness of banks to provide loans in the six months prior to the survey; however, 8% reported that banks were more willing to provide loans in 2009 than in 2008. A similar picture emerged when looking at access to public funding support mechanisms.

The 24 companies responding to our survey which had reported making investments had used self-financing and banks as the main private sources of financing (see Figure 2.16). This finding was supported by the case studies (see Chapters 3 and 4). Of these, 14 had also used public sources of funding, including regional/national government funding as well as the European Social Fund (see Figure 2.17, over page).

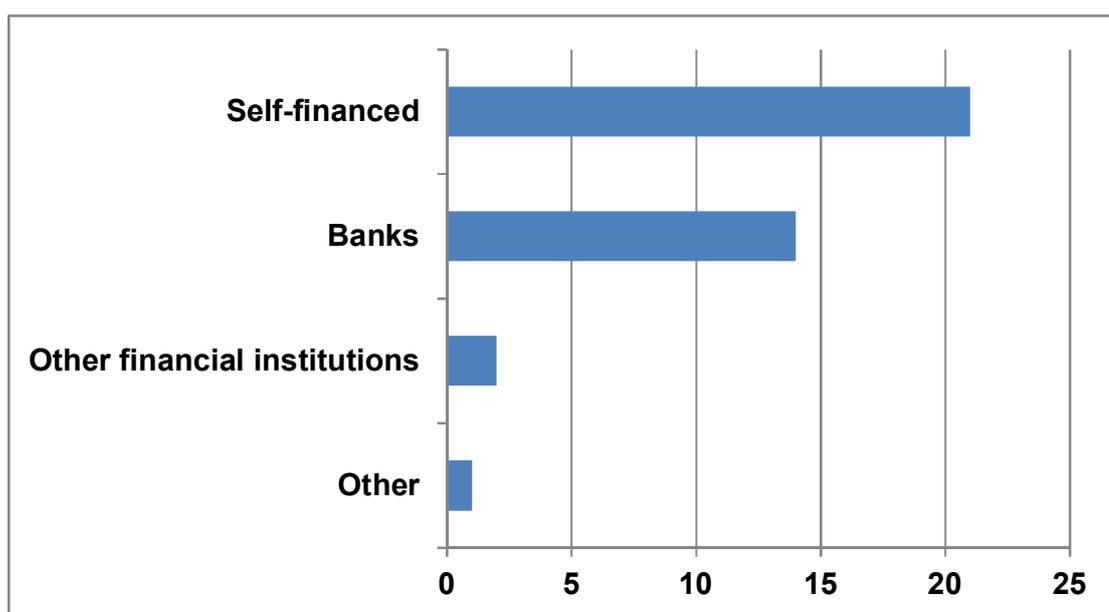


Figure 2.16: Responses from 24 Companies to: *How were these investments funded? Please tick all the 'private' finance sources that you have used*

²³ European Commission (2009a): the Flash Eurobarometer Access to Finance report was commissioned by the European Commission's DG Enterprise and Industry, in partnerships with the European Central Bank (ECB). It was set up to measure EU companies' use of various sources of finance, to assess the extent to which companies face difficulties when it comes to accessing finance and to study companies' expectations in terms of financing their future projects and developments.

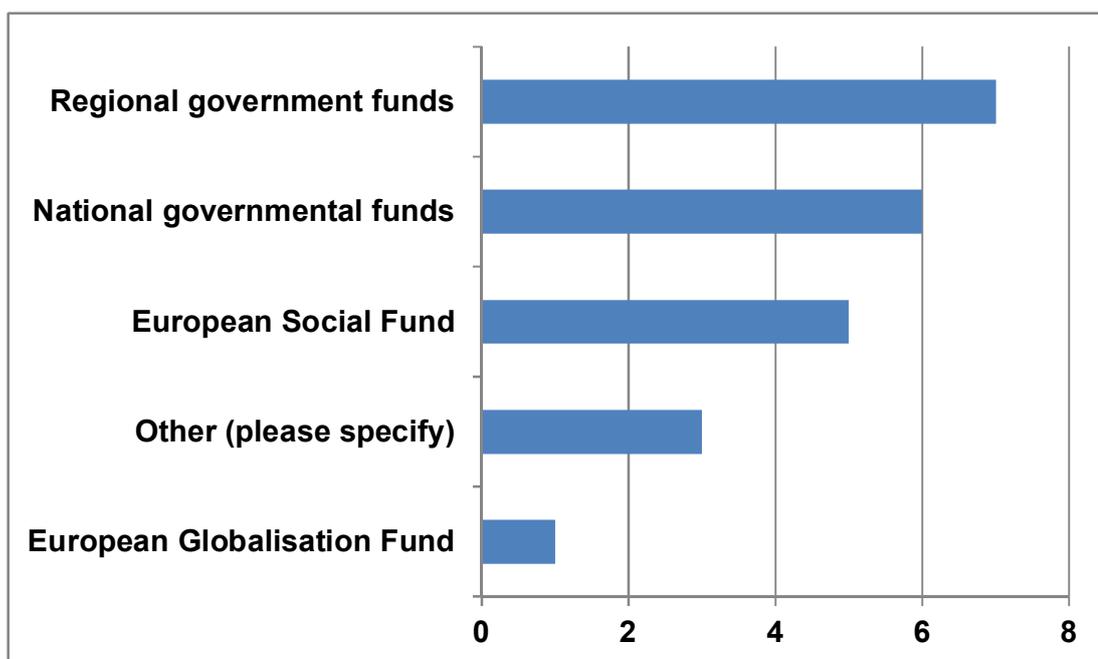


Figure 2.17: Responses from 14 Companies to: *How were these investments funded? Please tick all the 'public' finance sources that you have used*

2.6.7 Availability of Skilled Staff

The development of new products, the need for more efficient production and changes in sales channels mean footwear businesses are faced with the need for new improved skills and techniques. However, a shortage of skilled staff was a growing issue in many of the case study regions. A major contributory factor to the lack of skilled staff is the historically low wages that are paid in the industry and the resulting failure to attract workers from other industry sectors.

Around 40% of the companies responding to the EU survey indicated that they were experiencing skill shortages. All but one of the responding companies provided training, and full-time training in-house and/or apprenticeships were provided by nearly half.

The report on the task on SMEs found that, historically, it has been the larger employers who have led in training and development activities, as smaller companies have found it difficult to finance the training of employees. Small companies have relied on hiring employees who have already been trained by larger companies. However, as the number of larger employers contracts and training budgets are cut in response to tough market conditions, smaller employers can no longer rely on this source of trained staff and must look to develop skills within their own businesses. The issue of training is discussed in detail in Chapter 5 of this report.

2.6.8 Future Challenges

The literature indicates that the current challenges faced by the footwear industry will continue to be significant in future. Respondents to the EU survey were also asked to identify the challenges they foresaw for the next five years. Company respondents essentially identified the same challenges (across all company sizes) as had been faced between 2006 and 2011 (see Figure 2.18). The costs of production once again identified as the biggest challenge; the next most identified challenges were availability of skilled labour, competition, finding customers, development of new products and access to new markets, which are the same as those identified over the past five years (although in a different order).

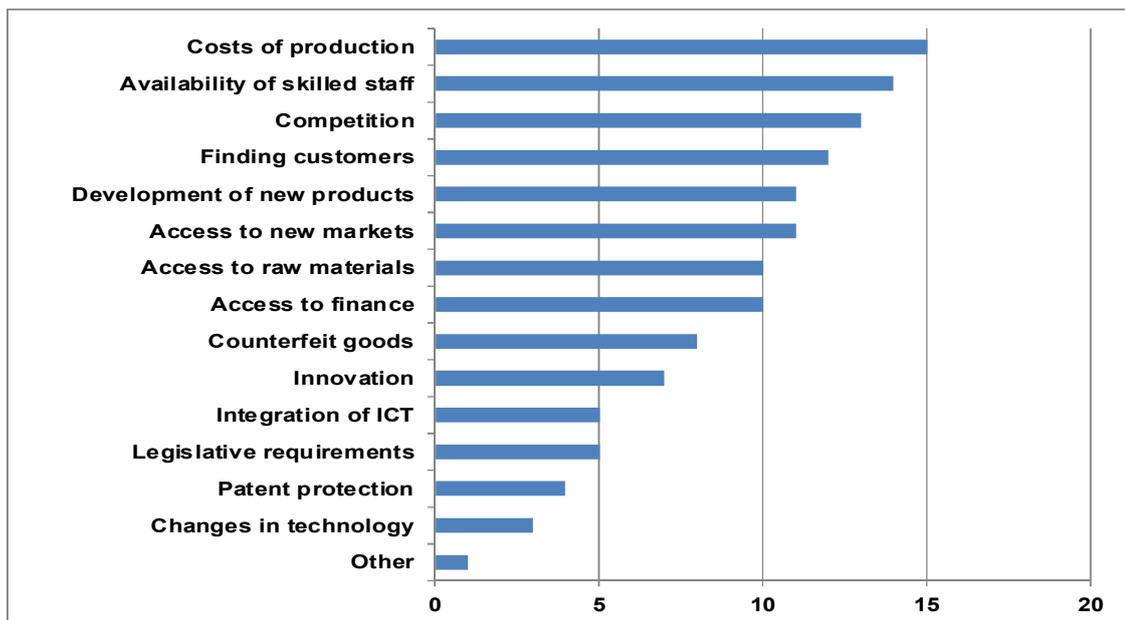


Figure 2.18: Responses from 24 Companies to: *Which challenges will your company face in the next 5 years?*

EU footwear companies will continue to face challenges from high costs of production and competition from developing economies. However, evidence suggests that EU producers are discovering that they can find markets for (branded) luxury footwear in emerging economies such as the BRICs. Table 2.15 shows the scale of footwear consumption and imports in these countries in 2010. Nevertheless, entry into these markets may require different marketing and distribution strategies. For example, German comfort footwear manufacturer Josef Seibel has opened a ‘Josef Seibel and Friends’ multibrand store in Moscow, selling a large range of its own footwear, together with a further 8 to 12 German and Austrian brands which have similar qualities.

Table 2.15: Footwear Consumption and Imports in BRICs, 2010

Country	Footwear Consumption		Footwear Imports	
	Million US\$	Million Pairs	Million US\$	Million Pairs
Brazil	11 158	780	305	29
Russia	n/a	381	3 769	336
India	n/a	2 034	100	89
China	n/a	2 700	846	33

Source: APICCAPS, 2011b

In China and India, growing wealth implies that half a billion consumers will soon have a similar disposable income as consumers in the EU and USA²⁴, providing a potentially significant market for luxury footwear.

Respondents also identified access to raw materials as a significant challenge in the future. Leather continues to be the primary material for the majority of shoes sold in Europe. However, footwear has seen its share of the leather market fall since 1998 due to increasing demand from the leather goods and automotive sectors. In parallel with this, the amount of leather on the market is reducing due to a reduction in meat consumption.

2.7 The EU Footwear Industry in 2020

2.7.1 Factors Affecting Future Development of the Industry

Based on the information gathered for the case studies, it is possible to make some tentative predictions of the shape of the EU footwear industry in 2020. However, the predictions should be treated with caution, given the unpredictability of a fashion-driven industry.

A range of external market and supply chain factors will influence the future of the EU footwear industry. These include:

- the *extent of recovery of the EU (and World) economy*. The overall footwear market, particularly the luxury end, has remained relatively unaffected by the financial crises and continuing uncertainty. However, markets in some EU countries (such as Spain, Portugal and Greece) remain constrained, with a focus on the lowest-price footwear segments where it is most difficult for EU production to remain competitive;
- the *development of markets in China and India*. Growing demand for footwear in these countries, linked to increasing affluence, may encourage producers to focus more on domestic production than export. This may contribute to closing the gap in production costs between these countries and the EU;

²⁴ CBI (2010)

- *fashion changes*: the fashion sector is subject to significant and largely unpredictable changes. Apparently small changes can result in major impacts on footwear production and distribution. For example, the growth of marathon running as a hobby increased the demand for both cheaper and more appropriate running shoes and hastened the rate at which footwear production moved to China and elsewhere in Asia to take advantage of lower labour costs and volume production;
- the significance of *environmental and social issues* to customers. Whilst the environmental lobby has yet to make any significant impacts on the footwear industry, in some countries there is rising interest in ‘green’ products and socially-responsible production. This, together with concern about the carbon footprint of imported products, could make footwear produced within the EU more attractive;
- impacts of the *ageing population* and growing interest in shoes which offer comfort, protection and safety to users. Producing such footwear requires increasingly sophisticated production techniques to ensure quality, which may favour EU production; and
- *increasing costs and the time-lag of long-distance transportation*: rising fuel costs and the need for reduced time to market in response to fashion changes could also increase the attractiveness of EU production. Despite the growth of an infrastructure in Asia to supply components and materials, product development and commercialisation still takes longer than in the EU.

These influences are unlikely to cause major changes in the structure of the global footwear industry individually but, together, may result in a number of changes to the EU footwear sector from 2012 to 2020.

2.7.2 Most Likely Scenario

Our most likely scenario is based on demand for footwear in the EU recovering from the economic crises, as it has appeared to do since 2010, together with growing demand for luxury footwear in BRICs and other non-EU markets. Fashion would remain an important influence, with a desire amongst consumers for recognisably different footwear.

Under this scenario, manufacturers in countries such as Spain, Portugal and Italy could retain their current levels of production in the higher price/higher quality market segments, focusing on fashion. Shoe companies in the ‘northern’ EU states would continue to rely on offshoring of production, but with production of premium products and/or high fashion footwear returning to lower-cost European producers such as Romania and Bulgaria and the Balkan states. Some such companies are already beginning to adopt such an approach, through:

- bringing partly-made shoes into Europe from China and completing the assembly on demand;

- expanding their existing EU facilities and acquiring existing production facilities in lower-cost European countries;
- making premium products in Europe under a high-value brand supported by volume production from China; and
- exploring the marketing of footwear tailored to specific customer needs (so called ‘mass customisation’).

The result of this scenario could be a gradual increase in the volume and value of shoes made in the EU, focusing on high value/high fashion brands and mid-range footwear with particular niche attributes, such as having health and comfort benefits or being environmentally-friendly, whilst retaining an element of fashion.

It will rely on product development skills, including expertise from other disciplines (such as medicine), for comfort and health-focused products, increased production flexibility, better systems for forecasting and managing stock levels and closer cooperation/integration of the logistics and distribution chain. It is also likely to be accompanied by further changes in sales channels, with the emphasis on offering better service to the consumer.

2.7.3 Pessimistic Scenario

A pessimistic scenario would envisage little or no recovery in the EU or world economy. This could lead to stagnation or contraction of overall demand within the EU footwear market, with mass sales restricted to the lowest price bands and little or no growth in the premium price ranges. The economic situation would limit consumers willingness to pay for niche or environmentally-friendly products. Continued constraints on accessing finance would limit EU producers’ ability to invest in product innovation or increased production flexibility, which could result in an inability to increase exports of premium products to the BRICs and other markets. This would result in:

- a further reduction in output, numbers of companies and employees in Italy, Spain and Portugal in favour of offshoring to lower cost locations in Europe (e.g. Bulgaria, Romania and the Balkan countries) or outside to countries such as Ukraine or countries in North Africa. This would be accompanied by a gradual loss of service competences, such as logistics and distribution;
- the last remaining production in ‘northern’ Europe would also be offshored, mainly to China or other Asian countries, with the risk that design and development competencies could follow. There would be increasing vertical integration of distribution and logistics, leading to further concentration in this sector; and
- as a consequence of these changes, the EU footwear market would be largely dominated by imports. There would be an almost complete loss of manufacturing skills in the traditional footwear regions, accompanied by the closure of training courses and institutions. There could also be a severe impact on the RDI infrastructure. However, there would be potential for expansion of production (at

least in the short term) in Bulgaria and the candidate countries in the Balkans, which would require investment in training.

2.7.4 Optimistic Scenario

In the optimistic scenario, economic growth and hence demand for footwear in the EU would recover more quickly than in the ‘most likely’ scenario. There would also be a growing demand for luxury footwear in BRICs and other non-EU markets. Fashion would remain an important influence, with a desire amongst consumers for recognisably different footwear. This would increase demand for higher-value and niche products, enabling the production of footwear with environmentally-friendly, comfort and design properties. Under this optimistic scenario, the focus of producers in China could switch increasingly to domestic markets, further reducing cost differentials between offshore and EU production, especially when transport costs and impacts, and the need for ‘fast fashion’ are taken into account. Under this scenario:

- manufacturers in Spain, Portugal and Italy could expand their current levels of production in the higher price/higher quality market segments, focusing on fashion. They could begin selling products within their national markets, as well as to those in other Member States and export markets;
- shoe companies in the ‘northern’ EU states would return production of premium products and/or high fashion footwear from China to lower-cost European producers such as Romania and Bulgaria and the Balkan states at a more rapid rate, and would retain some production within their home countries;
- training of footwear industry employees would expand, focusing on both traditional skills and competencies in design, production management, logistics and marketing, in both traditional and lower-cost production countries, focusing on attracting young people into the industry;
- investment in RDI could increase, in order to fulfil the demand for higher performance products, as well as ensuring flexibility of production, to meet the needs of ‘fast fashion’ and customised products; and
- footwear retailing would develop further, for example with retail outlets linking foot scanning to the choice of product, with the option to display a virtual image of the product then order it for home delivery. This could be accompanied by manufacturers developing their own internet sales platforms, rather than relying on existing platforms, to have greater control over the product offering and prices.

2.7.5 Conclusions

There is considerable uncertainty over which of the three scenarios the European footwear industry will follow in the period to 2020, given that many of the factors which influence the scenarios are outside the control of the footwear sector. Nevertheless, we believe the ‘most likely’ scenario is a plausible one, and appears to be closest to the expectations of the industry itself.

3. RESTRUCTURING AND MODERNISATION

3.1 Introduction

3.1.1 What is Meant by Restructuring

The term ‘restructuring’ has become used in many social sciences as a catch-all word for all types of actions in reorganising economic structures. These actions may take place at various scales:

- from a micro-economic perspective, at the firm level;
- from a meso-economic perspective, to systems of firms (clusters, partnerships, sectors); and
- from a macro-economic perspective to nations and world regions.

A sectoral analysis, such as this one on the footwear industry in Europe, primarily focuses on the meso-level but requires a closer understanding of the micro-level, which was the focus of the case studies undertaken for the task on restructuring and modernisation.

At the sectoral, regional and national scale the term restructuring was largely used during the 1970s and 1980s when industrialised economies faced a competitive squeeze from newcomers²⁵. It primarily had a defensive connotation, more concerned with reaction to emerging threats than pro-active shaping of the future. When looking at the outcomes, however, it is not easy to decide whether they are the result of reaction or pro-action. Focusing on the firm, Porter²⁶ suggested three types of strategy which result in restructuring of the company: cost leadership, differentiation and specialisation. In reality, however, there are different mixtures of these strategies.

3.1.2 Restructuring in the Footwear Sector

Literature on the footwear sector in Europe and the USA has a common understanding that the sector is an old industry characterised by low technology and high labour intensity in production, subject both to mass production (in large units), and flexible production (in small units), but mainly driven by cost-leadership strategies²⁷.

During the 1970s and 1980s, such industries were subject to what was called the New International Division of Labour (NIAT²⁸). Labour-intensive industries, mostly in the consumer industry sectors, learnt to separate production processes into capital-intensive and labour-intensive activities, the latter susceptible to relocation to low wage countries. This gave rise to offshoring of parts production (such as upper

²⁵ See, for example, the introductory text in Ruigrok and van Tulder (1995)

²⁶ Porter (1990)

²⁷ See, for example, Scott (2006)

²⁸ See Fröbel *et al.* (1980)

stitching) to other countries with lower production costs by large companies, while final assembly of the shoe largely remained in western industrial countries. Some socialist countries, such as Poland, Hungary or the former German Democratic Republic, were integrated into this capitalist spatial division of labour during the 1980s.

The effect of such changes was detrimental to employment at the traditional production sites of companies and in the traditional production regions and nations. Employment in production has declined while employment in all kinds of services has increased within most companies. However, it is extremely rare that companies in a region which has lost most of its footwear production to other regions are able to completely replace the lost employment through non-production activities such as design, production planning and supervision, supply chain management and sales organization.

Unlike the general trend, where a move to a more service-oriented economy is expected to benefit women, the gender impact of this change has been mixed. This is because traditionally, there has been a strong gender divide in production, with women filling mainly unskilled or semiskilled manual roles (e.g. stitching) while men were responsible for the more skilled production steps involving machinery. This division is still clearly visible today in the plants we visited. The initial shift to services (e.g. production planning, supervision and logistics) required skills and the type of production knowledge mainly held by men, who took these new roles. In addition, responsibility for sales (to wholesalers and retailers, involving extensive travelling to visit customers) was traditionally a male role. Even design was largely male-dominated, and only recently have female fashion designers begun to play a role. However, the numbers of such roles are small.

The 1990s and 2000s saw a new phase in the changing global division of labour, due to the appearance of China on the world markets, major reforms in South Africa, India, Indonesia and the opening of Eastern Europe²⁹. New phenomena included the rise of contract manufacturing, in the emerging “buyer driven” global value chains³⁰, and the increasing participation of SMEs in outsourcing of production within the region or offshoring to other countries. A multiplicity of factors combined to enable remote production and long-distance trade in consumer goods, such as the increasing competence of newcomers in manufacturing complete products, new forms of cross-border regulation (including regulation of contracts), reduced international transportation costs and reduced information costs through innovation in IT.

It has become clear that the common perspective on the global division of labour is too much oriented towards production in its true sense and tends to neglect the societal embeddedness of production (as discussed in the cluster concept) and, in particular, the increasing importance of having a local presence in the market³¹. One of the reasons is that footwear has largely changed its character from ‘Ford-type’

²⁹ McCann and Acs (2011)

³⁰ Gereffi *et al* (2005)

³¹ Gertler (1995)

mass production to flexible customized production. This can take two forms; either producing single pairs on demand, mainly in the segment of men’s formal shoes or orthopaedic shoes, or extending the number of collections per year, i.e. mass customisation, mainly in the women’s fashion shoes segment.

As a consequence, different approaches to restructuring at the company level can have different drivers. While some authors³² suggested a simple dichotomous typology of some footwear companies sticking to well-known technology and products but relocating to low cost locations and others (mostly suppliers) changing products and technology but sticking to the region, the actual strategies of footwear companies are much more diverse. This is particularly the case when analysing companies in different European countries, producing in different societal environments, which determined the particular regional or national development paths of footwear clusters and companies. Corresponding to the current debate in evolutionary economics, heterogeneity in strategies is to be expected among footwear companies, not similarity³³.

3.2 Restructuring Models

3.2.1 Typology of Restructuring

The European Restructuring Monitor, based at the European Foundation for the Improvement of Living and Working Conditions (Eurofound) records restructuring announcements in establishments, based on media reporting. Eurofound has developed a typology of restructuring, which is shown in Box 3.1.

Box 3.1: Typology of Restructuring used by Eurofound
<i>Relocation:</i> When the activity stays within the same company, but is relocated to another location within the same country
<i>Outsourcing:</i> When the activity is subcontracted to another company within the same country
<i>Offshoring/delocalisation:</i> When the activity is relocated or outsourced outside of the country’s borders
<i>Bankruptcy/closure:</i> When an industrial site is closed or a company goes bankrupt for economic reasons not directly connected to relocation or outsourcing
<i>Merger/acquisition:</i> When two companies merge or during acquisition, which then involves an internal restructuring programme aimed at rationalising an organisation by cutting personnel
<i>Internal restructuring:</i> When a company undertakes a job-cutting plan, which is not linked to another type of restructuring defined above
<i>Business expansion:</i> where a company extends its business activities, hiring new employees
<i>Source: European Commission (2012)</i>

³² such as Schamp (2005)

³³ This is common understanding in evolutionary economics since the seminal work of Nelson and Winter (1982)

The typology is focused on the impacts of restructuring on employment within particular EU locations. In practice, the restructuring activities of footwear companies do not always fit neatly within this structure:

- *relocation* within the same company and *outsourcing* within the same country are relatively rare in the footwear sector (although sub-contracting parts of the manufacturing process within a cluster still occurs in Portugal, Spain and Italy, this is a long-term phenomenon and not linked to recent market challenges as such);
- *offshoring* (also termed *delocalisation* by Eurofound) can take a number of different forms. These can include ‘near shoring’, with relocation to EU Member States (such as Romania) and proximity countries (such as Tunisia) or ‘far shoring’ to distant countries such as China and India. Offshoring can also be combined with outsourcing, through subcontracting of labour-intensive activities (such as upper stitching) either near shore (e.g. early outsourcing to low-cost European countries such as Portugal in the 1980s, Eastern Europe and even North Africa since the 1990s) or far shore (to non-EU and non-neighbouring countries such as China);
- *bankruptcy/closure*: most company closures in the sector are a consequence of bankruptcy;
- *merger/acquisition*: this may be linked to business expansion or, commonly in the footwear sector, takeover of a company following its bankruptcy by another; and
- *internal restructuring* in the footwear sector generally involves modernisation through measures to improve productivity, such as innovation in process technologies or improved management practices. This may or may not involve job-cutting.

In this study we have therefore modified the Eurofound typology set out in Box 3.1 by focusing more on the internal restructuring of the footwear companies and the destination of offshoring strategies in more detail. Internal restructuring is intended to increase the company’s chances of survival, to improve its productivity and, hence, its competitiveness.

Where offshoring investments are directed is important, as near-shoring supports the sector’s sustainability within Europe while far-shoring most often results in reduced footwear production in Europe. However, far-shoring is also a strategy for gaining access to foreign markets, particularly in the sports shoe sector. It appears that some of the larger men’s and women’s shoe producers are currently trying to follow a similar global market strategy to that adopted by the sports footwear sector. By far the majority of European producers, however, are oriented towards (regional) European markets³⁴.

³⁴ APPICAPS (2011b)

Table 3.1 compares the classification used by Eurofound³⁵ with the detailed types of restructuring activities identified in the case studies.

Table 3.1: Types of Restructuring Activities	
Eurofound (EU Restructuring Monitor)	Typology Used in this Study
Internal restructuring	Operational restructuring: New process technologies New process organisation New IT based process management
	Product restructuring: Innovation in products Entering into new market segments Establishment of brand Takeover of brand
	Reorganisation of sales channels: Opening new sales channels Investment in downstream integration or in upstream integration
Relocation Outsourcing, Offshoring/ delocalisation	Locational restructuring: Near-shoring: offshoring (via outsourcing or in own factories) to nearby countries within the EU and at the borders of the EU Far-shoring: offshoring/outsourcing to distant countries, mostly in Asia
Bankruptcy /Closure	Closure
Merger/Acquisition	Merger and acquisition of other companies

There are two key points to note:

- current company restructuring in the European footwear sector mainly concerns small and medium sized enterprises in the women’s and men’s casual and formal footwear subsectors. Large footwear producers are found mostly in the sports footwear sector, which is dominated by global brands such as Adidas or Puma, and in the footwear retail sector, where large retailers such as German companies Deichmann or Wortmann (the holding company which owns the Tamaris shoe retail chain) have also moved into footwear production outside the EU;
- types of restructuring can be combined in different ways. In theory, the literature in social sciences has differentiated between two approaches to restructuring:
 - a ‘low road’ approach based on a strategy of competition primarily on the basis of price, offshoring production to low wage countries, both near and far; and
 - a ‘high-road’ or higher added-value approach, competing mainly on quality and design, based on strategies of diversification and innovation through

³⁵ European Commission (2012a)

internal restructuring, business extension together with offshoring. High road approaches also rely on regional and national institutions fostering, for example, partnerships in education and training and RDI through non-profit institutions

However, these are ideal-type strategies. In practice, restructuring involves a host of hybrids and is highly heterogeneous.

At the meso-level, restructuring of the sector is related to the trajectory of an old industry, where exits (either through bankruptcy and closure or complete relocation to low cost countries) prevail, although a few firms based on new concepts in product and process technology may enter the sector. Furthermore, takeovers may consolidate the sector and enhance companies' access to the final consumer through adding more brands and/or new sales channels to the company's portfolio. The meso-level perspective adds more actors to the restructuring concept, for instance informal and formal partnerships in a cluster, third parties such as educational and training institutions or research institutions, and policy agents from very different scales of government.

3.2.2 Operational Restructuring

Operational restructuring in the European footwear sector tends to support and enhance other restructuring activities. The EU survey indicated that improved product quality and customisation were amongst the measures most widely adopted by companies to address the challenges they face. Operational restructuring can be a key aspect of this. For example, changes in the organisation of production to allow for smaller production runs and greater variety can help companies to meet the challenge of fast fashion and customisation. Operational restructuring can also assist in enhancing the efficiency of production and helping to manage costs. Production equipment was also one of the main areas of investment made by companies responding to the survey.

The case studies for the task on innovation also confirmed the importance of technological innovation in the production process to improve efficiency and effectiveness. Customisation and environmental issues were key factors to be addressed in technological development, as well as the incorporation of ICT into manufacturing, sales and design.

The case studies for the task on SMEs found that modernisation of IT in production planning and order processing and process flexibility were important for SMEs wishing to move into higher price segments and expand into new (export) markets. For low and medium price segments, improved functional capability and increasing productivity through modern machinery could play a key role in meeting the current challenges.

3.2.3 Product Restructuring

Product restructuring focuses on developing products for new market segments and developing and promoting brands. In general, companies which produce higher-quality products, which have identified niche markets and which are able to compete in export markets are better able to maintain their turnover and profitability.

The EU survey indicated that responding companies had made significant investments in product design and viewed product innovation as a key area of development. Information from the case studies for the task on SMEs indicated that the SMEs most affected by reduced demand are those focusing on domestic markets, which have been hit by the recession, and those producing lower-priced footwear, which is most vulnerable to foreign competition.

Changing Market Segments

In recent years, the general trend in Europe has been for manufacturers to focus on reducing volume but improving quality and innovation. The CBI³⁶ indicates that European footwear manufacturers have targeted niche markets and upgraded to higher price segments. Examples of key directions of product restructuring include:

- **Comfort:** casual footwear has become increasingly popular for the growing group of older people, for example softer leathers, improved fit, warmth, inner soles with linings made from a single piece of leather, fabrics protecting against moisture, membranes, breathable footwear or removable insoles. There is also a trend towards more comfort in evening footwear by using different forms of high heels, allowing easier walking;
- **Design:** the increased role of fashion and design is making footwear production more and more complex; effective links between conception, production, distribution, marketing and sales channels are crucial;
- **Technology:** developments such as mixing different materials to obtain different properties in soles and uppers, new materials for soles to improve comfort and make the design unique and new, more environmentally-friendly adhesives and colours; and
- **Niches:** focus on high-quality market niches like luxury, safety or orthopaedic footwear, which are more diversified and offer greater added value. This may also include bespoke 'made to measure' footwear, recycled footwear, ethical footwear and urban footwear and outsized or specialised shoes.

Respondents to the EU survey indicated that their strategies were very much focused on improving the production and selling of their products through improved design/quality, image/communication/service and product customisation. Positioning their products in the higher market segments and ceasing production of cheaper

³⁶ CBI (2010)

brands are ways in which SMEs in both Emilia Romagna and Valencia SMEs have adapted to increased competition (see the report on the task on SMEs).

Developing Own Brands

The EU is home to some of the world's most prestigious footwear brands, such as Jimmy Choo or Christian Louboutin, as well as clothing brands with footwear ranges such as Prada and Gucci. While many domestic markets are dominated by low cost imports, EU producers are discovering that they can find markets for branded luxury footwear in emerging economies such as Russia, China, Brazil, India and the Middle East.

Footwear industry associations responding to the EU survey noted that maintaining the reputation, image and presence of EU footwear manufacturers, as well as emphasizing the benefits of EU brands in their home markets, was an important area of activity.

The case studies for the task on SMEs demonstrated that strengthening brand identity provides a way for SMEs to expand their markets, for both high-end and lower price range brands. SMEs in both Valencia and Emilia Romagna have adopted this approach successfully (see Chapter 6 of this report).

3.2.4 Reorganisation of Sales Channels

The CBI³⁷ noted that footwear is sold in most EU countries through a specialised distribution route, which is from manufacturer to importer/wholesaler to retailer. This is shown in Figure 3.1 (over page).

With an increase in the quantity of imports entering the EU market, specialist distributors and large retailers have the potential for greater leverage in bargaining with EU manufacturers. This affects manufacturers which otherwise would not be in direct competition with cheaper Asian products because of the different price range of their products³⁸.

As a result, both large producers such as Ecco or Nike and increasingly medium sized producers are trying to avoid distribution via the wholesale sector. They do this through opening their own-brand stores and/or developing shop-in-shop systems to sell their footwear separately within clothing shops, department stores or within multi-brand footwear stores. Examples include Mephisto from France, Ara, Gabor and Seibel from Germany, which all offer shoes in the medium or higher market segment. We also identified examples in Poland. In some cases, for example a comfort shoe manufacturer in Germany, companies are achieving independence from the wholesale sector by investing in and/or purchasing existing footwear chain stores.

³⁷ CBI (2010)

³⁸ Interview with the European Association of Fashion Retailers, AEDT, September 2011

Many of the small footwear companies we interviewed still used the traditional approach of using selling agents to distribute their products directly to footwear shops or, in the case of safety footwear in particular, to outdoor clothing shops. This is supported by the results of the EU survey of stakeholders, which showed that the majority of EU footwear manufacturers responding do not own their own-brand stores, but instead sell their products to multi-brand footwear stores or to wholesalers. Although finding customers was seen as a main challenge by respondents to the EU survey, very few had changed their methods of distribution in response.

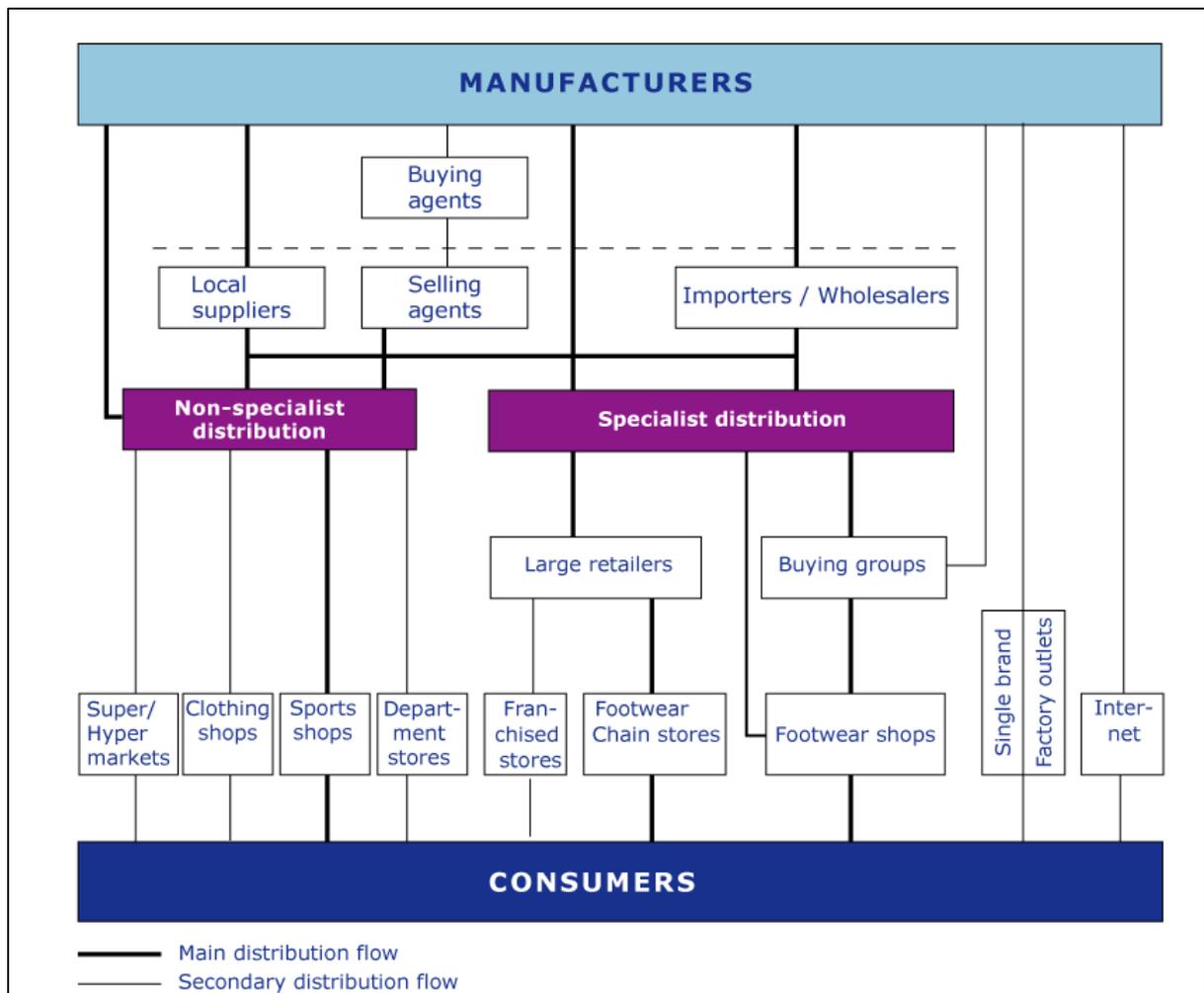


Figure 3.1: Specialised Distribution Route for Footwear

Source: CBI (2010)

Nearly all of the companies responding to the EU survey sell products not only in their own country, but also to other countries, both inside and outside the EU; very few respondents sell all their products in one market. The companies interviewed for the task on SMEs have adopted similar strategies. Almost all Valencia companies were seeking to access new markets outside Spain or to increase their presence in current ones. Most companies had been severely impacted by the contraction of the

national market. Export strategies and access to new markets are also predominant for SMEs in Emilia Romagna.

3.2.5 Locational Restructuring

As noted in Chapter 2, offshoring of high volume footwear production by EU manufacturers, to countries other than their own, has been a trend for several years. Many of the leading footwear brands that originate in the EU have production facilities throughout the world, depending on the location of their main markets. For example, large sports shoe companies like Adidas and Puma utilise contractors in Asia and other developing countries to produce the majority of their products³⁹. Although much offshoring of large volume production has been to China, India or elsewhere in Asia (far-shoring), some companies have maintained at least some of their manufacturing within the EU or proximity countries (near-shoring).

Even where production has been totally or partially outsourced to subcontractors, companies continue to carry out product design and marketing activities in house. These stages are closely related, since designing a successful sample collection requires constant monitoring of the market (taste, demand trend, fashion etc.) and maintaining close partnerships with the retailing system⁴⁰.

For example, near-shoring is a functional upgrading strategy for footwear firms in Brenta, Italy, which specialises in the high-end footwear market for major fashion houses⁴¹. The company has moved low value added activities and products to low wage countries such as Romania, generally through outsourcing, and focusing on production for the luxury market at home⁴². The impacts on Romania of such strategies are examined in Chapter 6.

SMEs in Valencia had made significant use of outsourcing, primarily to other companies within the region (although some had offshored/outsourced to Romania or North Africa). The strong partnerships developed through clusters made this possible. One company had outsourced all activities other than design of footwear and raw material purchasing.

3.2.6 Closure

As a result of locational restructuring and increased competition, there was a continuous reduction in the number of footwear firms in the EU between 1999 and 2009. As noted in Section 2.3, Eurostat data⁴³ indicate that the number of firms reduced by nearly 25% between 2004 and 2009 alone.

³⁹ IBIS (2010).

⁴⁰ Amighinia A & Rabellotti R (2006)

⁴¹ Amighinia A & Rabellotti R (2006)

⁴² Competitiveness (undated)

⁴³ Eurostat (2011)

3.2.7 Mergers and Acquisition

In response to the new competitive environment, Capasso and others⁴⁴ found that firms located within clusters have been forced to achieve greater efficiency by growing in size, through strategies of merger and acquisition and the creation of business groups. Even in a production system where restructuring seems to have come to its end (such as Germany), there is ongoing activity. Companies use mergers and acquisitions either to add new brands (to enter new market segments), often through acquisition of failed companies which owned brands, or to acquire sales channels (for producers) and production plants (for retailers).

For example in Montebelluna, Italy, which has historically specialised in ski boots, multinational groups have acquired a number of historic local brands. Montebelluna-based companies have also acquired foreign brands. The aim of the mergers is to provide companies with a portfolio of products, so that downturns in the ski boot market can be offset by other products, and to combine the marketing and brand management skills of multinational groups with the design and manufacturing skills of local manufacturers.

3.3 Impacts of Restructuring

Although the footwear sector co-evolved with industrialization and urbanization across Europe in the late 19th and early 20th centuries, regional trajectories are quite different. They are dependent upon:

- the situation of countries as forerunners or latecomers in industrialization;
- early and late responses to societal changes such as the shift from Fordist to Postfordist industrial organization;
- low-road (competition based on price) or high-road (competition based mainly on quality and fashion) approaches to restructuring (see 3.2.1); and
- different national policies.

The current literature indicates considerable heterogeneity in the state of restructuring in the footwear sector and its regions. There appears to be a continuum of footwear regions, ranging from:

- regions that have achieved a steady state of restructuring involving a high-road approach (such as in Germany, the Italian districts of Brenta⁴⁵ or Portugal);
- growth regions based on a low-road approach involving offshoring of production from old footwear districts to districts in transition with low wages, such as in Romania⁴⁶ and to some extent Poland;
- shrinking regions previously based on a low-road approach, where costs have increased (such as in Italy and, particularly, in Spain where the impacts of the

⁴⁴ Capasso M, Cusmano L and Morrison, A (2010)

⁴⁵ Amighini, A and Rabelotti, R (2006)

⁴⁶ Crestanello, P and Tattara, G (2011)

turn-around from an earlier informalisation strategy⁴⁷ to a new high-road strategy is still unclear⁴⁸; and, finally

- declining regions (some Italian regions) and demise of clusters, as in France^{49,50}.

As a consequence, recent research on the restructuring in the footwear sector and local clusters highlights major differences in the regional impact of firm restructuring, depending on the heterogeneity of firm strategies, local networking and policies. With the exception of the Montebelluna region⁵¹, restructuring is generally tied to a reduction in employment and the number of companies. However, the decline of the local footwear industry did appear to have been halted in those regions which chose some form of ‘high road’ trajectory.

Overall, restructuring of the EU footwear industry over the last 10 to 15 years has led to steady reductions in production, the number of companies in operation and employment, as shown in Section 2.3. There was a further decline following the financial and economic crisis of 2008 and 2009. However, amongst respondents to the EU survey, some companies were increasing staff numbers (particularly administrative staff and skilled workers) while others were reducing (particularly unskilled workers) and some were staying the same (see Figure 3.2).

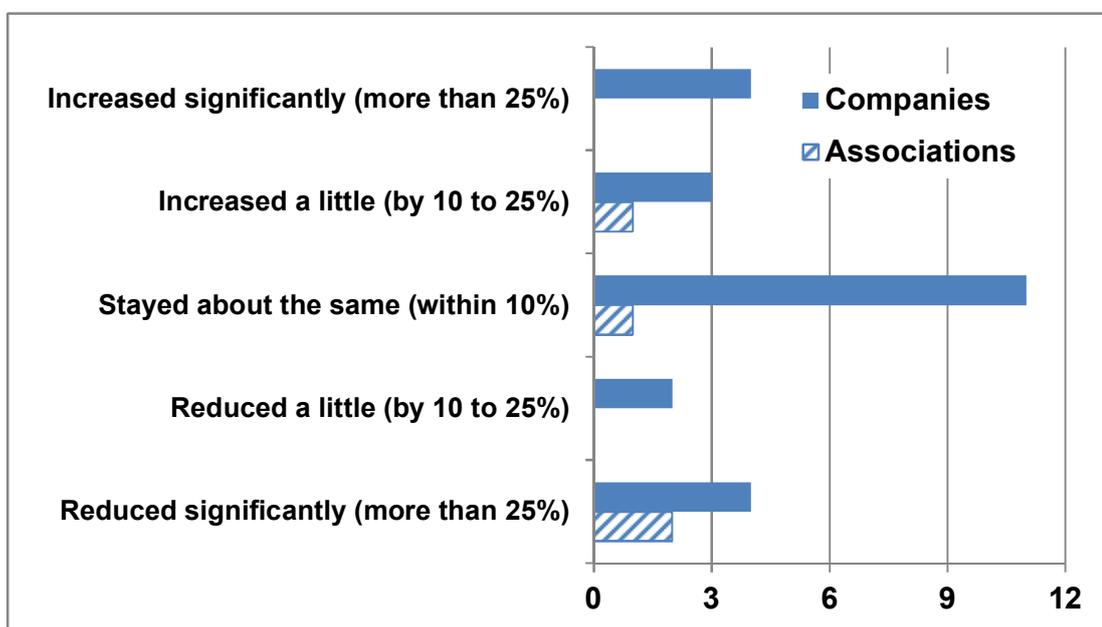


Figure 3.2: Responses from 24 companies and four industry associations to: *Has the number of people you (your members) employ changed in the last 5 years?*

⁴⁷ Ybarra, J A (2000)

⁴⁸ Herrero, G P and Puche, A M (2003)

⁴⁹ Le Bot, F and Perrin, C (2009)

⁵⁰ Courault, M (2006)

⁵¹ Sammarra, A and Belussi, F (2006)

Respondents were also asked what action they had taken in response to the drivers for restructuring. Figure 3.3 shows that the emphasis was very much on high road approaches, such as improved product design/quality, image/communication/service and product customisation.

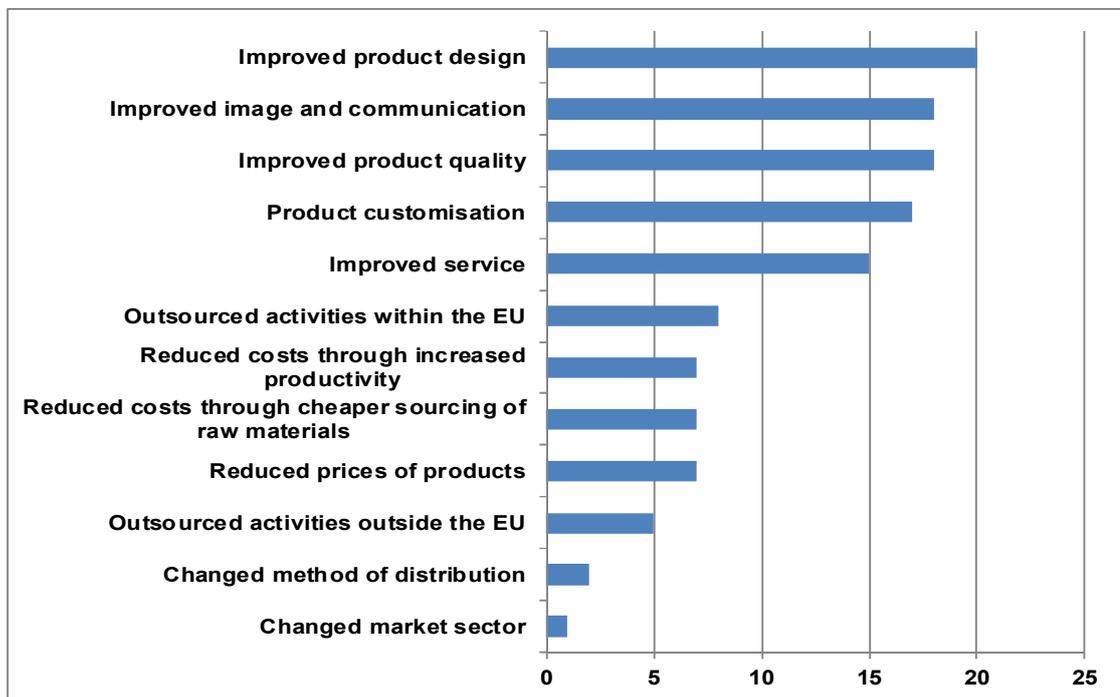


Figure 3.3: Responses from 24 companies to: *What actions have you taken in the past 5 years in response to the challenges facing the footwear industry in Europe?*

3.4 Restructuring Activities in the Case Study Regions

3.4.1 Overall Strategies Identified in the Study Regions

The case studies for the task on restructuring and modernisation covered regions in five EU countries, two from southern European (Portugal-and Italy) two from the Northern European industrial core (France and Germany) and one new Member State (Poland). Each region has followed a different trajectory in restructuring.

The development of the footwear industry in **Norte** from a small-scale, domestically focused sector began in the 1980s when it became an outsourcing location for major brands, in particular from the UK and Germany, adopting a ‘low road’ approach, because of its low labour costs. When these companies subsequently moved their production to even cheaper locations, the industry went through a second phase of restructuring (see Box 3.2). The focus of the industry has since been on exports, because of the small size of the domestic market. By 2012 it was focused on a higher added-value approach of developing brands and improving the quality of products,

together with improving marketing and sales skills, to access high-value markets in northern Europe and elsewhere.

Box 3.2: Stages of Restructuring in Norte

During the 1980s, foreign-owned footwear companies moved into Norte to take advantage of lower labour costs. This contributed to a rapid growth in footwear exports and required local companies to adopt more modern, large scale production methods.

However, the increased ease of importing into the EU in the 2000s saw many of these foreign-owned firms move their production to countries outside the EU with lower costs, particularly China and India. This resulted in the closure of foreign-owned factories and a reduction of output and employment amongst Norte companies that relied on the foreign-owned firms for sub-contracts. The average size of firms reduced. Portugal's footwear exports fell significantly during this period and imports of cheaper shoes grew.

Since 2005, the footwear sector in Norte has adapted to the new market conditions through a strategy focused on innovation, increased development and promotion of own brands based on fashion and quality rather than subcontracting, and the use of technology to improve flexibility. The customer base has widened, with a continuing emphasis on exports. This restructuring has enabled the sector to remain relatively resilient through the economic crisis.

A key factor is that, during the period of subcontracting, Norte companies often produced the full shoe, with limited disaggregation of assembly and upper production. This allowed the companies to continue with integrated production of the full shoe and enabled them to focus their efforts on new functions such as distribution, branding and logistics

Source: Interviews with companies and associations in Norte, October 2011

The footwear industry in **Veneto** has traditionally been focused in clusters of SMEs, based on decentralised production and flexible specialisation. In the last decade, this model has been put under significant pressure by increased competition in international markets. Within the Veneto region, different clusters have adopted different approaches to restructuring (see Box 3.3).

Box 3.3: Varying Restructuring Strategies in Veneto

Montebelluna is dominant in technologies for the production of ski boots and other sports footwear. Companies in the cluster have focused on developing and promoting their own brands, offshoring production to lower labour cost locations whilst responsibility for design, R&D, marketing and sales remains in Montebelluna. As a consequence, the cluster has lost the more standardised end of the manufacturing process but has retained the highest value-added and creative activities. Restructuring has enabled companies to expand their output and turnover rapidly in a cost efficient way.

Companies in Brenta, mainly SMEs, produce medium and high price fashion footwear. They have restructured by subcontracting for major fashion label companies that entered the luxury footwear market in the mid-1990s. This process contributed to increased competition among local firms, accelerating closure of the less competitive. Many firms have merged and small Italian conglomerates have been created. For the firms remaining in business, subcontracting for fashion labels has provided stability and growth, allowing them to remain in the market without having to relocate production to remain cost-competitive. However, their independence has been compromised. They depend on orders from major brands and are finding it difficult to enter the market with their own product.

Source: Interviews with companies in Veneto, October 2011

Competitive pressure has led firms in Montebelluna to grow in size, through mergers and acquisitions, and cut costs through subcontracting labour-intensive operations to countries with lower costs. There is a long history of offshoring production outside Italy, starting with sports brands in the 1960s and extending to all types of production in the 1990s.

Companies in Brenta, by contrast, are at a similar stage to those in Norte in the 1980s, as they are highly dependent on sub-contracting. In contrast to Norte, however, this subcontracting is for luxury fashion brands and is driven more by quality than price. However, companies in Brenta are seeking to adopt a similar approach to those in Norte, with an increasing focus on developing and marketing their own brands ('high road' approach).

This difference between the strategies adopted by the two districts indicates that there is no single approach to success for the footwear sector. Instead, companies need to identify their strengths and potential market opportunities and adapt their strategies to these.

Rhône-Alpes is a region with a traditional footwear industry that has been squeezed out of the market due to high costs and unsuccessful strategies by companies to develop their brands and access the market. Some of the footwear companies in the region became high-quality contract producers for fashion brands and were forced to close when the brands moved their production to other regions, similarly to Norte. This has resulted in a gradual decline over the years, to the point where very few footwear companies remain in the region. The few remaining firms have mainly adopted a 'high road' approach, focused on design and pattern production, with some finishing for the luxury end of the market and niche areas. The market focus is on exports, including exports to China. However, one sports footwear company in the region has adopted the opposite, 'low road' approach, with total offshoring of production to China.

Footwear companies in **Rheinland-Pfalz** have combined aspects of the 'low road' approach, addressing competitive pressures through offshoring the high-cost aspects of production to China and eastern Europe (see Box 3.4, next page) whilst retaining their technical competence and innovation in products.

Box 3.4: Stages of Restructuring in the Rheinland-Pfalz Region

The Rheinland-Pfalz region previously hosted an integrated footwear cluster, of equipment manufacturers, suppliers and footwear assemblers. During the 1980s and 1990s German footwear companies separated production into different steps and outsourced and offshored certain steps, such as upper production to Portugal and eastern Europe and mass production to Asia. The main driver was lower wages in these countries, which reduced costs. This also was the phase of operational restructuring in process technologies.

From the 2000s onwards, the focus was on product quality, design and improvement of own brands and the search for market niches. The drivers were increasing international competition and the decline of the middle range segment in traditional markets.

Currently, restructuring is even more focused on investment in design and product quality, maintaining market niches and increased efforts to ensure access to sales channels. Part of this strategy is to improve production technologies for efficiency in small batch production and fast access to the market. This has resulted in a trend of relocation of production back to Europe (but not Germany) from East Asia.

Source: Interviews with companies and associations in Rheinland-Pfalz, November 2011

The main strength of the Rheinland-Pfalz footwear industry appears to be technical competence in product design. After unsuccessful experiences with targeting market niches, such as ecological and orthopaedic shoes in the early 2000s (with even a firm founded in the 1990s going bankrupt after five years), companies have focused on strengthening their competencies in design, branding and, finally, in investment in their own sales channels (takeover of retail chains, internet retailing). Since the early 2000s, the survival of small brand owners has been put into question, as accessing sales channels seem to have become increasingly difficult. As a result, there has been consolidation through mergers and acquisitions, where family owners acquire groups of brands to target different market sectors.

Southern Poland has followed a similar trajectory to Norte, in moving from mass production to a more flexible approach. However, unlike Norte, the shift from mass product subcontracting to brand ownership ('low road' to 'high road') is still ongoing. Until the end of the 1980s, the Polish footwear industry mainly produced low-cost exports, to both Russia and the EU. The first stage of restructuring was the privatisation of large, formerly state-owned footwear companies. The second stage of restructuring arose when the large companies found it impossible to compete in a market system and many of them went bankrupt and were broken up. From the 2000s, most footwear production in the country has been undertaken by private firms, mainly SMEs. These smaller companies combine some subcontracting for major European brands with development of their own brands. Unlike Norte, Southern Polish companies have followed the strategy of fragmenting production (which enables them to relocate parts of production to Romania or even Tunisia). Furthermore, as the domestic market is still growing, some companies have focused on the local market through establishing brands and improving sales channels.

3.4.2 Types of Restructuring

The different strategies have implications for the types of restructuring undertaken. However, this is also influenced by the resources available to companies and their historical development. One common feature is that it is not a single type of restructuring that is the norm, but a combination of approaches.

The process of **operational restructuring** is very dependent on the strategy adopted, as strategies involving large-scale production of footwear require very different technology from a focus on small-scale, niche production. In Norte, for example, subcontracting for foreign brands led some companies to invest in large, mechanised production lines. This equipment was unsuitable for the move to smaller-scale niche production which followed the loss of subcontracts, and some companies mothballed or disposed of the equipment, as Box 3.5 describes.

Box 3.5: Impacts of Strategy Changes on Technology Requirements
During the 1990s, a company manufacturing casual footwear focused on restructuring of its technology base. This allowed it to increase production through greater automation and to approach new foreign customers as a sub-contractor. It invested heavily (€0.5 million per year) in new technologies. The company was one of the first in Portugal to use water jet cutting, CAD/CAM and automated cutting knives.
When the company downsized in the 2000s, after foreign customers relocated production outside the EU, much of this automated technology was no longer needed. The company switched to producing for its own ladies fashion brand, which required smaller series and larger numbers of styles (around 100 styles per collection, with 700 different combinations of styles and colours). The automatic conveyors were removed from the factory and now production is much more manual.
<i>Source: Interview with footwear manufacturing company in Norte, October 2011</i>

The current focus on niche markets and more fashionable footwear relies on smaller batches and faster response times. This requires innovation in equipment to enable greater flexibility as well as organisation of factories and more effective production management. In Norte and Southern Poland, this has involved the introduction of water jet and laser cutting equipment, while in Rheinland-Pfalz oscillating knife cutters are seen as providing higher quality. IT advances such as CAD/CAM systems have been critical to companies in all of the case study regions in delivering the increased emphasis on design and more frequent changes in collections, or both small and large companies.

For some niche markets, particularly high end fashion footwear, a lack of technology can be seen as an advantage, with brands trading on the fact that footwear is hand made. For example, doing things ‘the old way’, which is increasingly valued by customers, is an important part of the brand profile for some manufacturers in Norte (see Box 3.6, next page).

Box 3.6: Hand-Manufacture as Part of the Brand Profile

All the company's footwear is hand-made for the luxury ladies fashion market. Larger volume models are hand cut using metals knives whilst laser and water-jet cutting are used for smaller volumes. The company has the ability to carry out all aspects of footwear production itself, to reduce its dependence on suppliers. It even has a small in-house leather tanning and dyeing facility (leather is bought in unfinished from all over the world – mainly South America and Asia - and treated in-house). It produces footwear in small batches, with the emphasis on rapid response to customers.

Source: Interview with footwear manufacturing company in Norte, October 2011

Different approaches have also been adopted for **product restructuring**. For companies that continue to manufacture in the EU, primarily SMEs, the focus has been on developing products for niche markets, where price is less of a consideration. Innovative design is a key factor, including rapid response to fashion trends and a greater range of styles and colours. EU manufacturers are also targeting niche markets, such as safety footwear with design and fashion elements, specialist work footwear for hospital staff and shoes for people with foot problems. We also found examples, in Norte and Southern Poland, of sole manufacturers moving into designing and manufacturing their own ranges of footwear (see Box 3.7).

Box 3.7: Progressing from Component to Footwear Manufacture

The company specialises in the production of soles, but in the last 10 years it has also begun to make light-weight injection-moulded men's and ladies' footwear for specific professional markets, such as hospitals. The company was able to compete with imports in this market because the focus is on materials and technology, rather than price (the shoes retail for around €30 - €50).

The aim was to enter a new market using the company's existing systems, expertise in injection moulding and staff. There was a lot to learn to make this step, including adapting the technology (requiring new moulds etc) as well as learning to understand the professional footwear market and how to sell. However, as most of the company's competitors are brands such as Crocs, rather than manufacturers, they have greater scope to innovate. This is still a small project, with only two products, but these were already sold in 20 countries by 2011.

Source: Interview with manufacturing company in Norte, October 2011

Quality and design are also important factors for larger companies. Brands are vital to the sector, although the closure of companies in Rhône-Alpes has shown that possessing an established brand is not sufficient in itself. The approach to product restructuring varies by country and by market segment. For example, shoe producers in Germany have a tradition of comfort in shoes, but are aiming to supplement this by being more fashionable (see Box 3.9). Italy still has the highest reputation in fashion terms and aims to retain this through rapid changes to collections. For sports footwear manufacturers, footwear technology and new materials are the focus of product development.

Box 3.8: Product Innovation Through New Brands

The company aims to produce ‘fashionable, sporty shoes with comfort’, designed to avoid stresses on the foot and remain comfortable through long periods of standing or walking, using specially-designed injection-moulded soles. It has two brands; sporty comfort shoes in the middle-upper price range (€70 - €150) and second brand combining comfort and fashion which it acquired in 2005. It also produces children’s and men’s classic city shoes brands.

The company has started a new fashion brand based on celebrity marketing and in the lower-mid price range (€59-€79). The aim is to raise the profile of the company at a time when retailers are under pressure.

Source: Interview with footwear company in Rheinland-Pfalz, November 2011

Approaches to **reorganising sales channels** also vary according to the overall restructuring strategy and the way the retail market operates in different countries. The key elements are developing new sales channels and new markets. In Norte, companies that had previously focused on subcontracting needed to develop new competencies in marketing when they moved to producing their own brands. This is a barrier faced by companies in Brenta that mainly produce under contract for fashion labels but wish to develop their own brands. Southern Polish companies have a similar barrier, compounded by the relative lack of development of footwear retailing in the country.

Footwear companies have adopted different approaches to marketing. Some companies, both large and small, have decided to open their own stores as a way of developing sales channels, either mono-brand stores or in partnerships with other manufacturers. For small companies, in Southern Poland for example, this can be a single store; for larger companies it may involve setting up or purchasing retail chains. One barrier for companies that have their own stores is that of competition with their established retail customers (see Box 3.9). Companies in Norte, for example, were reluctant to set up their own stores because of concerns that this could reduce sales elsewhere. Another issue is the level of investment required to establish a retail presence.

Box 3.9: Opening of Retail Stores by Footwear Manufacturers

Two manufacturers, one of women’s shoes and one of men’s shoes, used to sell their products via wholesalers. They then decided to cooperate by opening a shop selling both ranges, which of course do not compete with each other.

This appeared to be successful, as it made the companies’ products available to a wider group of customers. However, some drawbacks were identified. These included the fact that the manufacturers were competing with their loyal retail customers and the fact that diverting resources to their own shop limited their opportunity to increase sales elsewhere.

Source: Interview with Polish footwear research centre, October 2011

Although some companies in all the countries of the case study regions are embracing internet retailing, others are more reluctant. One reason for this is concern about competing with retail customers. Some companies instead use their web sites to

inform consumers about the stores where their footwear is available. Others, such as a company in Poland, have used IT to facilitate selling by traditional salesmen; the salesmen use an integrated online ordering system to process sales made to retailers in real time (see Box 3.10).

Box 3.10: Change of Sales Channels from Wholesalers to retailers

In the early 2000s the manufacturer of textile shoes decided to begin marketing to single individual shops rather than selling to wholesale traders, as prices were low with wholesalers.

The company has a regional representative in each of 16 regions of Poland. The representatives have a laptop with an integrated online order system and the managers of shops the representatives visit can make instant orders. On average, each shop is visited twice a week by a representative.

Currently the company has around 1 500 individual customers. The minimum order is 40 pairs of shoes; however, a lower, smaller order can be processed provided the customer pays the delivery costs. The company promises to deliver in between 48 and 72 hours, mainly using two major international delivery companies.

Source: Interview with company in Southern Poland, October 2011

Another concern is the practicality of internet retailing for footwear, given differences in sizing and the attitudes of consumers. One company in Germany noted that the level of returns on shoes sold via the internet is very high; only a few specialist firms have return rates below 50%. Customers tend to order several pairs at once, intended only to buy one pair, as a substitute for trying on several pairs in a shop. However, online retailing does allow companies to be closer to consumers and to understand what the market wants. One way round the practical barriers for shoe manufacturers is to sell via an established online retailer.

At the same time as some manufacturers are moving into retailing, some traders are moving into footwear production. For example, traders in Belgium and the Netherlands import cheap footwear then re-export it with a higher margin. They have responsibility for financing, design, branding, sales and promotion and distribution. Indeed, Belgium has a higher positive export balance in footwear than Portugal, despite having no production. Retailers in Germany, Italy and Spain are also following this route.

Another important focus of reorganising sales channels is a focus on exporting, particularly for manufacturers in countries where the home market is dominated by cheap imports. For example, one of the key features of the restructuring strategy in Portugal is exporting, primarily to other EU countries but increasingly outside the EU (see Box 3.11, next page). Italy has also focused on exports, and remains one of the largest exporters of footwear in the world. Nevertheless, the majority of exports by EU manufacturers are still to other markets within the EU; exports to third countries tend to be niche-based and often related to past ties (for example Portuguese exports to Mozambique and Angola).

Box 3.11: Focus on Exporting

From having a small number of major brands as clients, a ladies fashion footwear company has around 3 000 customers in the EU – mostly in France, Italy and Spain. It aims to have its footwear available in the best multi-brand footwear stores. It has a team of agents selling its products in each country; they travel from shop to shop with samples; this gives very good market feed-back.

As the company produces in small batches, it offers customers the ability to re-stock within three weeks. This enables customers to buy in small batches and has been very successful; they end up ordering more than they would have done in a single larger order.

The company also sells 10% of its output outside the EU, to Japan, Canada, the US, Australia and New Zealand. It made contact with customers in these markets through exhibiting at trade fairs.

Source: Interview with footwear company in Norte, October 2011

Locational restructuring has been a feature of all of the countries of the case study regions. In the case of Norte (in the 1980s) and Brenta, this involved inward relocation, with local companies acting as sub-contractors to major fashion brands. In other case study regions (and Norte in the second phase of restructuring) it involved relocation of production to lower cost areas outside the country.

There are different models of locational restructuring, and individual companies may adopt a range of models at the same time. The models vary in terms of:

- the countries to which production is offshored. This is affected by geographical proximity (e.g. Veneto producers offshoring to Romania and Tunisia, German companies to Hungary and Slovakia, Rhône-Alpes and Norte companies to North Africa) and type of production (mass production to China and India, higher quality fashion and component production to eastern Europe);
- whether the offshoring producer establishes its own factories or outsources via subcontracts. This again can be a feature of geography, with relatively few companies establishing their own plants in China, and also of the financial resources of the producing company. Outsourcing allows for greater flexibility whilst owned factories allow for greater control (which is likely to be more important at the higher-priced end of the market);
- whether the subcontractor works solely for one producer or for several. A number of smaller EU producers noted that being only one of several of a subcontractors' customers could cause difficulties in delivery and quality, if priority was given to other customers;
- whether only component manufacturer is offshored or entire shoe making. A number of companies that have offshored most of their production still assemble or finish footwear in their own countries, partly to control quality and partly to be able to use 'made in' labels; and
- the extent of control that the producer has over design and quality. While the general model is for design and quality control to be retained in the manufacturer's home country, some companies (especially retailers) buy 'ready made' shoes from producers, particularly those in China. We were also told that some retailers ask their subcontractors to copy models produced by European brands.

One interesting development in locational restructuring is the trend by certain companies to move at least some of their production back from China, in particular to the lower cost areas of Europe (see Box 3.12). The main reasons for this are the rising and unpredictable costs in China, together with a shift in focus by Chinese producers to the domestic market, and the awareness that relocation to other (low-cost) countries in Asia, such as Indonesia, means high learning costs at the beginning. At the same time, proximity to the market is increasingly required due to the need for product quality, flexibility, and speed to market and due to changing retail structures.

Box 3.12: Relocation of Offshored Production Back to the EU

A manufacturer of women's, men's and children's comfortable fashion shoes has expanded the production capacity of the plant it owns in Hungary through an investment worth €4.44 million. The boost was necessitated because the group has decided, as a result of increasing costs and more limited production control, to transfer part of its manufacturing back from sub-contractors in China and Moldova to its own plant in Hungary.

The facility in Hungary will produce 8,000 pairs of footwear a day when production is at full capacity. The construction of the newest 1,800 square-metre plant cost over €1 million and the company spent over €3 million on direct injection moulding machines used to produce soles for the groups product ranges

Source: Interview with company in Rheinland-Pfalz 2011; Press release issued 29 May 2011

Closure of footwear companies has been a feature of all of the countries of the case study regions. In Norte, closures were mainly limited to foreign-owned companies, which moved production from Portugal to cheaper offshore locations (see Box 3.13). A number of insolvencies of shoe manufacturers in Poland occurred during the late 1990s, when large state-owned enterprises were privatised. However, the break up of enterprises following insolvency sometimes allowed new companies to be formed.

Box 3.13: Closure of Foreign-Owned Companies in Norte

A UK-owned casual, fashion and children's footwear company first offshored some of its production from its UK base to Norte, Portugal in the late 1980s. It bought one existing factory and, when production was up and running in the early 1990s, it built a new plant on a green field site in a remote country area. The company offshored production to Portugal because labour there was cheap and the company could easily transport leather from UK. The factories were owned by the UK company, rather than being based on subcontracting. In the early 1980s, only stitching was carried out in Portugal. The shoes were then sent back to the UK for finishing, so that they could be marketed as 'Made in the UK'. In the late 1990s, the Portuguese plants also began finishing shoes. The reason for this was their lower costs compared to the UK.

By the late 1990s, it became clear that production in China and India was even cheaper than in Portugal. Productivity in Portugal was also lower than in the UK. The UK company started buying uppers from India to make in Portugal, to reduce its costs. The UK company eventually closed its Portuguese factories in the early 2000s, over a period of two to three years, and moved its production completely to India and China, based on sub-contracting rather than setting up its own factories.

Source: Correspondence with UK owned company, November 2011

Mergers and acquisitions have also been important in several of the case study regions. These include mergers of footwear companies within a region; this has been a particular feature in Veneto, where multinational companies have acquired a number of historic local brands and local companies have also acquired foreign brands (see Box 3.14). It also includes acquisition of bankrupt firms which own important brands, including by purchasers from outside the EU, and acquisition of retail chains by footwear manufacturers. For example, a medium-segment footwear manufacturer in Rheinland-Pfalz first acquired another manufacturer of a well-known brand, to diversify into a lower price range, then acquired a retail group to obtain greater control over its sales channels.

Box 3.14: Restructuring and Expansion through Mergers and Acquisitions

Tecnica started in Montebelluna in 1960 making work boots. It enjoyed its first worldwide success in 1970 with the Moon Boot after-ski footwear.

Following series of successive mergers and takeovers, the Tecnica Group is one of the world's leading companies in the ski boots, "outdoor" footwear, after-ski and winter footwear as well as in-line skates. It produces over five million pairs of footwear per year.

In addition to Tecnica products, the Tecnica Group is the parent company to the following brands: Nordica (skis and ski-boots), Blizzard (skis), Dolomite (ski-boots, outdoor clothing and footwear), Nitro (snowboards and snowboard boots), Lowa (outdoor footwear and ski-boots), Rollerblade (in-line skates), and Think Pink (sportswear).

The Group's products are distributed in all the main world markets, it employs over 1 560 people and has a turnover of around €410 million and more than 10 000 sales stores worldwide

Source: Company web site <http://www.tecnica.it/company/company-profile>

3.5 Drivers for Restructuring

3.5.1 Types of Drivers

We noted in Section 3.1 that differentiation between endogenous and exogenous drivers or between push factors (in the sense of traditional migration theory: pushing the footwear sector out of Europe) and pull factors (attracting footwear companies to a location abroad) seems somewhat arbitrary in the case of the EU footwear industry.

This has been demonstrated by our case studies. For example, the entry of China into the WTO and the subsequent reduction in import tariffs to the EU was an exogenous driver. However, the higher costs of production in the EU could be considered partly endogenous, in that they were linked to failure to invest in more efficient production. Similarly, the ability to manufacture cheaply in China, without facing high import duties, created a 'pull' factor for companies to relocate production there. However, the fact that cheap imports were then able to enter the EU market created a 'push' factor for the companies that had retained their manufacturing in the EU. For some companies, this resulted in the need for a rapid decision on whether to move production (see Box 3.15).

Box 3.15: Complexity of Drivers for Restructuring

A UK company, which produces a major brand of boots, shoes, sandals and safety footwear, offshored almost all of its production to China over a period of six months in 2002-2003. While the shoes' leather uppers were already made in China, Vietnam and Romania, most of the product manufacturing had stayed in Britain. Two of the previous suppliers of uppers were the first subcontractors for offshoring. The company moved its machinery to these subcontractors and trained their staff in its use.

The restructuring was driven totally by cost. The company was facing financial disaster; it lost about £20m in 2001. Its gross margin in the UK had fallen from the mid-40s% to the low 20s% and it could not increase the price further as the market would not accept it. This margin was insufficient for investment in marketing or capital equipment, which meant the company would no longer be able to compete as a brand. All of the company's competitors had already offshored their production.

Since offshoring production, the company has developed its own retail presence in Asia (previously it only had UK and US stores, by 2011 it had 22 in Asia). It also has a growing e-commerce business. Offshoring of production enabled the company to substantially reduce its costs and remain in business. The company believes there is no viable alternative to this business model; the source countries and suppliers might change, but offshore production will continue to be the model. Offshoring effectively saved the company and it is profitable and growing.

Source: Interview with UK company, October 2011

3.5.2 International Competition

The key driver for restructuring in every case study region was **increased competition**, particularly from low-cost producers in Asia (with China being the largest threat). Not only has imported footwear taken an increasing share of the EU market (see Section 2.4.2), it has also lowered customers' expectations in terms of price. Although few companies mentioned trade policy specifically as a major driver, this clearly underlies the increase in competitive pressure that they are facing (see Box 3.16).

Box 3.16: Significance of Trade Policies to Restructuring Decisions

The company moved production to Romania in the 1990s. This provided access to cheap labour but, as the country was not then a member of the EU, tariffs were in place on imports to the EU. The company's subsequent move to subcontracting to factories in China allowed it to further cut costs and be more competitive in terms of price, whilst still facing tariffs.

Whilst Romania's entry into the EU removed tariff barriers, this was not sufficient to outweigh the lower costs of production in China. Costs in Romania have also increased since it joined the EU.

Source: Interview with company in Veneto, October 2001

Large volume EU producers had already begun the process of relocating production from higher-cost EU countries, such as Germany, the UK and Italy, to lower cost regions such as Portugal, Romania and Hungary in the 1980s and 1990s. Changes in EU trade policy made it easier for these companies to transfer production to even lower-cost locations outside Europe. Large volume producers had to follow this route or risk becoming uncompetitive and closing (see Box 3.16 above). Other EU footwear manufacturers responded by changing their business models away from

(‘low road’) competition with low cost countries, focusing instead on innovative products, style and service which cannot be matched so easily by competitors outside the EU (the higher added-value model).

3.5.3 Competition within the EU

A further aspect of competition that has driven restructuring is the trend towards fast fashion, leading to more frequent collections and a wider range of styles and colours. This has required a more flexible approach to production, marketing and logistics.

Competition in sales channels has also been a driver, particularly for companies in Germany. Here, concern about losing future access to customers has been a driver behind certain companies opening their own stores and even acquiring retail chains threatened with insolvency (see Box 3.17).

Box 3.17: Competition as a Driver for Restructuring of Sales Channels
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One reason for a Rheinland-Pfalz based manufacturer of women’s, men’s and children’s comfortable fashion shoes to focus on different ways to access the market was the threat to traditional multi-brand retailers, including competition from other manufacturers to turn them into mono-brand stores. For example, the company had an excellent multi-brand retail customer in Birmingham, which regularly sold 3 000 pairs of its shoes per year. However, the customer was bought out by a competitor and tuned into a mono-brand store, so the company lost a key sales channel almost overnight. This is an extreme example but is part of a wider trend. City centre stores are increasingly being taken over by manufacturers while a competitor took over a major retailer.
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The company purchased a controlling interest in a large retail group just before it went bankrupt, to avoid another company buying the chain and restricting the company’s access to the stores.
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<i>Source: Interview with company, November 2011</i>
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As Section 2.6.2 noted, one area of competition within the EU has been the entry of major fashion brands into the footwear sector. However, the example of Brenta showed that this could be of benefit to the EU footwear industry, as the fashion brands subcontracted production to EU manufacturers rather than offshoring production outside the EU, as fashion and quality are more important than the cost of production.

3.5.4 Availability of Funding

None of the companies and other organisations we interviewed, in any of the countries of the case study regions, considered the availability of funding to be a driver of restructuring in itself. However, the availability of EU, national and regional funding has facilitated the restructuring process for some companies. This has been more successful in some case study areas than others. For example, Portuguese companies in the Norte region have made use of funding for training (from the European Social Fund) and for trade promotion (from the European Regional Development Fund). Indeed, the footwear sector has made more use of trade promotion funding, to help finance attendance at trade fairs, than other sectors of the economy in Portugal.

By contrast, companies in the other case study regions appear to have made little use of such funds. A number of companies in Veneto and Southern Poland had applied for EU funding but had been unsuccessful, even in the case of a Southern Polish footwear firm that had hired a consultant specifically to help with its application. Authorities in the Rheinland-Pfalz area recognised that they had not been successful in general in accessing EU funds and were planning further training of officers on this issue. Several companies indicated that the administrative requirements of the application process were too demanding.

Companies in several of the countries of the case study regions have also made use of EU 7th Framework Programme funding for technology development; however, some companies expressed concern that EU-funded projects tend to be some distance away from their practical needs.

3.5.5 Assistance from Industry Associations

The extent of assistance available from regional (and national) industry associations varied considerably between the case study regions. In Norte, APICCAPS has taken a leading role in driving restructuring and innovation in the footwear sector in this later phase. It developed a Strategic Plan⁵² for the sector, covering the period 2007-2013, drawing on analysis by a regional university. The studies identified a number of options for the future of the Portuguese footwear sector; this included a focus on production innovation to increase productivity and flexibility and closeness to the market. The plan was agreed by all members and is being implemented by the companies, which have amended their business strategies in line with the plan. Progress with the plan is being monitored by APICCAPS, and by the regional university to check whether amendments are needed.

Associations in Veneto have also supported their members through restructuring, including providing assistance with training and marketing

Regional and national associations have not played a similarly proactive role in the other case study areas.

3.5.6 Impacts of the Economic Crisis

The economic crisis might be expected to have exacerbated the barriers already being faced by the footwear sector and resulted in further restructuring. However, the picture of its impact is mixed. According to the 2011 Plimsoll financial analysis, which looked at the performance of the top 350 companies in the industry, over half of the companies analysed recorded a drop in sales during 2010 (of up to 16%). An average company in the footwear manufacturing sector experienced a sales reduction of 3.7% per year; however, one in three companies saw an increase in their sales⁵³ (averaging 10%).

⁵² APICCAPS (2007)

⁵³ Plimsoll Worldwide Business Intelligence (2011)

Data on sales and production from national associations suggest that the industry has managed to stabilize output levels following the steep drops in 2008-2009. Short term economic indicators from the ANCI indicate that the value of production increased by approximately 4% in 2010 compared to the previous year⁵⁴.

From 2008 to 2009, the total number of company bankruptcies across all sectors increased in most European countries. One key factor was lack of availability of finance; even companies with a high demand for their products have faced barriers because of their customers being unable to obtain the credit to pay them⁵⁵. It is notable that the majority of companies responding to the EU survey had used self-financing for investments. Although over half of the survey respondents still found access to finance 'quite easy', this varied by company size, with a larger number of small companies finding access to finance difficult.

Lack of credit was a particular barrier for companies that began to restructure before the downturn, and had borrowed large amounts of money to do so, then suddenly found their sales income falling and reluctance on the part of banks to extend more credit⁵⁶. However, the majority of large-scale restructuring in the industry, particularly locational restructuring, took place in the first half of the 2000s and was, therefore, complete before the recession took hold.

The overall view from the companies and organisations that we interviewed for the task on restructuring and modernisation was that restructuring has enabled the footwear sector to remain relatively resilient through the recession so far. Although most companies we interviewed had lost sales, they were poised to take advantage of market upturns and in many countries sales had increased in 2010 and 2011. An increased focus on exports had also enabled companies to take advantage of better market conditions in certain countries. In addition, the luxury market was less affected by the recession than other segments, so the general trend of moving to higher price brackets had helped insulate many companies. One company in Rheinland-Pfalz indicated that seasonal fluctuations had been a more significant influence than the economic crisis on short-term profitability.

The footwear industry in Europe remains heavily dependent on the EU market, however, and the state of the EU economy remains a major concern for the companies we interviewed. One company noted that the economic crisis had led to significant reductions in sales in some markets (its sales to Ireland fell by 50%), although some markets began to recover by 2011. Customers are also more risk averse; one manufacturer noted that distributors immediately reduced stocks at the time of the economic crisis and many purchase more frequently in smaller batches, which requires an efficient logistics system.

Access to credit remains an issue for some companies, particularly SMEs (see Chapter 6 of this report) in the regions most affected by the recession, such as Norte.

⁵⁴ ANCI (2011)

⁵⁵ Eurofound (2010b)

⁵⁶ Eurofund (2010b)

As a consequence, most restructuring activities have been financed by companies' internal resources. Nevertheless, cash flow remains a critical issue for the sector, especially for smaller firms and, as with SMEs in other sectors, there is a risk that even companies with full order books could fail because of a lack of short-term credit.

The economic crisis has also affected footwear retailers, causing them to be more risk-averse and ordering smaller batches and less expensive models. One German footwear manufacturer had responded by offering better customer service and more rapid restock; orders used to be around 80% up-front and 20% restock, but by 2011 were only 40% to 50% up front. This increases risks for the manufacturer, as it has to produce for stock.

3.6 Success Factors and Barriers in Restructuring

3.6.1 Introduction

Despite the turmoil of recent years in the footwear sector, and the difficult economic outlook, the overall view of most companies and organisations that we interviewed was quite positive. A number of different factors had contributed to this success, including:

- close partnerships within the industry, with Governments and research centres;
- support from national and regional governments;
- flexibility by companies in adapting to new market conditions; and
- product differentiation and branding.

3.6.2 Success Factors

Close Partnerships

A key reason for the success of the Norte footwear industry in restructuring has been the close partnerships that exist within the industry and with the Government. The footwear industry association, APICCAPS, has played a very active role by developing an overall strategy for the sector, based on analysis carried out in partnership with a local university, which was proposed to and agreed by all member companies. The association has assisted companies to implement that strategy, together with its research centre, CTCP, by bringing researchers, equipment suppliers and manufacturers together to develop and test new technologies and to provide training and consultancy assistance to respond to the challenges of the new market conditions. It has also provided guidance to help companies to access national and EU funding for research and for marketing, and APICCAPS represents the industry as a whole at trade fairs.

A similar situation is found in Italy, with the cluster system still operating despite the effects of restructuring, and strong national and regional associations helping companies to address the barriers they face by providing access to research, training

and advice. The regional industry association considers that the secrets of Montebelluna's success are the high level of integration of the production cycle, along with the presence of a highly specialised supply chain. Footwear manufacturers work closely with their suppliers to ensure access to the materials they need. The presence of education and training facilities in the region is also an advantage, providing companies with access to the skilled labour they need, including influencing the curriculum to ensure that appropriate skills are taught (see Chapter 5 of this report). In both Veneto and Norte, there is still a considerable amount of local subcontracting of certain production operations, providing footwear manufacturers with increased flexibility to manage periods of high demand.

This level of partnership does not appear to exist in the other case study regions. In Rheinland-Pfalz the local association noted that companies have only begun to cooperate rather than compete in the 2010s, probably a consequence of the drastic reduction in the numbers of firms. However, there is a strong partnership with the local research and training institutes; training institutes provide tailored courses for companies and students undertake practical training within companies (see Chapter 5). In Southern Poland, too, partnerships appear to be emerging between larger companies, but SMEs continue to be suspicious of their competitors, with only a few examples of companies joining together (for joint bulk buying of supplies). In Rhône-Alpes, the small number of manufacturers remaining in the area makes partnerships between them difficult, but the industry appears to retain close ties with the research centre in the area, participating in joint research projects. The shoemaking tradition of the area is still seen as having a positive impact on the reputation of shoe manufacturers in the region.

These differences demonstrate that the transferability of this success factor depends on the active involvement of companies in associations and sufficient resources for associations to play this role. Simple proximity of different actors in the footwear industry is not sufficient in itself to ensure success of a region. Changes in the management of companies, from an older generation focused on competition to a younger one recognising the need for cooperation, may be one catalyst for change which could improve the transferability of this factor. European associations may also be able to assist with transferability, by spreading information on the activities and achievements of successful associations. It may also be possible for regional/national governments to play a role in bringing together different stakeholders, as is beginning to happen in Rheinland-Pfalz. However, this also depends on the level of interest in the footwear sector amongst regional governments, which varied significantly, as discussed below.

Support from National and Regional Governments

The level of support to the sector from the National and Regional Governments also appears to be a factor. The Portuguese Government has been very supportive of the footwear industry and has helped it to access EU funding support (from the European Social Fund and European Regional Development Fund). The sector has a good reputation with the Government because of its record in exports and has received assistance in the form of export credit guarantees, which have been very important, as

well as small grants for SMEs to work with consultants/advisors and financial assistance to APICCAPS in developing the strategy for the sector.

By contrast, a company in Rheinland-Pfalz noted that the shoe industry has always been a small part of the German economy, so is not influential at Federal Government level. There is more interest at regional and local level, but this has not necessarily resulted in effective support. The French government supports the footwear research institute with funds raised through a parafiscal tax on shoes and leather products, but this has not halted the decline of the sector in Rhône-Alpes.

The transferability of this success factor is limited, as it depends on the perceived political and economic importance of the footwear sector. Nevertheless, there may be potential for the industry to seek greater support in regions where it is currently limited, by focusing on local and regional governments and identifying methods of support that are relatively low cost (for example, assistance with accessing EU funding), drawing on examples from regions where support has been provided successfully.

Flexibility

Another key factor in successful restructuring has been flexibility in the face of changing market conditions. The manufacturing companies that have remained in business and been successful are those that were best able to adapt to the new requirements. In Norte, many of the remaining SMEs are family firms, where younger generations entering the business were able to change the focus of their companies from production to design and quality. Companies were also able to develop skills in marketing and distribution to adapt to the move from single subcontracting customers to dealing with large numbers of retailers. It is not clear why family firms in Norte were more able to take these steps than family firms elsewhere and thus it is difficult to assess the transferability of this success factor. The successful family firms worked closely with the industry association, APPICAPS, which provided them with a good understanding of the overall business environment and the options available to develop their businesses. Certainly, the younger generations appeared much more focused on marketing and sales than their parents, whose focus was more on the manufacturing process.

For larger companies, the ability to remain competitive has been linked to the flexibility provided by outsourcing production. This has led to a very adaptable system, where production can be closely geared to market requirements. This flexibility is one reason why footwear companies appear to have been relatively resilient through the recession. This approach (of flexibility through outsourcing) has been widely adopted by successful firms across the EU, and is, therefore, eminently transferrable.

Product Differentiation and Branding

The ability to differentiate their products has been an important factor in allowing EU footwear manufacturers to remain in business. Focusing on factors such as fashion,

comfort and safety has enabled them to avoid direct competition with low-cost competitors. The basis for differentiation varies between the case study regions, although fashion is an important aspect for most markets. For example, a Portuguese manufacturer of safety footwear has differentiated through designing safety footwear specifically for women, with a fashionable style, and for men with designs resembling football boots. Comfort and fit were a key area of differentiation for German manufacturers; many of the companies we visited had developed specialised and/or removable insoles to increase comfort. The fact that firms in all case-study regions had adopted this approach indicates that it is readily transferrable across the EU.

Differentiating in terms of sales channels and branding has also been important. Finding new ways of accessing the market has been particularly important for footwear manufacturers. In Rheinland-Pfalz, firms focused on developing strong brands and sold through traditional specialist retailers. In the 2010s, they are faced with competition for stores by large retailers producing and selling their own brands and by international firms opening mono-brand stores. In response, manufacturers have taken steps to ensure access to sales channels through acquisitions, opening their own retail stores (as mono-brands or with complementary brands) and develop e-commerce initiatives. Similarly, when moving away from subcontracting, Norte companies needed not only to develop their own brands but also to develop ways of selling. For most companies, this involved setting up systems of salesmen and agents, with specialist footwear stores as the main sales channel. A similar barrier is being faced by companies in Brenta that are currently subcontracting for fashion brands. The range of approaches adopted depends on the resources and skills available to the footwear firms. However, the overall approach of seeking the most appropriate sales channels for a particular product is very transferrable, in so far as it is in the hands of each individual company.

3.6.3 Barriers to Effective Restructuring

One remaining barrier identified by companies focusing on exports is the **lack of openness of non-EU markets** to EU footwear exports. Most exports by EU footwear companies are still to other EU countries, and exports outside the EU are limited. There is greater potential for growth of non-EU markets in future; China in particular and to a lesser extent in the other BRIC countries. Lack of access to these markets could constrain future growth. Although some companies and organisations still call for tariff barriers against imports, most organisations recognise that international competition is a fact of life.

Another barrier, identified by many of the companies we interviewed, was increasing **difficulty in recruiting younger people** to replace ageing workforces (discussed further in Chapter 5 of this report). This was identified as an issue in Norte, Veneto, Rhône-Alpes and Rheinland-Pfalz. There are two aspects to this barrier. Firstly, there is a lack of people with specific skills, such as lasters and finishers, particularly at the luxury end of the market. For example, one company in France estimates that there are only seven people in the country capable of producing one particular type of welt. The average age of staff with these skills is high, so this could become a significant barrier in future. Secondly, it is difficult to recruit young people to

production roles in the industry because of its poor reputation; young people do not consider that footwear manufacturing has a future. An example of this issue in Rheinland-Pfalz is given in Box 3.18.

Box 3.18: The Difficulty of Recruiting Young People

The Federal Employment Agency carried out a review of the current workforce in the footwear sector in the region as part of a national initiative, which mapped the characteristics of the labour force and provided an analysis of future trends both in relation to skills demand and supply. Previously it had not focused on the shoe sector because it was not offering jobs.

The study found that 41% of production staff in the sector are in the 50-65 age group; most of these will leave in the next 5-10 years. It has been difficult to recruit young people into the sector because of the adverse effect of previous job losses; shoe making is seen as an industry with no future. However, companies in the region indicated that there was a need to recruit, even in production jobs.

Source: Interview with Federal Employment Agency, November 2011

Access to finance is a concern for some footwear firms in some regions, particularly smaller companies in the countries most affected by the recession, such as Norte. As a consequence, most restructuring activities have been financed by companies' internal resources. Nevertheless, cash flow remains a critical issue for the sector, especially for smaller firms and, as with SMEs in other sectors, there is a risk that even companies with full order books could fail because of a lack of short-term finance (see also Chapter 6 of this report).

Several companies and organisations also raised concerns about the difficulties of **protecting designs** (discussed in detail in Chapter 4 of this report). A company in Rheinland-Pfalz identified copying of designs by retailers selling their own brand products as a particular concern. The retailers know what will sell, from their closeness to the consumer, and need high margins to afford their city-centre locations. The retailers therefore have cheaper copies of brand designs made in China for their own label, but sell them for only a little less than the brands (around 10% cheaper). The quality of the copies is poor, which could be damaging to the brand, as customers may perceive them to be the same.

Many of the companies we spoke to had not taken action to protect designs, because they considered that the current process for protection is not really effective. Companies considered that patenting innovations is costly and takes too long; simply registering a brand can take two years. Companies need expertise to obtain patents and protection inside the EU is not enough. For worldwide protection, though, patents need to be taken out country-by-country. Simpler procedures for obtaining a patent and assistance with worldwide registration would assist with this barrier.

Even when a design is protected, enforcement may be difficult. One company in Rheinland-Pfalz had taken a retailer to court twice for copying one of its products which had very distinctive features, which made the case easier to prove. However, although the company has won twice in the courts, the retailer is delaying action by appeals, which means it continues to gain the benefits from selling the copy. Other barriers identified during the case studies included:

- the continuing decline of traditional specialist shoe shops, which could have a significant impact on companies that rely on these sales channels;
- increases in the prices of raw materials, particularly leather. As it will be difficult to pass these costs on to customers, especially in the current economic crisis, this could lead to pressure on profit margins. Alternatively, increasing prices could reduce sales, as fewer customers will be able to afford the higher prices; and
- the future of family firms (discussed further in Chapter 6 of this report). Succession issues do not appear to be a major barrier in Norte, and for some firms in Rheinland-Pfalz, but were causing difficulties in Veneto, Rhône-Alpes. There is no obvious reason for this difference, other than perhaps the relative lack of other opportunities in Norte. It appears to be related as much to individual family dynamics as to external factors. It is rare for a company or entrepreneur with no footwear experience to enter the sector; companies in the apparel and related industries may move into footwear but they rely on the expertise of those with experience of the sector.

3.7 Future Trends in Restructuring

In general, the companies and organisations that we interviewed expected that restructuring in the industry would continue in future, but at a slower pace than in recent years.

The Norte footwear industry anticipates that the current trends will continue in future, with further improvements in efficiency, especially in the use of materials, increasing focus on quality and service and moves into additional export markets. Most of the footwear companies that we interviewed plan to continue with their current strategies of building and expanding their own brands of footwear. The next few years are seen as a period of consolidation after major changes and the shock of the economic crisis; companies do not envisage any dramatic changes in the near future and plan to continue with their existing business partnerships. Most companies do not plan to expand their production significantly, but instead aim to move further upmarket (through better design) to gain enhanced margins on their products.

Companies in both clusters in Veneto also plan to continue with their current strategies in future. Work for major brands will continue to be the main strategy for companies in the Brenta region. The quantity of orders placed by the major brands is not expected to reduce. However, companies are also aiming, as far as possible, to launch their own collections to enable further diversification. Companies in Montebelluna plan to continue with the promotion of their brands and the development of international markets. One potential barrier to this strategy is a growing shortage of skilled staff, which companies are trying to overcome both through developing their own training programmes and attracting employees from other parts of Italy, where the footwear industry has been contracting.

The companies we interviewed in Southern Poland identified continuing competitive pressure as a key future challenge. They planned to respond to the challenge by further investment in equipment to increase efficiency, by improved product design and quality, and by effective marketing.

Although the majority of restructuring of the footwear sector in Rheinland-Pfalz is complete, the industry recognises that it faces continual change. Most companies envisage only minor changes in the location of production in future. However, changes to sales channels are likely to continue. This will include both changes in stores in which their products are sold and a continuing focus on exports.

Companies in Rhône-Alpes anticipate that competitive pressures will continue in future, with an emphasis on further reductions in time to market. Products will also need to be further developed to meet consumer needs, including customised ranges and new, more eco-friendly materials and production methods. This factor has encouraged some companies to consider switching production back from China to locations nearer to France.

In general, it appears that the major period of restructuring in the footwear industry in Europe, which led to large-scale reductions in output, employment and the number of companies is largely complete. Nevertheless, the sector recognises that it faces a period of continuous change driven by competition, fashion and the changing requirements of customers.

Competitive pressures will continue to be strong, primarily due to imports into the EU from countries with lower production costs, particularly China. Although the EU industry cannot compete on price with these countries, it will need to continue managing costs by improving the efficiency of production and distribution through operational restructuring. The main way to address the competitive pressures will be through product restructuring, by building brands, identifying market niches and developing products to meet changing customer requirements, such as improved fit and comfort as well as fashion. This will require improvements in design and marketing, as well as further development of sales channels. All of these responses will require skilled and well-trained staff, so that companies will need to work closely with training institutes to address the potential problem of staff shortages.

4. RESEARCH, DEVELOPMENT AND INNOVATION

4.1 Introduction

4.1.1 The Importance of RDI in Europe

Research, development and innovation (RDI) has strategic importance for the competitiveness of the EU economy and was identified by the Europe 2020⁵⁷ strategy as the key to economic recovery. The Europe 2020 strategy was published by the European Commission on 3 March 2010 and is the successor of the Lisbon Strategy, which expired in 2010. The target of the Lisbon strategy was to position the EU as the world's most competitive and dynamic knowledge-based economy by 2010. Furthermore, the European Commission endorses innovation processes by establishing strategies and research programmes, such as the European Territorial Cooperation (ETC)⁵⁸ and the Seventh European Framework Research Programme (FP7)⁵⁹ to assist companies with RDI.

In close conjunction with the Lisbon strategy, Member States subscribed to the Barcelona Target of devoting 3% of their GDP to research and development by 2010. The target proved successful as a trigger for broad national investment. The Europe 2020 strategy proposed to continue allocating 3% of Member State GDP to research and development. Although only Denmark, Finland and Sweden have achieved the 3% GDP allocation to date, increased research and development expenditure have been noted for most Member States between 2006 and 2010, as shown in Table 4.1.

Table 4.1 lists Member States according to their share of R&D expenditure in 2010; with countries of the case study regions highlighted in bold. The Table shows that all case study region countries, apart from France, had an above average rate of increase to their R&D expenditure between 2006 and 2010, with Portugal having the highest rate of increase.

⁵⁷ European Commission (2010a)

⁵⁸ Interact (2013)

⁵⁹ The EU research and innovation policy is the Seventh Framework Programme 2007-2013 (FP7), which has a budget of €50.5 billion

	2006	2007	2008	2009	2010	% change 2006-10
Finland	3.48	3.47	3.70	3.92	3.87	11%
Sweden*	3.68	3.40	3.70	3.61	3.42	-7%
Denmark*	2.48	2.58	2.85	3.06	3.06	23%
Germany*	2.54	2.53	2.69	2.82	2.82	11%
Austria*	2.44	2.51	2.67	2.72	2.76	13%
France*	2.11	2.08	2.12	2.26	2.26	7%
Slovenia*	1.56	1.45	1.65	1.86	2.11	35%
EU (27 countries)*	1.85	1.85	1.92	2.01	2.00	8%
Belgium*	1.86	1.89	1.97	2.03	1.99	7%
Netherlands*	1.88	1.81	1.77	1.82	1.83	-3%
Ireland*	1.24	1.28	1.45	1.74	1.79	44%
United Kingdom*	1.75	1.78	1.79	1.86	1.77	1%
Luxembourg*	1.66	1.58	1.57	1.66	1.63	-2%
Estonia*	1.13	1.08	1.28	1.43	1.62	43%
Portugal*	0.99	1.17	1.50	1.64	1.59	61%
Czech Republic	1.49	1.48	1.41	1.48	1.56	5%
Spain*	1.20	1.27	1.35	1.39	1.39	16%
Italy*	1.13	1.17	1.21	1.26	1.26	12%
Hungary	1.01	0.98	1.00	1.17	1.16	15%
Lithuania	0.79	0.81	0.79	0.83	0.79	0%
Poland	0.56	0.57	0.60	0.68	0.74	32%
Malta*	0.62	0.58	0.56	0.54	0.63	2%
Slovakia	0.49	0.46	0.47	0.48	0.63	29%
Bulgaria*	0.46	0.45	0.47	0.53	0.60	30%
Latvia	0.70	0.60	0.62	0.46	0.60	-14%
Cyprus*	0.43	0.44	0.43	0.49	0.50	16%
Romania	0.45	0.52	0.58	0.47	0.47	4%
Greece	0.59	0.60	-	-	-	-

Source: Eurostat, downloaded from the Eurostat internet site:
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsc00001>. Data was last updated: 07/12/2011
 * Data contain estimates

Table 4.2 (next page) highlights business RDI expenditure in the EU as a whole and the countries of the case study regions for the tasks on research centres and research and innovation companies. As the data show, France has significantly higher business RDI expenditure compared to the other countries, partly due to its much larger economy.

	2006	2007	2008	2009	2010
France	23 911	24 753	25 761	26 341	26 684
Germany	41 150	43 000	46 000	45 275	46 980
Italy	8 210	9 455	10 173	10 238	10 465
Poland	477	535	679	597	694
Portugal	736	1 011	1 295	1 311	1 249
Romania	215	272	242	223	219
Spain	6 558	7 454	8 074	7 568	7 506
European Union (27)	137 301	145 941	151 597	146 012	151 126

Source: Eurostat - Business enterprise R&D expenditure (BERD) by economic activity and type of costs[NACE Rev.2] [rd_e_berdcost], last updated 30 November 2011

A range of factors affect the extent of business investment in RDI. For example, according to Erawatch⁶⁰, the main barriers to private R&D investments in Portugal are linked to five main features of the Portuguese economy:

- the structural characteristics of the economy;
- the size distribution of Portuguese firms, with few very large firms, which typically have greater R&D intensity;
- the nature of domestic demand (intermediate and capital goods demand patterns are less sophisticated than European average, so hindering the local companies supplying advanced products);
- average company absorptive capacity is relatively weak, not only in terms of purchasing advanced inputs but also in terms of integrating in their staff qualified human resources; and
- the insufficient development of the venture capital market.

4.1.2 Indicators of Innovation

The European Innovation Scoreboard (EIS)⁶¹ is an annual publication that tracks and benchmarks the relative innovation performance of EU Member States. Countries are classified in the following categories (with countries of the case study regions highlighted in *bold italic*):

- **innovation leaders**: Denmark, Finland, *Germany* and Sweden;
- **innovation followers**: Austria, Belgium, Cyprus, Estonia, *France*, Ireland, Luxembourg, Netherlands, Slovenia and the UK;
- **moderate innovators**: Czech Republic, Greece, Hungary, *Italy*, Malta, Poland, *Portugal*, Slovakia and *Spain*; and

⁶⁰ Erawatch (2010)

⁶¹ Pro Inno Europe (2012)

- **modest innovators:** Bulgaria, Latvia, Lithuania and *Romania*.

In relation to the innovative performance of enterprises, Innobarometer 2009⁶² surveyed firms with at least 20 employees from innovation-intensive industry sectors, which included footwear companies. The survey specifically examined areas of innovation. The results indicate that over 80% of companies introduced at least one type of innovation between 2006 and 2008. Innovations included improvements to products, services, processes, marketing strategies and organisational changes. Approximately a quarter (26%) of enterprises surveyed in the EU spends more than 5% of their turnover on supporting innovation. However, most (59%) enterprises spend less than 5% and the remaining firms do not spend any of their turnover on innovation.

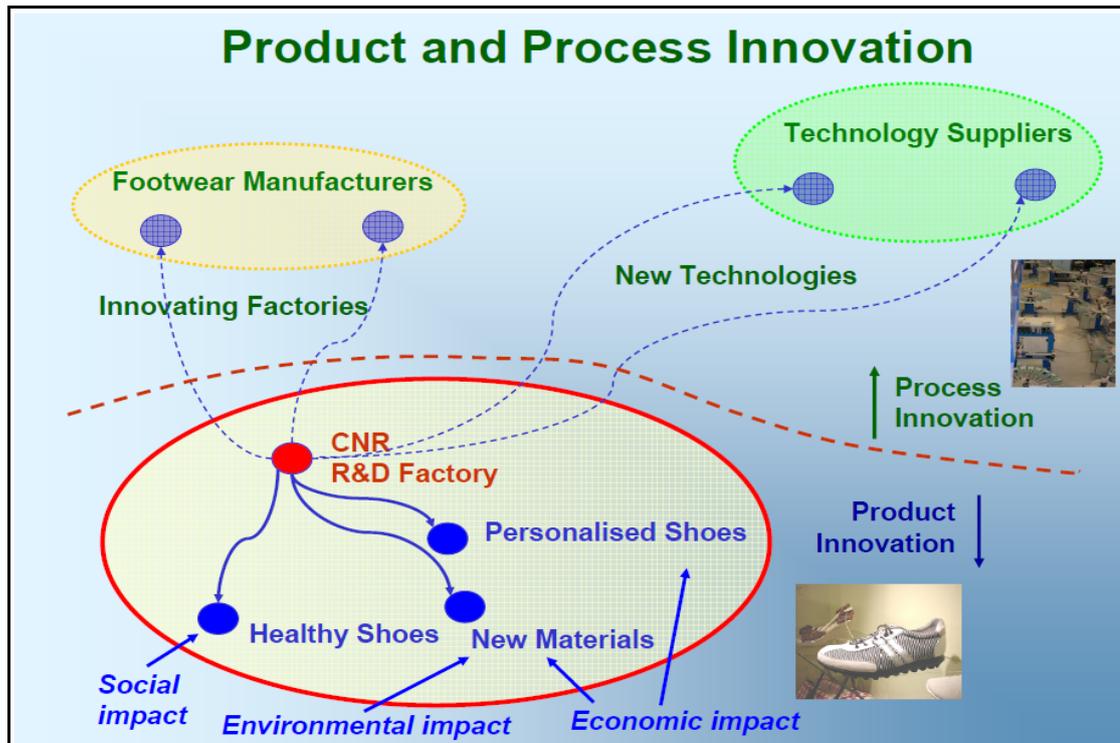
4.2 RDI Activities in the Case Study Regions

4.2.1 Introduction

For most micro, small and medium-sized companies within the European footwear industry sector, RDI forms part of their day-to-day business, as footwear products are continually being developed for the next model range. As such, the RDI steps are often small and incremental. For example, the design of a popular shoe may only need to change slightly for the next collection or there may be a minor change in the composition of the glue to provide a stronger bond with the sole.

However, meetings with footwear manufacturers across the EU during this study have illustrated that the search for improvements to enhance the prospects for company growth or, in some cases, simply survival must extend to all stages of footwear production from raw material supply to selling shoes to the customer. At each stage, measures have been taken by companies, often without any external assistance, which involve transforming RDI outcomes into marketable products. Figure 4.1 illustrates the process of innovation in the footwear industry.

⁶² EC (2009c)



Note: CNR=National Research Council of Italy

Figure 4.1: Footwear Product and Process Innovation

Source: Jovane F and Carpanzano E, 2007

Below we discuss each element of the figure in more detail, including the external drivers/impacts. First we consider process innovation, mainly based on new information technologies, and then product innovations such as new functions, new materials and customisation/personalisation.

Respondents to the EU survey for this study were asked to identify the key areas of innovation in footwear. Company respondents were clearly focused on their products and associated production processes (as shown in Figure 4.2). By comparison, all four industry associations identified service innovation as a key area for their members, while three identified products and the associated production processes.

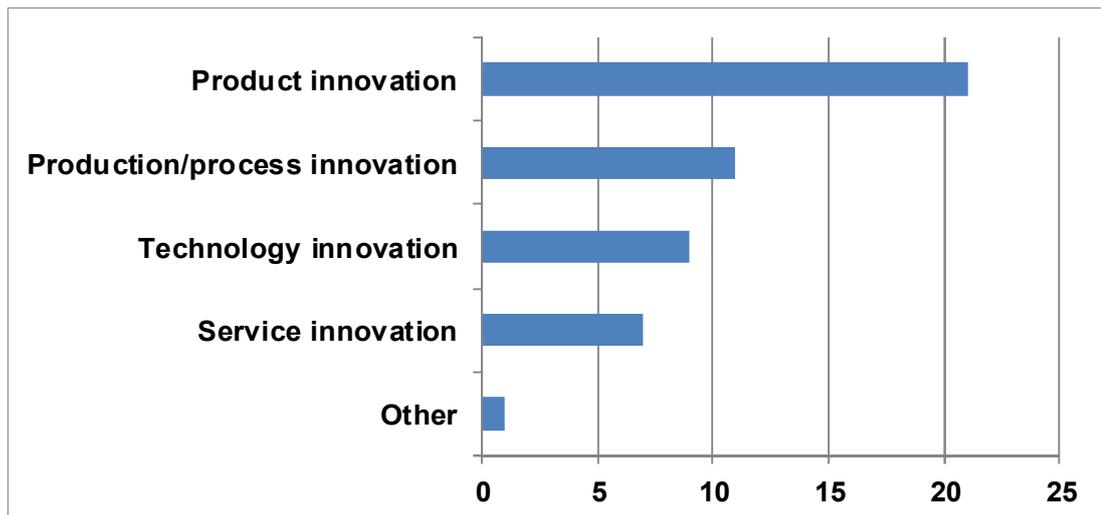


Figure 4.2: Responses from 24 Companies to: *What types of innovation you are currently undertaking?*

The literature research, case studies and EU survey results suggest that innovation capacity is not always RDI driven. The types of innovation introduced by footwear companies include:

- technological change through product and process improvement;
- organisational and structural change;
- improved product design;
- marketing initiatives and brand development; and
- improved quality of service.

There is clearly a close link between innovation and the process of restructuring, described in Chapter 3 of this report. Internal restructuring for example often involves measures to improve productivity, such as innovation in production technologies or management practices. This might include the development of the machinery as well as re-organising the production process with the aim of increasing production efficiency. This has become especially important for companies launching several collections per season.

Furthermore, product restructuring, which focuses on developing new products for new market segments as well as promoting brands, builds to a large extent on the results of product innovation. Companies wishing to enter a new market segment, e.g. a higher price category or footwear for particular types of workers, often launch a new brand of products carrying distinctive features. Product restructuring can be particularly important in highly competitive sectors such as athletic or sport shoes, where innovations in products appear regularly.

4.2.2 Process Innovation

Investment in process RDI can increase production efficiency through the use of new equipment and the re-organisation of the workflow. This can include improvements in technology, design software, logistics and marketing which may provide companies with an innovative edge⁶³. The rapidly-changing needs of consumers can require frequent modifications to the manufacturing process, which means that the workflow system must be open to accept small changes⁶⁴. Such flexibility can be aided by the use of IT.

A study by e-business W@tch in 2006 found that the footwear industry has one of the lowest overall levels of use of ICT⁶⁵. One reason for this lies in the traditional nature of footwear manufacturing, with a large majority of companies being small and micro sized often owned by families and relying on traditional sales channels. Nevertheless, an increasing amount of IT-related research is being carried out by the sector.

Utilisation of e-based technology can deliver multiple benefits to companies including improved communication with outsourced locations, increased sales, outreach and information exchange. For example, advances in data communication enable companies based in Europe to develop designs with factories in China by, for example, sharing 3D computer drawings in real time. Examples of such approaches were provided during interviews in Lombardia and Rhône-Alpes. Box 4.1 provides examples of IT-related RDI projects in Portugal.

⁶³ e-business w@tch (2004)

⁶⁴ Business Knowledge Source (2010)

⁶⁵ e-business w@tch (2006)

Box 4.1: Examples of IT-related Research Projects in the Footwear Sector in Portugal

The pressure to drastically reduce the average size of the order, the diversity and sophistication of the models and the decrease in deadlines in various industrial sectors meant it was not viable to use traditional tools to plan and control production lines. This led to uncontrolled processes and consequently a loss in productivity. Two national projects **SABE (Support Systems for Product Balancing/Scheduling)** which began in 2001 and **SIBAP (Automatic Balancing System for Production Lines)** which began in 2010 helped to bridge these gaps and provide support tools to balance and schedule production lines.

The **Agilplan** project began in 2009 and consists of a production planning system for footwear companies. The system is more agile and can plan production under uncertain conditions making it different from more traditional systems. It was designed for small and medium sized companies (SMEs) that produce footwear and similar components. The system allows for a smoother development of plans for manufacturing by order scenarios in a situation of uncertainty and lack of information. Agilplan adopts a user friendly interface which is simple to use, incorporating drag and drop techniques and software that automatically readjusts and re-plans production plans when new information becomes available.

A new project is soon to be developed called **NEWALK – Materials, Components and Technology** for future footwear. The project aims to develop new materials, functional components and advanced technology to create, produce and commercialise unique footwear (see also Box 4.5). This will be done in an integrated way, to design approaches and systems that will improve the process of receiving the material and sending it to production when manufacturing small ranges.

The **SIMULOG (Simulation and operation of internal logistics)** project began in 2007. It is a logistics and simulation project and allows equipment producing companies to identify potential problems in advance and significantly reduce the time and cost of developing and testing the solutions in the facilities of the client companies, thus increasing their competitiveness. It is possible to test the control software with the simulation models developed before the actual system is installed for the client company. This significantly reduces the cost of developing, improving quality and reducing drops in production during the installation phase.

ShoeID was developed with the aim of improving efficiency in the supply chain. The innovation is incorporated into a RFID (Radio-Frequency IDentification) Smart Floor; a customer can try on a pair of shoes and look at their own image recorded by a video camera. The image shows the customer standing in front of busy street scenes in Tokyo, London or New York.

Source: Interview with CTCP, October 2011; INESC Porto (2011)

ICT developments have also played a prominent role in facilitating the delocalisation of production. As manufacturing headquarters along with design and research centres, to a large extent have remained in Europe, communication, logistics and data transfer have become essential for maintaining quality of production.

For example, one of Poland's leading footwear manufacturers and retailers, NG2, has built a large automated logistics centre in Polkowice in south-west Poland which is due to open in 2012. Most of NG2's shoes are manufactured in China and India, with only a few lines of higher-quality women's shoes still produced at its Polkowice factory. The new logistics centre will have an inventory of five million pairs of shoes and will handle up to half a million shoes per day in order to serve its 700 shoe stores across Poland⁶⁶.

⁶⁶ NG2 (undated).

Another example of the use of ICT to enhance warehouse operations was found in Portugal (see Box 4.2).

Box 4.2: Innovation through Use of RFID Tracking to Improve Logistics

The loss of subcontracts for major clients and the subsequent focus on developing its own fashion brand required a complete change to the company's logistics operations. The company increased the size of the commercial back offices to deal with the much increased volume of invoices generated due to the increased number of customers.

Its warehouse has also been reorganised and the company uses an RFID system, linked to enterprise resource planning (ERP) and customer relations management (CRM), which allows invoicing as soon as a shipment leaves the warehouse.

Source: Interview with company in Norte, October 2011

4.2.3 Product Innovation

Product innovation is particularly important for companies moving from subcontracting to developing their own footwear brands, as described in Chapter 3 of this report. In all regions, companies continuously develop their products in response to market changes. Most footwear companies now produce two or more model ranges per year, particularly in the fashion segment of the market. This, by definition, involves a degree of product innovation. Product innovations can focus on function, fashion, components, materials or customisation.

Functional Innovation

The aim of functional innovation is to improve the performance of footwear for users, providing better protection for the foot and greater comfort. One noticeable trend from the interviews for all of the tasks was the emerging importance of comfortable shoes for consumers with particular needs, such as those who are overweight or who spend long periods on their feet at work. This was a focus of RDI in several companies visited.

In Rheinland-Pfalz, for example, several companies had developed removable insoles for footwear, which allowed the shoes to be readily adjusted to the requirements of users. In Lombardia, ITIA has focused on fire repellent and medical footwear and CIMAC on safety and sports shoes. In Norte, a safety footwear company has developed a number of innovative approaches to provide improved protection and comfort (see Box 4.3, next page).

Box 4.3: Product Innovation in Safety Footwear

The company has an in-house podiatry and biomechanics research laboratory, to ensure that the lasts it uses provide the correct mix of comfort and protection. It also has a research department and an innovation laboratory. The company's key areas of technical innovation include:

- the Clima Cork System, which has been patented for 15 years. A layer of cork (formed from a by-product of the production of bottle corks, milled and glued) is inserted between the insole and the outer sole. It protects from heat and moulds to the shape of the foot to increase comfort;
- responsive shock absorption: this is the shape of the heel and sole (with gaps) which provides protection six times greater than is required by the standard. It helps to protect the backs of people regularly jumping from trucks, such as refuse collectors;
- toebox: the company's protective footwear uses a composite toebox, completely enclosing the toe area, instead of a steel toecap. It offers better protection to the foot; and
- 3D vario: different insoles can be inserted into shoes to change the volume of the shoe. It takes account of variations in the 'height' of the foot between different people with the same length and width fitting, and can also be altered if a person's feet expand or contract during the day (e.g. from standing for long periods).

Source: Interview with footwear manufacturer in Norte, October 2011

Examples of recent functional innovation projects in Norte are given in Box 4.4.

Box 4.4: Examples of Research Projects on Functional Innovation

The **Advanced Shoe** project aimed to develop:

- high performance footwear which offer protection and security from aggressive or hostile environments and which are used in, for example, heavy industry and agriculture.
- technical footwear for specific applications such as footwear for golf, mountaineering or climbing. Such footwear has specific requirements and thus is considered a 'niche' market with high value.
- casual but functional high performance footwear which can be used on a daily basis but contain properties that are not traditionally found in footwear, such as increased resistance, increased waterproof properties and increased thermal comfort.

The project resulted in the development of materials for high performance footwear and testing standards for safety footwear and chemical and microbiological footwear.

The **Stress-Less Shoe** project studied the development of insoles, orthotics and shoes for people who carry extra weight, whether on a permanent basis such as obese people, or occasionally, such as pregnant women or hill-walkers who carry heavy rucksacks. The project developed orthotics, insoles and shoes which aimed to minimise the biomechanical stress associated with movement in humans who carry extra weight (permanently or occasionally). Despite the strain placed upon the foot by extra weight there is a lack of research into the implications of carrying significant levels of extra weight on the musculoskeletal system.

The **BionicFoot** project developed systems to evaluate the parameters of thermal and biomechanical comfort in footwear. The main elements associated with comfort in footwear are:

- correctly fitting shoes;
- appropriate temperature and humidity;
- arch and sole support;
- good flexibility;
- distribution of pressure on the sole of the foot; and
- the absorption of shock in the heel.

Box 4.4: Examples of Research Projects on Functional Innovation

The project studied the interaction between the foot and footwear in order to develop more comfortable footwear, and ultimately meet the demands and needs of the customer. It developed test systems which simulated real-life scenarios and activities, which allowed the assessment of the temperature and humidity within the shoe, the distribution of pressure on the sole of the foot, cushioning and the absorption of shock. By conducting such tests it was possible to generate further knowledge on the interaction between the foot and footwear which will permit the development of more comfortable footwear. It is anticipated that the results of this project will aid in the development of different footwear with superior comfort.

Source: Interviews in Norte, October 2011

One of the more recent partnerships at INESCOP with a footwear manufacturer involved placing a small electronic sensor within casual shoes. This is very similar to the system of the bionic and step counting technology used by sports footwear manufacturers; however, this time the technology is used in casual footwear targeting a different group of consumers. The step counting system in casual shoes serves the same purpose as in athletic footwear; it informs the user of the distance covered, perhaps as part of a general programme of improving fitness or losing weight. The product is now in production.

Fashion

One of the main drivers for product innovation is changing fashion, particularly for women's shoes. As discussed in Chapter 2 of this report, more frequent changes in collections, so-called 'fast fashion' is a key challenge for the sector.

Another area which is driven by fashion is that of sports shoes, particularly for boys and young men. This sector may account for one third of the EU footwear sales. The sector is dominated by major brands which outsource all production, mainly to Asian countries, as illustrated by the case of the German companies Adidas and Puma (see Box 4.5). However, the innovation process is not necessarily outsourced as demonstrated by the new Laces R&D building, opened in late 2011 in Germany, which houses over 1700 Adidas designers, developers, scientists and marketing strategists⁶⁷.

⁶⁷ www.e-architect.co.uk/germany/adidas_laces.htm

Box 4.5: Product Innovation in the German Sports Footwear Manufacturing Sector

German companies Adidas and Puma are two of the largest sports footwear manufacturers in the world. Both companies follow a similar business model, focusing on innovation in design, distribution, marketing and sales whilst production is sub-contracted to third parties.

Adidas has as a goal that it will 'introduce at least one major technological innovation each year'. Examples of past innovations include modular football boots made up of three interchangeable components: the upper, the chassis and the studs. Each component comes in a variety of styles and functions. Simply by mixing and matching these components, players can customize, adapt and tune their boots to any weather, any pitch and their very own personal style. Similarly, the company has developed an 'intelligent shoe' with built-in microprocessor for intelligent cushioning that automatically and continuously adjusts to the unique needs of individual athletes and changing surface conditions.

The main focus of Puma's innovation teams is footwear, which makes up about 50 percent of sales. In 2012 new high-tech new products developed by its 17-person footwear innovation group included a lightweight cross-sport range, featuring Evofoam cushioning and "anatomically engineered" outer soles. It has also focused on innovation in packaging. Its award-winning "Clever Little Bag" replaces the cardboard shoebox with a re-usable shoe bag, that protects each pair of shoes from damage from the point it leaves the factory until the consumer takes it home — thus generating savings on the production side due to less material used, reducing weight during transport and eliminating the need for extra plastic carrier bags

Sources: <http://www.adidas-group.com>; <http://about.puma.com/category/company/glance/>

Combining new looks with functional innovation is a feature of the protective footwear market, including ski boots, motorcycle boots and safety footwear. In relation to safety footwear, an example was provided, during interviews in Portugal, of a new range of men's safety footwear which resembles football boots and use lightweight materials. The company also offers a specialist ladies range, using a separate last rather than a modified men's last, which retains the safety features but offers variety in colour, material and style. Some illustrative examples of recent innovations in ski boots are presented in Box 4.6.

Box 4.6: Illustrative Examples of Ski Boot Product Innovation

Improved liners with close but flexible fitting allow Atomic Ski Boots' innovative *Live Fit* technology to keep feet warm and comfortable when skiing. Atomic boots are now made in Bulgaria.

Some Rossignol performance boots use patented *SensorFit* technology for those wishing to select liners with particular degrees of flex on the base. Rossignol boots are made in Italy (Montebelluna), France and in China.

Fischer offers ski-boots with a 'vacuum fit' in which the boot lining polymer material is expanded to provide a perfect moulded fit to the user. Fischer boots are designed in Italy (Montebelluna) and are made in Austria and the Ukraine.

Sources include:

http://www.atomic.com/en/Stories/2010_Home_3_1_LiveFit.aspx

http://www.bulgariaski.com/news/20081112/atomic_in_chepelare_en.html

http://www.rossignol.com/index.php?_lang=US&_cnt=CA&alias=rossignol-innovations-

[alpine&function=showTechno&insidefile=technoDetails.html&oid=TECH1011:crwjxkh119z0](http://www.rossignol.com/index.php?_lang=US&_cnt=CA&alias=rossignol-innovations-alpine&function=showTechno&insidefile=technoDetails.html&oid=TECH1011:crwjxkh119z0)

http://www.fischersports.com/en/Alpine/Technologies/Highlights/VACUUM-FIT?s_cc=1330159649

These examples reflect a trend within the ski boots industry for increased comfort and better fit of boots, in combination with fashionable design. Better fitting ski boots tend to produce less stress on the supporting muscles and allow for better control of movements without pain, thus leading to fewer injuries.

Components

Footwear components include box toes, toe puffs, heels, soles, counters (stiffeners) etc. Footwear producers generally buy in components from suppliers. Innovation in components can improve the overall performance of footwear products and their attractiveness to the consumer. An example of this is shown in Box 4.7, where a manufacturer has successfully developed an innovative ladies shoe heel.

Box 4.7: The Shock Absorber Heel
A German footwear manufacturer which specialises in innovative and comfortable footwear has developed an anti-shock heel for women's footwear. The new heel technology has integrated core stabilisers and pneumatic chambers within the heel which reduces the impact on the spine, spinal discs and joints. The aim of the heel is to increase comfort for women's shoes without compromising on fashion and design. This innovative system has been patented in Europe.
<i>Source: http://www.wortmann-group.com/</i>

Footwear component companies focus their RDI on improving the products they offer to footwear manufacturers, with the aim of improving the overall footwear product. We interviewed sole manufacturers in Lombardia, Southern Poland and Norte. Advances in components include polyurethane soles resistant to acids, hydrocarbons and solvents and the development of more effective and damage-resistant adhesives. This included a Polish component manufacturer which produced innovative lightweight soles made from PVC and a Portuguese sole manufacturer which regularly suggested innovative products to its customers, based on its research into market developments. Further examples from Lombardia are presented in Box 4.8.

Box 4.8: Examples of RDI by Component Manufacturers in Lombardia
A Milan based manufacturer has been producing a synthetic coated fabric for around 40 years. The coating and finishing are carried out in Milan and Velletri. The Velletri and Cisterna plant both have two high technology coagulation lines.
Another Milan-based company, which has been manufacturing footwear components since 1918, has developed as a leading producer of toe puff (box toe) and stiffener materials, and adhesives for shoes and furniture. All the main types of adhesive are produced including polyurethane, polychloroprene and a range of hot melts.
Another components manufacturer based in Vigevano began producing latex foam in the 1960s. This was shortly followed by polyvinyl chloride and polyurethane coated fabrics, aimed at markets such as footwear, furniture, leather goods and bookbinding's. The company also produces "Porolining" material which is a well-established lining material in the footwear industry for good breathability and absorbency. The company also produces upper materials such as "Xellents".
<i>Source: SATRA (2008)</i>

Materials

According to the companies responding to the EU survey, leather remains the most important shoe material and is used by over 80% of the manufacturing companies. However, innovation through the development of new materials, or improvements to existing materials, provides manufacturers with the possibility to differentiate their shoe products in the footwear market, as well as providing a basis for reducing material costs. Examples of the current focuses of materials innovation within companies include improvements in:

- material composition, assuring comfort;
- leather-softening technology;
- cushioning systems for shoes using different materials;
- penetration-resistance through chemical, water and fire repellent technologies;
- the colouring process to guarantee a consistent shade in material; and
- digital printing techniques for advanced customisation and personalisation of footwear.

Some footwear manufacturers and suppliers have developed partnerships with chemicals companies, laboratories, research and innovation centres to develop new and innovative material technologies. Examples of such innovations, which lead to improved performance of footwear products, are provided in Boxes 4.9 and 4.10.

Box 4.9: An Absorbing Fleece Technology for Shoes

A German footwear manufacturer and German chemicals company have jointly developed an intelligent system which adapts shoes to suit different weather conditions. The manufacturer has produced an absorbing fleece with an innovative ventilation element. The material is breathable and adapts to differing weather conditions; for example, the material closes up in the rain and re-opens when it is dry.

When the material gets wet, the absorbing fleece in the ventilation element immediately expands and self-seals the system and remains watertight under high pressure. Then, as soon as the material in the sole of the shoe dries, it regains its breathability. The technology has been protected by international patents. The German shoe manufacturer has manufactured its first shoe with the technology and partnered with other shoe producers to manufacture other shoes using this technology.

Source: http://www.iqtex.com/downloads/en/en_IQTEX-and-BASF_Leather-International-Magazine.pdf

Box 4.10: Nanotechnology for Footwear - Military

A UK shoe manufacturer established in the 1970s produces shoes for the military, law enforcement and security personnel worldwide. In 2009, the shoe manufacturer introduced a new patented nano technology to repel liquids from their footwear called ion-mask technology, in partnership with a research company specialising in liquid-repellent nano-coating technology for footwear and textiles. Originally developed for military clothing and designed to combat chemical agents, ion-mask technology is an ultra-protective surface enhancement.

This surface enhancement technology works at a molecular (nano) level. Applied inside a plasma chamber, the ion-mask treatment binds invisibly to the material's surface and fibres, resulting in extraordinary benefits to the end user, without affecting the look, feel or 'breathability' of the boot. The technology permanently alters the surface of a product at a molecular level to repel water, liquids as well as chemicals and protect soldiers from chemical attack.

Source: <http://www.magnumboots.com/uk/advantage/history.html>

Examples were found in Spain and Portugal of footwear companies working with chemical companies on materials innovation to improve the performance of footwear (see Box 4.11).

Box 4.11: Cooperation between Footwear and Chemical Companies on Materials Innovation

Panter, a manufacturer of safety shoes, is engaged in several projects with different research institutes and companies. Together with INESCOP, IBV and Bayer the company developed thermoplastic polyurethane sole resistant to acids, solvents and hydrocarbons with the greatest certified adherence coefficient.

Combining diversified designs of this sole with uppers of various materials, the company is able to meet the needs of very different working environments, focusing on features such as lightness of the shoes, shock resistance or heat resistance (from minus 30 to 300 degrees Celsius).

Source: Interview with INESCOP, May 2011

One company in Portugal carried out joint research with local suppliers to develop composite toeboxes for safety footwear, as an alternative to the traditional steel toecaps. This move had two benefits for the company; the toeboxes exceed the safety performance of steel toecaps but are lighter, allowing more comfortable footwear to be developed. In addition, sourcing toeboxes locally reduced costs compared to steel toecaps (which had to be imported) whilst also providing a new market for local suppliers.

Materials innovation can also be important in enabling companies to meet design trends at an affordable price for consumers. An example of such design-led innovation in materials is shown in Box 4.12.

Box 4.12: Design-Led Innovation in Materials

Ladies' fashion footwear manufacturers used innovation to develop an alternative to snakeskin, which is very fashionable for boots at the moment, but very expensive.

The company developed a form of leather printing and engraving which produces a mock-snakeskin effect; this was an initiative by the company itself and did not involve external partners. The company carries out this process itself and the resulting boots can be sold for half the price of real snakeskin boots.

The development needed to be carried out rapidly, as the trend for snakeskin is a current fashion feature which is unlikely to last for many seasons.

Source: Interview with Portuguese company, October 2011

Customisation

A key trend in product innovation is customisation. This allows customers to select a basic shoe model and adapt it to their own personal style by selecting the heel type, the material and the colour, as shown in Box 4.13. Several projects have been launched within the EU using very similar technologies, in which the image of a customer's foot is displayed on a screen in 3D with the selected footwear. This provides a personalised 'virtual reality' service for buying footwear products.

Box 4.13: Trends towards Customisation in Valencia

Customisation is becoming an important trend for medium and high price ranged women's shoe manufacturers, as consumers are increasingly looking for exclusivity and manufacturers are seeking to differentiate their products.

Within customization there are two main trends:

- customisation of the final product offered to consumers at retail stores; and
- customisation of a product line offered for retailers or buyers.

In the first scenario, consumers can select the specific accessories and style features of the final product in the retail store. In this case, the retail store is equipped with technology which projects the image of a basic shoe that customers can edit by adding the desired colour material and design elements while through another screen this newly designed shoe concept is projected upon the customer's feet. Spanish retail stores are now promoting the use of this customisation tool; the price of these customised shoes is approximately €200.

In the second case, manufacturers are offering a particular footwear model with a selection of accessories, colour and materials, which the buyers can choose. Therefore, some particular shoes will be sold through only specific retail stores.

Source: Interview with Research Institute in Valencia, May 2011

This type of technology is slowly gaining ground in the higher price ranges, offering a degree of exclusivity. It is also being used for sports footwear, where it has the benefit of allowing shoes to be designed to meet the specific parameters of a customer's feet. Specialised sports footwear shops already offer customisation services such as taking measurement of customer's feet and recommending a suitable model. Moreover, exclusivity has also become important for casual and sports footwear and companies such as Timberland, Nike or Adidas offer complete design customisation of selected footwear, available through their on-line stores.

4.2.4 Environmental Innovation

The growing environmental challenges facing the footwear sector, and the potential to differentiate products on the basis of environmental performance (see Chapter 2) have also been a driver for innovation. Box 4.14 provides an example in which the driver of innovation is the development of more eco-friendly materials.

Box 4.14: Environmental and Sustainable Protective Footwear

A small safety footwear company in France has undertaken research into eco-friendly materials such as chrome free upper leather, natural fibres and recyclable materials. These materials can improve not only comfort for users but concurrently have less impact on the environment.

The company partners with other organisations in its research activities, such as BASF (chemicals), research centres such as CTC in France, INESCOP in Spain and IFTH in France (textiles).

Source: Interviews in France, October 2011

Leather can be treated in many different ways and one area for RDI is the increasing pressure for leather treatments to be more environmentally friendly. For example,

INESCOP has developed processes for titanium-tanned leather and CTC has developed an eco-design process. Similarly, there are also pressures for more environmentally friendly plastics, which may also provide enhanced performance.

RDI into the environmental aspects of production is also of increasing interest to European footwear manufacturers and can contribute to improved brand image. Box 4.15 provides an example of a footwear firm incorporating environmental friendly processes into shoe production.

Box 4.15: Eco-Friendly Policy

A shoe manufacturer in Italy which has been producing shoes since the 1960s has given particular attention to the environment and the eco-friendly production of shoes. The company has incorporated environmentally friendly policies into the production process:

- **hand sewn footwear:** avoiding the use of chemical adhesives by use of hand-stitching;
- **removable insole:** dependent on the customer's specific needs;
- **use of renewable energy:** specifically in the production chain;
- **logistics:** optimisation of delivery and avoiding the use of heavily polluting vehicles; and
- **packaging:** all packaging is made from recycled paper.

Source: Downloaded from the Aeros internet site: (<http://www.aeros.it/en/index.html>)

Action on environmental issues has also been taken by suppliers to the footwear industry. For example, the Green Footprint Project, led by Dow Italia, has introduced renewable polyurethane materials for high quality, top design, shoes. The purpose of the project is to showcase the production of shoes made from new, bio-based, Dow Polyurethane Systems and their introduction into the footwear market. The specific targets of the project are to:

- reduce fossil fuel usage by 20 to 25%;
- lower energy costs, saving up to 10%; and
- reduce the carbon footprint by 0.7 tons of CO₂ per ton of polyurethane.

4.3 RDI Partnerships

4.3.1 RDI Centres in the Footwear Sector

As noted in Section 2.5, some of the leading research centres on material and process innovation within the footwear sector can be found in Europe. Both research centres and university departments undertake research into material composition and process technology improvement as well as quality testing of products. Almost all of the research centres were set up at the request of the industry to carry out research for them and this culture still remains. Research centres and internal company research are not mutually exclusive. Footwear enterprises and public research centres, as well as universities, partner on a wide range of projects.

In Lombardia, Norte, Valencia and Rhône-Alpes, RDI in the footwear sector is actively supported through partnerships amongst companies and other organisations. In Southern Poland, there is a formal ‘technology platform’ for the leather industry which was established in 2006 to encourage technological development and co-operation between industry, research centres and academia, with a focus on conducting research and implementation of the results. However, in practice, there appeared to be a very limited amount of partnering between companies and these organisations with respect to RDI. Table 4.3 summarises the structure, funding, activities and client base of the institutes.

Institute Region	Structure	Funding	Activities	Industry R&D Client Base
CIMAC Lombardia	Independent centre founded by industry association (ANCI)	Industry, plus government and EU funding for specific projects	Primarily testing and certification, plus applied R&D	Primarily ANCI members, but also companies world-wide
ITIA-CNR Lombardia	National research centre	Government	Applied R&D, plus researcher training	Regional and national companies
INDACO Lombardia	University Department	Government	Primarily academic, plus industry training and applied R&D	Regional companies
CTC Rhône-Alpes	Independent (industry-founded) centre	Industry (via membership fees and parafiscal tax) plus government for specific projects	Primarily testing and certification, plus applied R&D and training	National companies
INESCOP Valencia	Independent (local company-founded) centre	Industry, plus government and EU funding for specific projects	Applied R&D	Regional and national companies, plus third country companies
CTCP Norte	Independent (industry founded centre)	Membership organisation, annual budget is around €2.8 million	Applied R&D, logistic systems for automation, CAD for development, testing, patterning and production	Regional and national companies
ILI Southern Poland	National research centre	Government 2% and 98% from other sources e.g. property rental, EU-funded projects, grants, training, consultancy	Applied R&D, training, materials engineering	Regional and national companies

Lombardia hosts three centres of footwear innovation, CIMAC, INDACO and ITIA. CIMAC was founded by, and is funded by the industry while INDACO is an academic institute and ITIA is part of the National Research Council (CNR). Despite their different structures, all three institutes have established a strong partnership with

industry which has involved enterprises directly in research projects. The research centres are also well integrated with the wider footwear research community, through their involvement in a number of EU wide projects.

CTC in **Rhône-Alpes** was founded by industry specifically to meet its needs and to help maintain competitiveness. CTC's research programmes are decided by technical committees made up of representatives of member companies. It is primarily financed by industry, through membership fees and direct funding of specific projects. However, funding is also provided through a parafiscal tax levied on leather production and shoe sales in France. It also obtains some funding through national and local government support programmes. It has participated in EU-funded projects in the past but does not now see this as a major source of funds.

INESCOP in **Valencia** was also founded by industry and obtains much of its funding from its more than 600 industry members. INESCOP partners with a wide range of organisations within Spain and elsewhere in the EU. It works mainly with industry within the region, and holds regular, informal meetings with local companies to turn their general ideas on what they need to become more competitive into focused research projects which can be carried out on a partnership basis. It also has close links to Universities elsewhere in Spain and to the major research centres in Europe, via partnership on a variety of EU funded projects

CTCP is the only footwear research institute in **Norte** and benefits from being very close to the industry geographically, as well as to the headquarters of industry association APICCAPS. Like INESCOP, CTCP takes a proactive role by approaching companies with new ideas for products and processes. Its responsibility is to be ahead of the companies in terms of R&D developments. CTCP's role is making the links between problems and know-how for footwear firms. CTCP also partners with research centres and universities in the region that are not specifically focused on footwear but have relevant skills, such as IT and process management.

In **Southern Poland**, ILI provides research, training and consulting services to the regional (and national) footwear sector. However, in practice there appeared to be a very limited amount of partnering between companies and the centre with respect to RDI. Whilst companies might use the expertise of the ILI to provide consultancy advice, training or testing facilities, research at the ILI appeared to be self-governed.

The research centres in Lombardia, Norte and Southern Poland are thus quite different in the way they are structured and funded. Despite these differences, in most regions effective links have been established between research centres and industry and industry helps to drive the direction of research in the institutes. Box 4.16 (next page) provides an example of this from Valencia. In Southern Poland, however, the process does not appear to have worked as well.

Box 4.16: Example of a Research Centre Project Driven by Company Needs

In 1993, INESCOP understood there was a need for local manufacturing enterprises to respond to increased demand from the markets. It, therefore, began working to transform the large cutting tables used at production facilities to automatic ones, an innovation much resisted by companies at the beginning, as they relied on manual cutting of the leather.

With the help of a spin-off company, INESCOP developed the idea and eventually began to sell the technology, thereby assisting these companies to increase their production capacity.

Even though manual cutting is still widely used, especially in case of low orders, automatic cutting tables are increasingly used alongside manual cutting for large quantity orders.

Source: Interview with Research Institute, May 2011

4.3.2 RDI Partnership within Clusters

RDI can be demanding in terms of costs and expertise, especially for SMEs (see Chapter 6 of this report). One approach towards making RDI more affordable is to co-operate with other companies and organisations, in order to maximise the potential returns from sharing knowledge. The formation of regional clusters is recognised by the European Commission⁶⁸ as a way to enhance innovation. Although our research did not identify specific RDI focused clusters, Box 4.17 below provides examples of traditional Italian industry clusters within specific footwear manufacturing segments in which RDI plays an important role.

Box 4.17: Examples of Specialised Footwear Clusters in Italy

The footwear cluster in **Montebelluna** in the region of Veneto in Italy has been labelled the “capital of the snow industry” for its dominance in the technologies for the production of ski boots. There are many firms clustered in the area of Montebelluna and its competency in sports footwear has strengthened even as the footwear industry has weakened elsewhere in Europe. The cluster now holds a significant share of global production of mountain boots, motorbike boots, in-line skates, and after-ski boots, although production has been increasingly outsourced to Asia. Its value chain is tightly integrated locally, with a considerable number of SMEs supporting the major manufacturers, ranging from design firms, assembly and installation companies, laces manufacturers, machinery producers, moulders, and shearing and uppers workshops as well as various components manufacturers. These SMEs support larger firms, some of which were created in Montebelluna, such as Tecnica, Nordica, Brixia and Dolomite, and others that arrived via acquisitions, such as Nike, Rossignol and HTM. Montebelluna has become well-known for partnerships between footwear firms in the area to innovate and bring new footwear products to the market., including innovations in the fit of skiboos (see Box 4.10)

Brenta is a cluster of footwear firms in Italy which specialise in the high-end footwear market for major fashion houses. Shoes produced in the area are in the medium to high segment and predominantly women’s shoes. Many companies within the Brenta cluster started out by establishing their own brand in specific product lines and were then approached in the 1990s by large international brands (for example, LVMH, Gucci and Prada). Therefore, in Brenta RDI focuses on branding, advertising, marketing and sales. Exclusivity is an important feature of the branding of high end fashion shoes; therefore design RDI is also a key feature.

Source: Amighini A & Rabellotti R (2004)

⁶⁸ European Commission (2009d)

There are footwear clusters in all the case study regions, which facilitate RDI partnership amongst manufacturers, researchers and other industry stakeholders (although the cluster in Rhône-Alpes is now very small). These clusters comprise of companies and organisations working on all aspects of footwear design and production, particularly in Lombardia, Valencia and Norte. In Southern Poland, although most elements were present (including raw materials, components, design, research and production), specialist equipment and lasts appeared to be imported and partnership amongst the different parties was more limited.

All the companies interviewed within Lombardia, Norte and Southern Poland identified benefits of being located in clusters, but these were mostly informal rather than formal partnerships. Nevertheless, examples were provided of partnerships between footwear and components manufacturers as well as between footwear manufacturer and specialist related industry such as a fabric innovator, chemicals company, nanotechnology company etc. Informal partnerships generally include exchange of information between stakeholders regarding challenges, or routes of innovation.

Clusters such as Elche and Elda in Valencia provide opportunities for formal as well as informal partnerships. Valencia stakeholders founded the cluster Calzado Innovación, a non-profit association, to increase allocation of funding and support for the industry, as well as to further highlight the importance of the sector. A number of research projects have also been undertaken by the association, which had helped to establish the frameworks for lines of research in automation, digital technology and robotics.

However, even though companies in the footwear sector are often geographically close to each other within clusters, they may not necessarily interact, due to issues of confidentiality and varying objectives with regards to RDI. These views were expressed in Lombardia and reflected the findings of a detailed study into the equipment manufacturers of Vigevano (an area of Lombardia). Similarly, in Southern Poland, it appeared from the interviews that companies only co-operate in limited cases where there is a direct financial benefit. For example, a children's shoe manufacturer develops new product designs in consultation with customers and one of its component suppliers.

However, in Norte and Valencia, the proactive positions of the industry associations and the research centres appeared to encourage companies to consider the potential for opportunities for RDI partnership. Perhaps the best example was the creation of an equipment manufacturer to meet the needs of the Portuguese footwear industry (see Box 4.18, next page). This company now operates internationally in footwear and other industry sectors.

Box 4.18: Formation of a New Company to Deliver Innovative Technologies

In the mid-1990s, CTCP issued a challenge to organisations to develop machinery specifically for the footwear sector, as its needs seemed different from other sectors. In particular, equipment was needed to help the industry meet the demand for smaller orders (for the limited own brand market) and customisation.

One solution identified was for automatic cutting equipment. The three shareholders in the company knew the sector and so started up the business to respond to the challenge. One of the founders was an academic working on CAD/CAM software; his partners were working in companies manufacturing equipment for other sectors. CTCP brought the partners together and also helped customers to obtain public funding to minimise their risk in working with the new company (the company itself received no public funding).

Source: Interview with footwear equipment supplier, October 2011

In all case study areas, the main form of RDI partnership for companies was with their immediate customers, with companies working together on the development of designs, technological improvements and marketing. Clearly, such partnerships are informed and influenced by an awareness of developments in the footwear industry sector more generally. As such, there is an important role for industry associations and research centres to assist with this process.

4.4 Intellectual Property Rights

4.4.1 Introduction

Intellectual property rights (IPR) allow entrepreneurs and enterprises to retain ownership of the innovations they create. As with ownership of physical property, IPR enables them to use and benefit from the outcomes of their research and therefore prevent third parties exploiting their ideas without permission⁶⁹.

Intellectual property can be divided into two categories:

- industrial property, which includes inventions, trademarks, industrial design, and geographical indications of source; and
- copyright, which includes literary and artistic works such as novels, films, musical works, paintings, photographs, and architectural designs⁷⁰.

Patents in the European Union are registered at the European Patent Office. European patents are granted for inventions that are new, involve an inventive step and are susceptible of industrial application. Inventions protected by patents can include processes (manufacturing, management, environmental or IT), tools and machinery or the composition of materials.

⁶⁹ UK IPO (2007)

⁷⁰ Information from the World Intellectual Property Organisation (WIPO) available at <http://www.wipo.int/about-ip/en/>

Elements of a design can also be patented, provided these are original. Design patents offer the right to exclude others from using the specific design, colour and material composition or surface ornamentation. Designs can be protected at the EU level as registered Community design as well as unregistered (short-term form of copyright protection for industrial designs) Community design⁷¹. The Office for Harmonization in the Internal Market (OHIM) is the European Union agency responsible for registering trademarks and designs.

Protection of IPR is a priority in order to ensure fair competition and the continuation of innovation and creativity within the footwear industry. There is a threat to the EU footwear industry, with many counterfeit products on the market. One Portuguese firm we interviewed had had its designs copied in China and Brazil. The company recognised that it should probably be doing more to protect its footwear, but has not yet done so. Another Portuguese component manufacturer had offered sole concepts to its customers, who had then used them and patented the resulting design themselves.

4.4.2 Footwear Patents

The number of patent applications in the footwear sector was at its peak in 2005 and reached a low point at the height of the financial crisis in 2008 (the latest year for which data are available). In the European Classification System (ECLA), footwear is divided into three main sub-categories:

- characteristic features of footwear; parts of footwear;
- fastenings or attachments of footwear; laces in general; and
- machines, tools, equipment or methods for manufacturing or repairing footwear.

Table 4.4 shows the number of patents currently registered under these categories.

Classification	Number of Patents
Footwear	5,244
Characteristic features of footwear; parts of footwear	4,386
Fastenings or attachments of footwear; laces in general	907
Machines, tools, equipment or methods for manufacturing or repairing footwear	675
<i>Source: Espacenet- European Patent Office, Figures for July 2011</i>	

Footwear characteristics and features of products are the most commonly patented innovations; however, some innovations that are patented in more than one sub-category. An example of this is the patent for orthotics for a shoe and method of manufacturing an orthotic for a shoe by German inventors. In this particular

⁷¹ Information from the InnovAccess website available at http://www.innovaccess.eu/documents/WhatEuropeanPatent_0000006248_00.xml.html

invention, the insole of the footwear product is personalised by using a single-piece form cut from a solid material and at least the upper side of the insole is provided with topography specific for the user and the shoe. This patent qualifies both as a product and a process invention⁷².

Table 4.5 below indicates that the most important footwear manufacturing countries are also the ones patenting the most innovations. The countries in the table account for over 70% of all patents registered at the EPO.

Country	No. of Patents by Classification			
	Footwear	Characteristic features of footwear; parts of footwear	Fastenings or attachments of footwear; laces in general	Machines, tools, equipment or methods for manufacturing or repairing footwear
France	583	482	145	59
Germany	679	549	101	118
Italy	1049	840	240	142
Poland	12	:	:	:
Portugal	5	4	0	1
Romania	3	:	:	:
Spain	127	76	11	53
Japan	221	193	:	:
US	1091	929	151	149
China	22	20	2	1
Russia	4	4	0	0

Source: Espacenet- patent search of the European Patent Office, Figures for July 2011

Patents have been used by a number of the footwear firms interviewed in the case studies to protect new inventions and give monopoly rights to the inventor(s) (see Box 4.19, next page).

⁷² Example from the database of the European Patent Office: European Patent Office Registration Number EP 1654946 (A1)

Box 4.19: Patented Technologies

One company interviewed had many patents covering sports footwear, including:

- Comfort and breathability: a variation on the Geox air exchange sole;
- Air conditioning: atmospheric pressure injects new fresh air into the shoe, filling the vacuums left by the warm air that has been pushed out from the outlet valves thanks to the pressure exerted by the foot. The constant inlet of new air keeps the temperature of the foot unchanged and prevents it from sweating;
- Top air: the outsole of the shoe is composed of a rubber ventilation system which is open at the top. While walking air is ejected and this ensures effective flow of fresh air;
- Rubber insert construction: the sole of the shoe combines rubber with leather. The rubber used in the sole is made of a highly resistant, waterproof and non-slip material; and
- Air jumping: the outsole of the shoe is made of a spherical cells guaranteeing high comfort level which absorbs the weight at every step. This is used in comfort shoes. The shoe soles with their special tread pattern provide shock resistance.

As well as patented footwear technology, the company incorporates innovative solutions to the manufacturing process such as:

- a pouch construction method: extra soft foot bed;
- antistatic process: rubber soles with micro conductors; and
- Gore-tex: waterproof and improved transpiration.

Source: Interviews in Italy, 2011

However, companies indicated that the process of gaining patents, particularly international patents, was lengthy and costly. In addition, the effectiveness of patents is limited by:

- the opportunities for competitors to invent around a patent by making slight amendments;
- the speed of technological change and fashion cycles; and
- the availability of alternative methods (for example there are many inventions for breathable material/shoe technologies).

For example, a Portuguese company indicated that the tighter the protection and the more territories it covers, the higher the cost of patents and additional renewal costs. Realistically, it may not always be the best route to pay for a patent if the company cannot afford the renewal. Moreover patent protection does not always prevent infringement. As mentioned in Chapter 3, one company in Rheinland-Pfalz had taken a retailer to court twice for copying one of its products. The product had very distinctive features, making the case easier to prove. However, although the company has won its case twice in the courts, the retailer delayed action through appeals, which means it continues to gain the benefits from selling the copy.

4.4.3 Footwear Trademarks

TMView⁷³ lists 276 footwear-related trademarks (including those where trademarks status has ended), based on information collected from 14 Member State Trade Mark

⁷³ An online tool which is a joint project between the OHIM, World Intellectual Property Organisation (WIPO) and EU National Trade Mark Offices

Offices (Benelux, Bulgaria, Czech Republic, Denmark, Estonia, Spain, France, United Kingdom, Italy, Portugal, Slovakia, Slovenia). This is shown in Table 4.6. Two major footwear producing countries, Germany and Romania, do not appear in the table, as no data were collected from their trademark offices for TMView.

Country	Number of Trademarks
Bulgaria	1
Benelux	23
Czech Republic	9
Denmark	17
Estonia	4
France	15
Italy	29
Portugal	15
Slovakia	1
Slovenia	6
Spain	35
United Kingdom	55

Source: TMView <http://tmview.europa.eu>

In addition to trademarks, OHIM lists footwear related designs; searching under the Locarno classification (footwear 0.2.04) identified over 31,000 results.

4.4.4 Protection of Intellectual Property Rights in the Case Study Regions

Several of the research centres have taken out patents to protect their own innovations. For example, INESCOP in **Valencia** has about 17 registered patents at the European Patent Office covering a wide range of innovations. The institute has also sold over 1 500 licences for its patented CAD design system. However, many considered that the process of taking out patents is complicated and expensive, while only giving limited protection against counterfeiting.

In **Lombardia**, ITIA-CNR has a number of (mainly national) patents. In its view, projects and products are often patented one after the other with minor alterations added to them; therefore, these tend to lose their value very quickly. The strong competition in the footwear sector means they will try to imitate and out-do the latest innovation very quickly. Furthermore, even the slightest change to a technology or product can be secured with a different patent which may deter some companies from taking out patents.

The research centres indicated that one reason why many footwear companies do not take out patents is because most innovation in the sector is incremental and practical, rather than involving major research breakthroughs. However, we did identify examples of companies protecting their intellectual property by taking out patents (both in the case studies for the Tasks on Research Centres and on Research and Innovation and in other case studies).

Although protection of intellectual property is seen as increasingly important, smaller companies in **Norte** do not always apply for patents as it is an expensive and time consuming process. Furthermore, once patents are issued, companies do not always have the money to take action against any infringements. Enterprises have therefore found it easier to apply for national patents rather than for EU and worldwide patents. CTCP in Portugal holds a number of patents, but does not see these as a particularly valuable tool. It therefore considers it better to present an idea in public, which means that the idea cannot be patented by anyone else.

None of the footwear companies and organisations interviewed in **Southern Poland** had used patents or other measures to protect their new designs and products. However, one producer of children's shoes which develops designs in cooperation with a sole producer prevents the sole producer from copying the design for use elsewhere through its contract. There appeared to be two main reasons, one was that the time to take out a patent was, in many cases, longer than the product lifetime (particularly with two to four collections per year). Secondly, small changes to a protected product could render the protection invalid. It may also be because the incremental nature of innovations did not lend themselves to patenting.

In summary, the use of intellectual property rights was not seen as a priority area within the case study areas. Although there may be merit in protecting a new development in technology, there was general agreement that protecting designs was not worthwhile due to the short lifetimes of shoe designs. In relation to technological developments, patents were not generally regarded as particularly beneficial, due not only to the time and costs of obtaining and enforcing them (particularly at an international level) but also because minor changes by competitors could render them ineffective.

4.5 Funding for RDI from Public Support Mechanisms

4.5.1 Availability of Funding from Public Support Mechanisms

Adequate access to funding from public support mechanisms to invest in RDI is crucial for companies in the EU footwear sector. There are a number of mechanisms which provide financial support to EU footwear companies. These include:

- the European Framework Research Programme (FP7);
- the Community Framework for State Aid for Research and Development and Innovation⁷⁴;
- the Eco-Innovation Initiative through the Competitiveness and Innovation Programme (CIP)⁷⁵;
- national research programs; and
- regional initiatives.

⁷⁴ European Commission (2006)

⁷⁵ European Commission (undated, a)

The European Commission has adopted the Community Framework for State aid for Research and Development and Innovation⁷⁶ to clarify to Member States how best they can give support to not only research and development but also innovation projects, without infringing state aid rules. The Framework sets out a series of guidelines for specific types of state aid measures which could encourage additional RDI investments by private firms, thus stimulating growth and employment and improving Europe's competitiveness. These include aid for R&D projects, aid to young innovative enterprises and aid to innovation clusters.

4.5.2 EU Supported Initiatives in Footwear RDI

The initiatives undertaken as part of the European Framework Research Programme (FP7) are an important element of RDI in the footwear sector. Examples of recent projects are shown in Box 4.20.

Box 4.20: Examples of Recent Footwear RDI Projects under FP7
<ul style="list-style-type: none">• DOROTHY: development of tools for the design of customer driven and high value-added footwear in the global production chain and corresponding business models⁷⁷;• HEELLESS: development of a heelless shoe to reduce injury during running;• SHOPINSTANTSHOE: development of a shoe from shape memory materials;• SSSHoes: development of new production technologies for shoes for feet affected by diabetes as well as other high value added products;• FIT4U: development of new technologies to involve the consumer in the design of shoes;• ENVIRO-TEX-DESIGN: development of a virtual design environment; and• NET-CHALLENGE: development of processes and ICT decision support tools for SMEs.
<i>Source: http://cordis.europa.eu/</i>

At the end of 2011, two new NMP (nanotechnologies and nanosciences, knowledge based multifunctional materials and new production processes and devices) research projects started under the FP7, addressing specific groups of consumers:

- the aim of the MY WEAR project is to develop a new generation of customised, green, safe, healthy and smart work wear and sport wear products for elderly, obese, diabetic and disabled people;
- the other project, entitled FASHION-ABLE is targeting manufacturing companies, particularly SMEs. It seeks to provide innovative European SMEs engaged in customisation with the technological means that will enable the conception, co-design and the sustainable manufacture of fully personalised products.

In addition, PROsumer.NET, a Coordination and Support Action is also funded by the 7th Framework Programme. The project aims to disseminate knowledge amongst the technology and research platforms that are related to the design-based consumer goods industry.

⁷⁶ European Commission (2006)

⁷⁷ ETH (2008)

4.5.3 Uptake of Funding from Public Support Mechanisms for RDI

Both national and EU funding support mechanisms are available and accessible in all case study regions even as these might be of different levels and forms. However, companies, and especially small and micro sized enterprises, often struggle to provide the capacity, time and finances that would be necessary to apply for funding. Nonetheless, the involvement of these smaller companies is crucial, as they make up the majority of manufacturing companies in Europe. Therefore, access to information regarding on-going research projects and the sources of funding can be beneficial for these enterprises.

Out of the 24 companies responding to the EU survey which had reported making investments, 14 had used regional, national government funding and EU funding (see Figure 4.3).

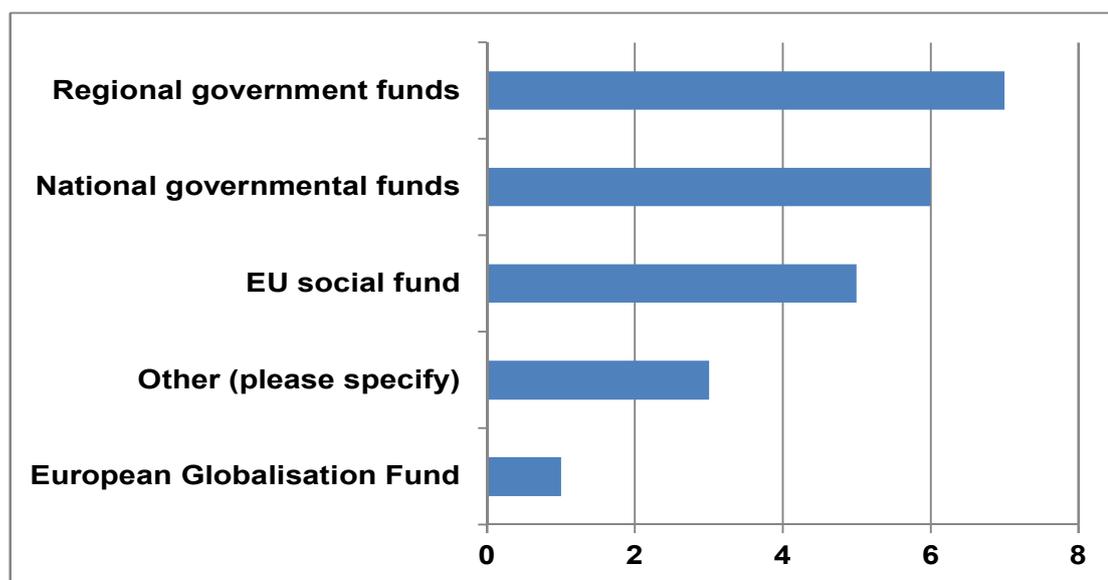


Figure 4.3: Responses from 14 Companies to: *How were these investments funded? Please tick all the 'public' finance sources that you have used*

A number of the research centres and companies that we interviewed for the case studies had participated in EU-funded projects, including the CEC-Made-Shoe Project described in Box 4.21.

Box 4.21: The CEC-Made-Shoe Project

Between 2004-2006, the European Confederation of the Footwear Industry (CEC) co-ordinated a research project called CEC (Custom, Environment, and Comfort) Made Shoe, which involved 54 partners from 14 European countries and was co-financed from the EU's 6th Framework Programme (EU financing provided over €10 million). The project aimed to address challenges faced by the sector, such as the incremental and uncoordinated nature of research, declining market share of European producers and the lack of national and EU policies to reduce labour costs. More specifically, the objectives were to:

Box 4.21: The CEC-Made-Shoe Project

- improve the industry's capability to quickly and adequately respond to changing market demands (including reducing the design and manufacturing lead time, smaller-scale production series, increased flexibility, i.e. increasing the pre-existing number of collections per year);
- improve waste management and increase the use of environmental friendly materials and processes;
- provide training for the SME in order to implement this new business model; and
- improve production efficiency, reducing the cost of manufacturing by at least 20%.

Research conducted under the auspices of this project focused on the following issues:

- new product concepts, such as the “intelligent shoe”, including life cycle analysis, biomechanics and physiological criteria integration (an example of an intelligent footwear solution given by another source is an intelligent shock absorber);
- new processes and core technologies leading to flexible and rapid responses to market demand by speeding up design, manufacturing and sales, including internal logistics and management;
- new materials, including bio materials, health / comfortable materials and active materials; and
- information and communication technologies leading to the creation of an electronic infrastructure between consumers, shoe retailers, footwear manufacturers, etc.

The outcomes of the project included:

- the development of new shoe types and new materials: biodegradable, snap shoes (interchangeable shoes with different choices for bottoms and tops), and intelligent shoes that adapt to environmental conditions;
- CAD / CAM / CAE software for the development of the new shoes;
- new manufacturing technologies, machinery and systems (e.g. a one-step manufacturing process that is 15% more efficient and allows the manufacture of smaller production batches, new quality control technologies); and
- new software architecture for supply and retail chain management (communication system for the supply chain).

Source: European Commission (undated, downloaded in September 2011)

The issue of financial support for RDI in the footwear sector is more than a question of how much is being spent and on what projects. The major research projects funded by FP7 and other programmes, described in Section 4.5.2, often involve research centres and companies from several countries. However, for a small footwear company trying to improve its products, the most useful contribution to its RDI might be a €1 000 grant to attend a trade fair to see what other companies are doing. SMEs often find it more difficult to obtain finance than larger companies, which negatively impacts their ability to innovate. Therefore, financial support is crucial for companies to set up or expand their operations, particularly in difficult market conditions.

In **Lombardia**, ITIA-CNR considered that not enough financial support is available from the regional or national government. ITIA-CNR explained that most of the money allocated for research is aimed at supporting centres to put together proposals for EU projects. This does not appear to be an effective use of funding, as it limits the line of research to the areas of footwear development identified in EU projects.

INESCOP noted that the footwear industry in **Valencia** suffers from a lack of funding, which creates an obstacle to the implementation of R&D outcomes. It expressed concern that current financial support for R&D often puts SMEs in competition with large firms for funding. However, the Ministry for Science and

Technology allocates funds (covering up to 30% of the costs) for research and innovation; these are smaller amounts that target technological development within individual companies.

In **Southern Poland**, there appeared to be an awareness amongst the companies interviewed that EU funds could be available and, indeed, one of the companies was involved with a major EU funded project (see Box 4.22). However, ILI indicated that getting financial support from EU funds had become more difficult in recent years. This was reflected in other interviews in which it was indicated that accessing EU funds often required the involvement of regional authorities, which appeared to introduce additional administrative hurdles. In general, there was little or no funding available for the footwear industry in Southern Poland and, for most companies, RDI investments were self-financed. One firm mentioned that it obtained some limited funding from the Government, which had been used, unsuccessfully, on a non-shoe development project.

Box 4.22: The Naturalista Project

A sole manufacturer from Southern Poland participated in the Naturalista project, which is funded by the EU Eco-Innovation Programme, together with companies from Spain, Portugal and the Czech Republic.

The aim of the project is to make ecological products from old footwear, where rubber soling and other polymers have been used alongside materials like textiles and leather. The new recycling process will help to decrease the environmental impact of footwear after purchase and during manufacture.

Naturalista will aim to obtain an Eco-label that indicates that a product uses recycled materials from shoes

Source: Interview with manufacturer in Poland, November 2011

In **Norte**, EU funding had been obtained for a range of projects – including support from EU Regional Funds for the work of APICAPPS in promotion of the Portuguese footwear sector. However, CTCP noted that the outputs of EU-funded footwear research projects under the 7th Framework Programme are often far from those required for practical applications. There was a perception that, due to the influence of academic organisations, projects tend to focus on new knowledge, rather than practical issues. This is less of a problem for the more advanced companies, which are able to take initial ideas forwards, but more problematic for SMEs, which require a more useful product. Although there is no regional funding, the fact that Norte contains most of the Portuguese footwear industry meant that national Government support and funding was available to assist with RDI.

The French Government supports the CTC through a parafiscal tax. It also provides support for research and innovation within clusters, which CTC has used for a number of projects. The region of **Rhône-Alpes** also provides support for footwear research (see Box 4.23).

Box 4.23: Regionally Funded Research on Nanomaterials in Rhône-Alpes

An example of regional support is research conducted on the use of nanotechnology in leather processing. The research considered ways in which nanomaterials can be used as an alternative treatment to improve the properties of leather. Work was primarily focused on wet applications and targeting products used in the luxury goods industry, sports and safety.

The objectives of this project include:

- defining the constraints of nanomaterials (capsules and particles);
- analysing the commercial possibilities offered by this technology through the application of nanoparticles and nanocapsules;
- applying these formulas in the manufacture of leather; and
- assessing the physical-mechanical properties of the leather material obtained.

Source: Interview with CTCP, May 2011

Box 4.24 demonstrates the use of financial support mechanisms for R&D by one company in France.

Box 4.24: Financial Support for a R&D by a Small Company in France

A small French company produces shoes for the safety and protective footwear sector. Its main area of research is related to safer soles to improve slip resistance. To remain competitive, the company allocates about 1.5 % of its turnover to RDI.

The company did not previously have the financial resources to do this; it, therefore, used funds from the PACA (Provence-Alpes-Côte d'Azur) region and the EU Competitiveness and Innovation framework Programme (CIP) called 'eco innovation for leather'.

Source: Interviews in France, October 2011

Most of the organisations interviewed across the case study areas indicated that research funding from the EU could be useful, but they have found that the administrative work involved in accessing the funding too onerous. Some companies indicated that they would need to hire a new person or a consultant simply to put a proposal together and handle the administrative tasks involved.

4.6 Success Factors and Barriers in Transforming RDI Outcomes into Marketable Products

4.6.1 Success Factors

The information gathered from the case studies indicate that the key success factors for transformation of RDI outcomes into marketable products are:

- strong industry representation in setting research and development agendas;
- close partnerships between footwear manufacturers, their suppliers and customers;
- effective partnerships within clusters; and
- targeted financial support.

Industry Representation in Setting Research Agendas

Throughout our case-study visits, both research centres and footwear companies stressed the need for companies to be intimately involved in setting the research agenda. Many of the research centres in Lombardia, Valencia, Norte and Rhône-Alpes were initially set up by industry, and are largely funded by industry. This appears to be an important driver in ensuring that research agendas closely follow the needs of companies.

For example, CTC's research programmes are decided by technical committees made up of representatives of member companies. Similarly, INESCOP in Valencia holds regular informal meetings with local companies to discuss their general ideas on what innovations they need to become more competitive. These ideas are then turned by INESCOP into focused research projects which can be carried out on a partnership basis (and the earlier Box 4.16, Section 4.3.1) provides an example of such a project. In Norte, CTCP was set up by the industry association, APICCAPS, and works very closely with it to focus research agendas on the areas of innovation likely to be most beneficial to companies.

By contrast, there appeared to be very little partnership between research centres and industry in Southern Poland in setting RDI agendas. Whilst companies might use the expertise of the ILI to provide consultancy advice, training or testing facilities, research at the ILI appeared to be set independently of the industry.

The ability to transfer this success factor to other EU regions, therefore, depends not only on the existence of research centres, but on the willingness of research centres to work closely with industry (and vice versa). This, in turn, is likely to be influenced by the sources of funding and the organisational structures of the research centres (see Table 4.3). Although these are likely to be influenced by the historical development of the research centre, it may be possible to make changes that encourage closer cooperation with industry.

Partnerships between Manufacturers, Suppliers and Customers

Working closely with suppliers and customers has been a key factor for footwear companies in transforming RDI into marketable products. In all case study areas, the main form of RDI partnership for companies was with their immediate customers, to assist with the developments of designs, technological improvements and marketing.

For example, the key to successful RDI in components appeared to be close cooperation between footwear manufacturers and their suppliers. An example of such cooperation, between a sole supplier and the footwear producer was given earlier in Box 4.14 (see Section 4.2.4).

Close cooperation with customers and suppliers is an important aspect of all business activities for footwear companies. However, in some cases companies were reluctant to cooperate on RDI due to issues of confidentiality and varying objectives with regards to RDI. These views were expressed in Lombardia and reflected the findings

of a detailed study into the equipment manufacturers of Vigevano (an area of Lombardia). Similarly, in Southern Poland, it appeared from the interviews that companies only co-operate in limited cases where there is a direct financial benefit.

This indicates that the transferability of cooperation on RDI depends on the ability of manufacturers, suppliers and customers to find areas of RDI cooperation that will be mutually beneficial. In Norte and Valencia, the proactive positions of the industry associations and the research centres appeared to encourage companies to consider the potential for opportunities for RDI partnerships. Thus, transferability of this success factor may depend at least in part on the presence of such proactive industry associations.

Effective Clusters

There were footwear clusters in all the case study regions which could potentially facilitate RDI partnerships amongst manufacturers, researchers and other industry stakeholders. However, the presence of a cluster alone is not sufficient to ensure partnerships which support the transformation of RDI outcomes into products. In Southern Poland, for example, although most elements were present (including raw materials, components, design, research and production), specialist equipment and lasts appeared to be imported and partnerships amongst the different parties were more limited.

Where partnerships are effective within a cluster, it can provide a significant boost to focused and product-related RDI. For example, companies in the Valencia cluster founded Calzado Innovación, a non-profit association, to increase allocation of funding and support for the industry. It has undertaken a number of research projects, which had helped to establish the frameworks for research in automation, digital technology and robotics. Its activities are complemented by C2I2 a.i.e. (Calzado, Componentes, Investigación e Innovación), which is an economic interest group for technological innovation. Most of its members are enterprises based within the cluster and its purpose is the promotion and implementation of national, European and international action in the footwear and components industry.

The transferability of this success factor, therefore, depends on the extent to which partnerships in general works within a cluster (see also Section 6.3.2). Setting up specialist structures for RDI partnerships, as in Valencia, may assist with the process.

Targeted Funding from Public Support Mechanisms

Our research indicated that funding from national and regional public support mechanisms was available and accessible in many of the case study regions, even though these might be of different levels and forms. They included mechanisms in Lombardia and Valencia specifically targeted at small and medium enterprises. For smaller companies in particular, the availability of smaller amounts of funding, which can be accessed more rapidly, is the key to successful RDI investment.

Industry associations can play an important role in assisting companies to access funding from public support mechanisms, both at EU level and more locally. For example, APICCAPS in Norte has helped its members to access funding for RDI from a range of national and EU sources. Similarly, Calzado Innovacion in Valencia assisted stakeholders to access funding for RDI projects which helped to support the transformation of RDI outcomes into products. These are listed in Box 4.25.

Box 4.25: Examples Research Projects with the Participation of Calzado Innovación

Projects funded under the framework programme of the Spanish Ministry of Industry, Tourism and Trade:

- Zapateria virtual: digitisation and customisation;
- Structure and function of an Integration Competences Centre;
- Identify Innovation opportunities from the company; and
- Future trends for the Footwear Industry.

Projects Funded by IMPIVA (Institute for small and medium sized Valencian enterprises):

- Dynamisation of the Footwear Cluster; and
- Promotion of the Footwear design.

European-funded projects:

- CORNET (Collective Research Networking) European Programme:
- Implementation and testing of innovative automatic sorting and assessment system of leather plies for the tannery sector.

Source: Interview with Research Institute, May 2011

The transferability of funding from public support mechanisms for transformation of RDI outcomes into products, especially by smaller companies, depends on the policies of national and regional governments. Whilst the Europe 2020 strategy encourages such investment, the current economic conditions may make it hard for governments to increase funding in this area.

4.6.2 Barriers

Research centres identified a number of barriers to the uptake of innovation. The key ones were:

- difficulties in interacting with smaller firms;
- a lack of finance;
- a shortage of appropriately-trained staff; and
- the short timescale to which companies operate.

Involving Small Firms

Most of the research centres we interviewed indicated that it was more difficult to work with smaller firms and to encourage them to adopt innovations. A number of reasons were identified for this problem. In particular, CTC indicated that small companies often find it difficult to participate in joint projects due to their limited resources and time availability of their staff (they do not have specialists devoted to

the area of research). CTC believes that encouraging small firms to participate in R&D projects relies on personal, often informal contacts. The institutes in Italy also considered that some small companies' limited use of IT might also be a barrier to participation in some projects.

Lack of Finance

A lack of private finance for research activities affects both the research institutes themselves and the footwear companies which could potentially benefit from their R&D output. Many of the SMEs we interviewed relied on their own resources for such investment, which limits the extent of R&D which they can undertake.

Lack of Access to Public Funding Mechanisms

Some of the national and regional public funding support mechanisms are specifically aimed at small firms. However, a lack of flexibility in funding mechanisms can be a barrier to small firms, who often find the application process and administration involved too complicated and time-consuming. INESCOP noted that small and medium sized enterprises have found it difficult to participate individually in European level research programs, partially due to the level of support available, but also due to the fact that they consider the tendering process difficult because of language and administrative barriers.

Shortage of Training

According to ITIA, the availability of appropriately-trained young researchers is one of the biggest barriers to implementation of R&D outcomes. INDACO noted that, at university, students are encouraged to experiment, but this can be difficult to maintain in the commercial environment of footwear manufacturing. Therefore, it can prove to be difficult for companies and education institutes to see eye to eye with regards to the training needs of the industry. ITIA had planned to develop its own Masters' course to address this problem, but this had not been successful. This issue is addressed further in Chapter 5 of this report.

Short Planning Horizon

The fashion footwear sector in particular is driven by ever-shorter timescales for producing new collections. The focus of firms is on meeting the requirements of clients for rapid delivery of new products to the market. Longer-term and more groundbreaking projects are, therefore, less likely to be of interest and, instead, industry will favour short timescale projects, which will deliver practical results very rapidly. Research Centres have had to adapt to this problem by combining involvement in longer-term, large scale projects with short-term joint projects.

4.7 Future Trends in RDI

The research centres we interviewed identified a number of areas of RDI which they expect to become more significant in future. These are summarised in Table 4.7.

In the case study regions, product-related innovation (developing new products or to upgrade existing ones) is likely to remain the RDI focus for footwear manufacturers, together with improved business models and marketing innovations.

Region	Key Areas for Future Research	Type of Innovation
Lombardia	Environmental aspects of products and production	Environmental innovation
	New forms of supply chain cooperation	Process innovation
	Fast fashion	Marketing innovation
Valencia	Customisation and retail technology	Marketing innovation
	New materials	Product innovation
	IT and robotics	Process innovation
Rhône-Alpes	Sustainable development	Process innovation
	Material composition	Product innovation
	Advanced detection and traceability technologies	Process innovation
Norte	Improvements in process efficiency	Process innovation
	Improving services through marketing and sales advances	Marketing innovation
	Innovation in materials and components	Product innovation
Southern Poland	Increased flexibility in production	Process innovation
	Replacing PVC with other plastics	Environmental innovation
	Environmentally-friendly leather tanning techniques	Environmental innovation

An important trend identified by some of the footwear companies interviewed was the increased rate of incorporating IT into footwear production. This includes the use of IT in the production process, to facilitate small production runs (see Box 4.26) and to customise products in a cost effective way, as well as making sales and logistics more efficient.

Box 4.26: Use of IT to Customise Production

INESCOP worked with a local sole manufacturing company on a project funded by the Institute for Small and Medium Sized Valencian Enterprises, IMPIVA to develop a robotic arm with visual sensors that enable the appropriate treatment of the different shoe models in production.

The injection process generates debris caused by the separation of moulds that affect the final quality of the manufactured product. A buffing procedure is required to remove these remains. The automated deburring process requires a three-dimensional model of the product (CAD) that generates paths to be made by the machine tool to ensure a permanent contact between the tool and the product to refine.

The project was a joint effort between the institute and the company, combining the expertise of INESCOP with the specific manufacturing process, the special skills and requirement of the company.

Source: Interview with Research Centre, May 2011

Both research centres and companies in most case study regions considered that partnerships were likely to be of increasing importance in RDI in future. The difficult economic conditions, with reduced liquidity available to banks and the likely reduction of government funding because of the ongoing economic crisis will make it hard for all but the larger and more profitable companies to invest in RDI on their own, especially given the problems SMEs face in accessing finance (see Chapter 6 of this report). Close cooperation between research centres and businesses will be necessary, to ensure that smaller firms have access to the type of innovation that could help them to remain competitive. The exception to this point was Southern Poland, where companies planned to remain independent in their RDI and where initiatives to form closer links between industry and research centres appear to have failed.

Similarly, partnerships between companies in the supply chain are likely to become increasingly important, especially for fashion footwear. The speed of change of collections, with the move to ‘fast fashion’ will require footwear manufacturers to work closely with their customers and suppliers. As noted in Chapter 3 of this report, this provides a potential opportunity for EU manufacturers, as they may be more able to develop such partnerships better than manufacturers offshore (for example, in China).

However, the benefits of close cooperation will only be achieved if RDI expertise remains within the EU. Although many major companies have outsourced production to Asia, RDI has so far tended to be retained in Europe. There are exceptions, however, as shown in Box 4.27. Clearly, if more companies relocate RDI to Asia in future, this would significantly affect the future of the European footwear industry and reduce the potential for partnerships.

Box 4.27: Relocating R&D to Asia

An Italian rubber sole manufacturer recently announced the setting up of a Technical Centre in the Guangzhou province of China. This will be a new Far East headquarters for R&D and will consist of an innovation centre, industrialisation and production centre and a product performance test centre.

Source: <http://www.vibram.com/index.php/us/VIBRAM/What-we-do/Vibram-R-fivefingers-R>

For both companies and research centres within the case study areas, the protection of intellectual property was not seen as a priority area. Patents were not generally regarded as particularly useful due, not only to the time and costs of obtaining and enforcing them (particularly at an international level), but also because minor changes by competitors could render them ineffective. This situation is not expected to change in future, without significant changes to make the system of obtaining and enforcing international patents simpler, cheaper and more effective. Both organisations and companies considered that such changes were unlikely in the near future.

5. TRAINING

5.1 Introduction

5.1.1 Background

Training and education in the footwear sector has been increasing in significance in response to the major changes the sector has undergone (discussed in Chapter 3 of this report). To be effective, education and training institutions need to respond to the changing industry demands. This requires them to work in close partnership with businesses, in order to be able to forecast the emerging skills needed and to ensure that the education system and curricula are updated to reflect regional and product-specific needs.

The recent changes to the industry have been matched by changes to the system of education, including the introduction of the Bologna Declaration on the European Space for Higher Education (1999). The six objectives contained in the Declaration are:

- the adoption of an easily legible and comparable system of qualifications, by means of the introduction, among other questions, of a Supplement to the Diploma;
- the adoption of a system based, fundamentally, on two principal cycles (undergraduate and graduate);
- the establishment of a credit system, such as the ECTS system;
- the promotion of European partnerships to assure a level of quality for the development of comparable criteria and methodologies;
- the promotion of a necessary European dimension in Higher Education with particular emphasis on curricular development; and
- the promotion of mobility and removal of obstacles to its free exercise by students, teachers and administrative staff of universities and other European institutions of higher education⁷⁸.

These objectives, especially those relating to mobility and partnerships, are of key importance in the footwear sector, where traditional skills can be difficult to find and the dissemination of new, emerging techniques and technologies often requires joint efforts.

⁷⁸ Confederation of EU Rectors Conferences and the Association of European Universities (2000)

5.1.2 Types of Footwear-Related Training

Footwear training courses can be categorised in terms of both the level of training and their content. The main categories are described in Table 5.1.

Vocational courses	Training on a specific vocation (e.g. footwear production, footwear management), generally for existing employees. Can take place either in a classroom or at the workplace. Generally three years long; can be part of an apprenticeship programme.
Specialist courses	Training on specific aspects of a vocation (for example footwear marketing or sales) for existing employees. Can take place in training institutes or in the workplace.
Degree courses	Academic courses at bachelors or masters levels in subjects related to the footwear industry, such as shoe technology. Generally full-time and based at academic institutes, but may incorporate periods of (paid or unpaid) placement in industry.
Apprenticeships	Training aimed mainly at young people and based primarily in the workplace, supplemented by vocational courses in training institutes, in which the apprentice acquires the skills and knowledge required of the skilled worker ⁷⁹ .
In-house training	Formal or informal training by the employer which provides workers with the skills needed to carry out a specific job (or part of their job).

These courses may be either full or part time, and involve different proportions of academic study within a training institute and practical experience within industry. These aspects differ between different countries.

Some education training institutes run programmes for students and industry professionals in parallel, thereby ensuring that the educational content is kept up to date. This professional development training can take the form of short courses (e.g. less than nine months or an academic year) delivered during the working day.

In some cases, training institutes run classes covering all areas relevant to the footwear manufacturing sector, including business management (e.g. managing overseas production) as well as manufacturing (e.g. colouring processes). The undergraduate courses are generally three years long and the follow-up Masters courses often last a further two years (e.g. in the United Kingdom). Manufacturing and technical professionals can also enrol in courses organised in the form of summer schools (an example of which is the footwear summer school organised by the London College of Fashion) to further develop their skills and expertise.

5.1.3 Key Skills

The employment and training practices that an enterprise adopts are critical in ensuring that skills of its staff match its business requirements. While the operations required for the manufacturing process are similar across different product segments, there is a varying level of emphasis on design. Where manufacturing of a product

⁷⁹ Centre for Economic Performance (2005)

segment has been largely offshored to other countries (for example, sports footwear), knowledge and awareness of the technological processes typical for that segment may become limited in the labour market in Europe.

In the following subsections, the skills requirements for the three main operational phases of the footwear sector (design, production and marketing and sales) are described.

Footwear Design

The design of footwear products is an integral part of the production process. Depending on the subsectors, designs can either change rapidly within a year or only slightly over many years. Subsectors such as medium price ranged fashion footwear can introduce many collections, often changing monthly, while the luxury segment is more likely to introduce a spring/summer and an autumn/winter collection while safety footwear designs may last for several years.

Shoe designers are responsible for conceptualizing new designs for footwear lines. They create technical illustrations for their designs and must be able to communicate their ideas to those in charge of production. Individuals in this line of work should have good manual dexterity, as well as a flair for fashion and foresight regarding upcoming trends in the industry.

Footwear design is a specialist field within fashion design, which typically requires earning at least an undergraduate degree. Gaining a bachelor's degree in footwear design takes at least three years and consists of coursework in both the creative and business side of the fashion industry. Students who enrol on a degree program generally take classes in footwear collection development, marketing strategies and creative design. Additionally, degree and specialist programs can teach students how to design shoe patterns with computer-aided design (CAD) software. Although many shoe design programs are offered as part of fashion design courses, footwear design courses are also available through specialist footwear training institutes.

Businesses we interviewed expressed concern about the lack of specific practical knowledge amongst new graduates, as well as their lack of awareness of the industry factors including supply chain mechanisms. This could lead to designers failing to take account of the price and practicality of the products. Besides following trends and predicting market dynamics, footwear designers, therefore, need to understand the supply chain and make sure that the products are capable of being manufactured, as well as remaining wearable.

Manufacturing

Footwear manufacturing operatives use a range of hand tools and semi-automated equipment to create footwear products. The specific tasks depend upon the type of footwear being produced (with premium segment shoes, for example, generally involving a larger amount of work by hand) and the scale of production (high volume production is more likely to be semi-automated).

A manufacturing operative would complete the different stages of production by working to a pattern supplied by the footwear design team. Typical activities could include:

- cutting ('clicking'): trimming and shaping leather or fabric pieces for the 'upper' section;
- stitching ('closing'): sewing together all the individual sections to complete the upper;
- lasting: moulding the uppers into their final shape on a wooden or metal pattern called a 'last';
- making: attaching the soles with adhesive or stitching;
- finishing: fitting and trimming heels to shape, and staining the soles, heels and edges before waxing and buffing; and
- 'shoe room': working on the final stage of production, polishing the shoe for the desired colour and effect.

Quality control of the products can also be part of the job of a manufacturing employee. In the larger footwear manufacturers, employees specialise in one particular production stage while in a smaller company, one person might work on the entire process⁸⁰.

Footwear engineers apply the results of new research and engineering knowledge towards the creation of new products. Amongst their responsibilities is defining protocol and setting the direction of the engineering work to include mechanical, process, product or chemical aspects. Footwear engineers are likely to have an overall knowledge of manufacturing, the types of leather used in the operation, as well as grading and typical faults. Moreover, engineers deal with production line balancing, including style changeovers, team working as well as push/pull systems, process activity mapping and key performance indicators⁸¹.

Sales and Marketing

Sales and marketing skills are essential to the success of footwear manufacturing companies. Understanding market trends and consumer behaviour are extremely important factors. In most footwear subsectors, trends and design change rapidly and finding the right marketing approach to maintain sales performance can prove to be a challenge. Marketing communication can include:

- advertising (on and off-line);
- public relations;
- promotion; and
- direct marketing.

⁸⁰ DirectGov (2010)

⁸¹ SATRA (2012)

In addition to marketing, sales techniques that can include the ability to quantify key retail trends and accurately predict future retail growth are equally important for all enterprises and can provide crucial information about key drivers of the market. New marketing trends for footwear include promotion through the internet and social media while new sales techniques include customisation.

5.1.4 The Role of Training in Business Strategies

Generally, policies governing education and training are implemented and managed by the national governments of the Member States, thus the strategic roles of certain sectors of the economy are critical in setting educational priorities. Countries that have a traditionally strong presence in the footwear manufacturing industry might place greater emphasis on footwear-related training and education than other nations.

Initiatives for specific industry-related training and education can be launched by enterprises as well as regional or national policy makers. There is an increasing awareness of the role that training and education can play in maintaining competitiveness, as well as of how development of human resources should be a key part of long-range business strategies. There can be varying elements of an employee training programme depending on the specific needs of employees, groups or the company, as well as whether the training is on-going or serves to address a particular barrier.

Responses to the EU survey indicated that the majority of companies provide some form of training to their employees. Full-time training in-house and/or apprenticeships were provided by nearly half of the responding companies, as shown in Figure 5.1.

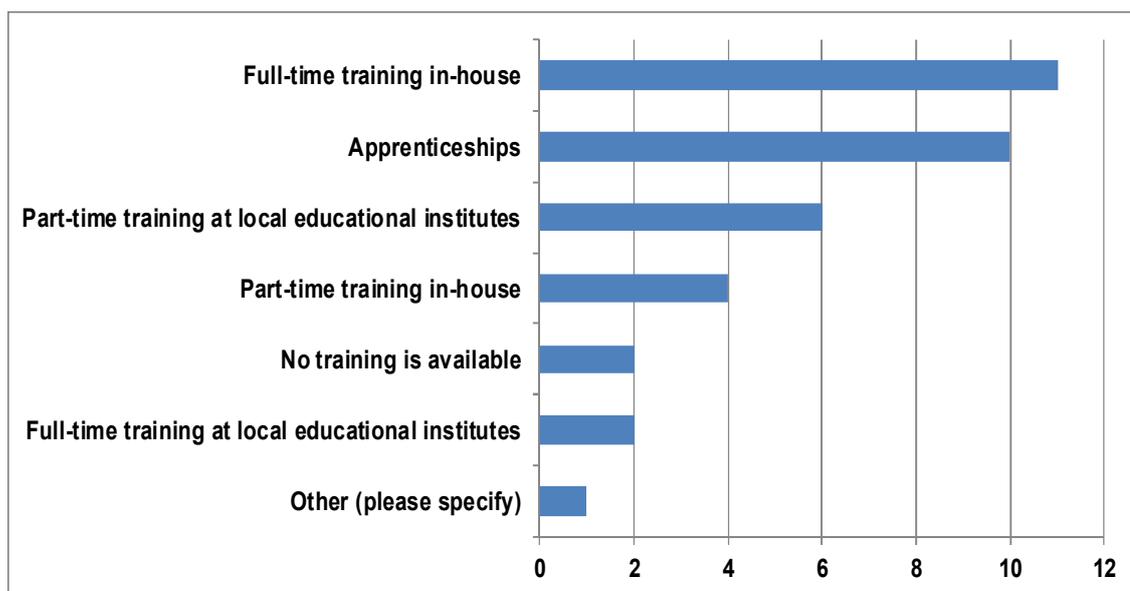


Figure 5.1: Responses from 25 Companies to: *What sort of training do you provide?*

The responses indicate that training on–the–job still plays a major role in the operation of the footwear manufacturing companies. By incorporating elements of training, companies assure that skills are updated and employees are aware of the latest trends.

5.2 The Footwear Training Infrastructure in the European Union

5.2.1 Training Institutes

There is a wide range of training institutes providing courses related to footwear in the European Union. While some focus on footwear manufacturing and design exclusively, for example at the Politecnico Calzaturiero in Padua or the German College of Footwear Design and Technology in Pirmasens, a more general phenomenon is that footwear aspects are taught within a wider context of design or engineering. Table 5.2 lists the main footwear education and training institutes within the European Union and the types of courses they offer.

Country	City	Organisation	Type of Course Offered
Austria	Linz	Kunst Universität	Degree courses
Belgium	Sint-Niklaas	Academy for Fine Arts, Teacher Shoe Design Course	Degree courses
Czech Republic	Usti nad Labem	Faculty of Art and Design JEP University	Degree courses
Czech Republic	Prague	Academy of Arts, Architecture and Design	Degree courses
Denmark	Copenhagen	Danish School of Design	Degree courses
Denmark	Kolding	Kolding Design School	Degree courses
Estonia	Tallin	Estonian Academy of Arts	Degree courses
Finland	Lahti	Lahti Polytechnic - Institute of Design	Degree courses
Finland	Rovaniemi	University of Lapland - Faculty of Art and Design	Degree courses
France	Cholet	Centre Régional des Pais de la Loire - Institut Colbert	Degree courses, , vocational courses
France	Lyon	CTC Groupe - Centre Technique du Cuir, Chaussure, Maroquinerie	Vocational, Specialist courses
France	Cholet	Lycée de la Mode	Degree courses, vocational courses
France	Paris	Lycée d'Alembert GRETA de la mode	Degree courses, vocational courses
Germany	Pirmasens	International Shoe Competence Centre	Vocational, Specialist courses

Table 5.2: Main Footwear Training Institutes in Europe			
Country	City	Organisation	Type of Course Offered
Germany	Pirmasens	University of Applied Sciences Fachhochschule	Degree courses
Germany	Pirmasens	Pirmasens School for Vocational Education	Vocational, Specialist courses
Hungary	Budapest	Moholy-Nagy University of Art and Design	Degree courses
Ireland	Dublin	The National College of Art and Design	Degree courses
Italy	Florence	Polimoda	Degree courses, vocational, specialist courses
Italy	Milan	Politecnico di Milano	Degree courses, vocational courses
Italy	Vigonza	Politecnico Calzaturiero S.C.A.R.L.	Degree courses, vocational, specialist courses
Italy	Vigevano	Politecnico Intern. per lo Sviluppo Industriale ed Economico PISIE	Specialist courses
Italy	Milan	Istituto Tecnico Internazionale Arte Calzaturiera e Pellettiera (ARS SATORIA)	Vocational, Specialist courses
Italy	San Mauro Pascoli	Cercal	Vocational, Specialist courses
Italy	Milan	Domus Academy	Degree courses. Vocational, specialist courses
Poland	Radom	Technical University of Radom	Degree courses
Poland	Krakow	Krakow School of Art and Fashion Design	Degree courses
Portugal	Lisbon	IADE - Instituto de Artes Visuais, Design e Marketing	Degree courses. vocational, specialist courses
Romania	Iasi	Gheorghe Asachi Technical University of Iasi	Degree courses
Spain	Igualada	Escuela de Tenería de Igualada	Degree courses
Spain	Barcelona	Institut Quimic de Sarriá	Degree courses
Sweden	Stockholm	Beckmans College of Design	Degree courses
Sweden	Stockholm	University College of Arts, Crafts and Design	Degree courses
The Netherlands	Eindhoven	Design Academy	Degree courses
UK	Leicester	Leicester College	Vocational, specialist courses,

Country	City	Organisation	Type of Course Offered
UK	Northampton	Institute for Creative Leather Technologies (ICLT)/ University of Northampton	Degree courses
UK	London	University Of the Arts London, College Of Fashion	Degree courses
UK	Leicester	De Montfort University, Leicester	Degree courses
UK	London	Paul Thomas Shoes shoemaking classes	Specialist courses
Various EU	Milan, Turin, Venice, Cagliari, Florence, Madrid, Barcelona	Istituto Europeo di Design (International Higher Educational Network in Design, Fashion, Visual Communication and Management of creative industries)	Degree courses, specialist courses

Source: Euris (no date), additional internet research

In addition to courses at the training institutes, in-house training by businesses can also involve teachers and professors from training institutes. Moreover, these institutes often work with one another on projects that can support the future success of their alumni.

5.2.2 Students

In 2010, overall, there were 172.6 million young people aged under 30 in the 27 countries of the EU; this is a 15.5% reduction since 1985. A considerable majority, 79%, of young people in the EU aged 20-24, successfully completed upper secondary education (ISCED3) in 2010, which confirms the upward trend shown across Europe since 2000.

One of the factors encouraging young people to take up tertiary education is the employment options which it provides. The 2012 Eurydice report on Education in Europe found that, on average, 86% of tertiary graduates between 25 and 39 years of age are working, as opposed to 78% of those with upper secondary qualifications, and only 60% of young people with lower level qualifications. The difference is even more pronounced for the 40-64 age group, where tertiary graduates are 37% more likely to be in employment than non-graduates holding qualifications up to lower-secondary level⁸².

Tertiary education graduates can also find it easier to integrate into the job market. At European Union level, the average duration of the transition to the first significant job was five months for people with tertiary qualifications, while for people with upper secondary level education it took, on average, over seven months and almost ten

⁸² EURYDICE (2012)

months for people with lower education levels. Despite this, according to the Eurydice report, there is a general tendency in Europe for the number of tertiary graduates to outweigh the number of employment opportunities. Therefore, more than one in five tertiary graduates is overqualified for the type of employment they find.

Unfortunately, there is no central source of information available on the number of students studying footwear related courses in the individual Member States or the EU as a whole. However, statistics are available for manufacturing process-related courses, as well as art and design courses. These statistics can provide an indication of the changes that have taken place in the number of people studying to courses related to the sector. They are summarised in Table 5.3 for countries with a significant footwear sector (the countries containing the case study regions for the task on training are in bold).

Table 5.3: Numbers of Tertiary Students in the Field of Manufacturing and Processing					
	2005	2006	2007	2008	2009
France	:	17,316	17,226	21,347	20,551
Germany	18,319	18,815	19,183	19,216	20,610
Italy	14,206	15,503	16,003	13,484	13,076
Poland	27,782	57,855	61,599	:	63,252
Portugal	4,469	4,031	4,117	4,368	4,251
Romania	32,767	31,781	28,895	21,955	23,782
Spain	16,084	15,118	13,976	13,211	12,926
EU 27	227,329	228,356	228,713	164,041*	223,980
<i>Source: Eurostat, Tertiary students (ISCED 5-6) by field of education and sex [educ_enr15]</i>					
<i>*figures for Poland were unavailable for 2008</i>					

Table 5.3 shows that the number of students engaged in manufacturing studies across the EU reduced by over 60 000 between 2006 and 2008. However, from 2008 to 2009 there was a significant (30%) increase, leading to the number of students being only 3 000 lower than in 2005. Traditional footwear manufacturing countries such as Italy and Spain, as well as the countries of eastern Europe including Romania, have seen a reduction in the number of students while the numbers in Germany and Poland have increased.

While the field of the arts encompasses many subjects, and only overall figures are available, some insight regarding potential trends in the number of students in footwear design may be drawn. Table 5.4 (over page) shows that the number of art students across the EU increased by nearly 20% between 2005 and 2009 (the countries containing the case study regions for the task on training are highlighted). This increase is reflected by the number of art students registered in this field in some individual Member States with a significant footwear sector (such as Poland, Portugal Romania and Spain). However, numbers decreased in Germany and Italy, despite the importance of design for footwear producers in those countries.

	2005	2006	2007	2008	2009
France	:	93,367	91,064	90,412	89,208
Germany	84,258	83,647	81,951	79,974	80,624
Italy	112,872	115,086	115,019	80,123	107,747
Poland	20,899	23,214	24,446	:	27,645
Portugal	15,977	16,585	18,040	19,460	19,747
Romania	10,015	12,985	12,888	12,648	13,839
Spain	82,477	82,741	84,175	84,552	86,461
EU 27	634,267	733,128	757,611	699,778	759,103

Source: Tertiary students (ISCED 5-6) by field of education and sex [educ_enr15]

5.3 Funding for Training from Public Support Mechanisms

5.3.1 Available EU Funding Support Mechanisms

There are a number of on-going European and national initiatives supporting training and education, including EU funding support mechanisms. The aims and targets of the main European funding support mechanisms are summarised in Table 5.5 (next page). These mechanisms operate through different channels, generally through the designated authorities in the different Member States or through the offices/organisations set up by the European Commission.

Beside the financial assistance available under these funding programmes, a range of European Union policy measures provides support for training. These include the Community Framework Programmes for Research and Technological Development, e.g. the Lifelong Learning Programme or the Marie Curie Actions. The New Skills for New Jobs initiative of the European Commission is also designed to help Member States in adapting and linking education and training needs more closely to the requirements of the industries. Chapter 4 also provides information on and examples of support for the footwear sector under the Framework Programme for Research and Development.

Name	Timescale	Objectives
European Social Fund (ESF)	The current implementation mechanisms is set for the period of 2007-2013	<p>ESF is one of the Structural Funds implemented across the various regions of the European Union. Its objective is to reduce differences in prosperity and living standards across EU Member States and regions, therefore, promoting economic and social cohesion. Its aims are to improve the skills of the workforce and to help people who have difficulties finding work.</p> <p>Over the period of 2007-2013 an estimated amount of €75 billion is expected to be distributed to Member States; this represents an increase of 7% from the previous programme period of 2000-2006. 34% of funding is directed towards improving human capital.</p> <p>The fund is disseminated via the responsible authorities designated by the individual Member States. Beneficiaries of ESF projects can be of many different types, including public administrations, NGOs and social partners active in the field of employment and social inclusion⁸³.</p>
European Globalisation Adjustment Fund (EGF)	The Fund has been running since 2006	<p>The European Globalisation Adjustment Fund aims to support workers who lose their jobs as a result of changing global trade patterns, so that they can find another job as quickly as possible.</p> <p>The Fund is activated upon a request of a Member State when one or more companies (national, multinational or SMEs) announce at least 1,000 redundancies either in an enterprise, or in a sector within a region, due to structural changes in world trade patterns.</p> <p>The Fund is designed to intervene in cases where the redundancies have a significant impact on a region or a sector and, therefore, there is an EU dimension in terms of scale and impact.</p> <p>A maximum amount of € 500 million per year is available to the EGF to finance such interventions⁸⁴.</p>

The EU's *Lifelong Learning Programme* supports the training, and re-training of employees, as well as the training of trainers. The framework programme's budget is disseminated through Institutes of the European Union and, in certain cases, national agencies. There are four sub-programmes within the Lifelong Learning Programme that fund projects at different levels of education and training. These are:

- Comenius for primary and secondary education;
- Erasmus for higher education;
- Leonardo da Vinci for vocational education and training; and
- Grundtvig for adult education.

⁸³ European Commission (undated, b)

⁸⁴ European Commission (undated, c)

The Leonardo da Vinci Programme is particularly relevant for footwear training purposes. It funds many different types of activities and includes ‘mobility’ initiatives that enable people to train in another country, as well as co-operation projects to transfer or develop innovative practices and partnerships focusing on topical themes in the sector. A recent example on the use of the Leonardo da Vinci programme in the field of fashion and design is presented in Box 5.1.

Box 5.1: EU Support to Promote Fashion Design

The European Fashion Designer Competition was held at the Victoria & Albert Museum in London and entailed a Europe-wide garment design competition, open to groups of students studying fashion across Europe. It was part funded by the Leonardo da Vinci action of the European Commission’s Lifelong Learning Programme.

The competition was aimed to raise awareness of the projects work and the advantages of studying and working within the European fashion sector.

Teams of two to five students studying fashion at levels 3 or 4 in a European educational institution were competing against each-other. A maximum of two entries per institution were accepted.

Source: CIPS- Centre for Innovation and Partnerships: European Fashion Designer Competition
http://www.ciponline.com/what_we_do/transnational/european_fashion_designer/european_fashion_competition.aspx

The main aim of the Grundtvig programme, which could also be of importance to the footwear sector, is to respond to the educational challenge of an ageing population in Europe, as well as provide adults with an opportunity to improve their knowledge and competence. The programme undertakes different types of activities including mobility projects, multilateral projects for good practice, knowledge transfer and partnerships. Applications for tenders are open to institutions, associations, education and training centres⁸⁵.

Another part of the Lifelong Learning Programme is the European Qualifications Framework (EQF) which uses eight reference levels based on learning outcomes (defined in terms of knowledge, skills and competences) to define qualifications, thereby shifting the focus from input (lengths of a learning experience, type of institution) to what a person holding a particular qualification actually knows and is able to do. It creates a common European reference system linking different countries’ national qualifications systems and frameworks together to make qualifications more readable.⁸⁶

The EU has also developed the European Framework for Key Competences for Lifelong Learning, which is an annex of a Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning⁸⁷. It defines eight key competences for personal fulfilment and development, active citizenship, social inclusion and employment.

⁸⁵ European Commission (2010b).

⁸⁶ European Commission (2012b)

⁸⁷ Official Journal of the European Union (2006)

5.3.2 Use of EU Support Mechanisms in the Case Study Regions

In line with industry requirements, the training institutes of the sector have been placing increasing emphasis on internationalisation and the use of advanced technologies. As these subjects are not specific to the footwear industry, they offer the potential for partnerships with other universities and research centres. These partnerships have helped to expand the knowledge base of the participating institutes, which has a spill-over impact on the regional industry, as students as well as professors participating in these research projects often work with regional or local enterprises. A platform for such partnerships is created by the European Union 7th Framework Programme for Research and Technological Development.

In Veneto, the Politecnico Calzaturiero has received funding support from the European Social Fund, through the Ministry of Labour, for a project supporting the recognition, validation and certification of skills. The Politecnico is also capitalising on its wide range of connections and is participating in EU 7th Framework Programme. Companies in the region of Veneto, however, do not usually seek EU support since, as far as possible, they try to finance their training activities from their own budgets.

Southern Polish companies are eligible for support for training from the Structural Funds. Most of the companies interviewed during the case studies have not taken advantage of these funds as they consider the application process burdensome from both an administrative as well as a management time perspective. However, one company took indirect advantage of the European Social Fund by using the Voluntary Labour Corps, which is supported by the European Social Fund, as a source of new employees.

In Rheinland-Pfalz, while there are examples of stakeholders utilising European Union funding support, these initiatives are not widespread. According to the Federation of the German Footwear Industry (HDS), the European Union could play a greater role in helping to retain competence in shoe manufacture, through support to training centres.

Examples of utilisation of funding support by the footwear sector in the case study regions are given in Box 5.2.

Box 5.2: Examples of Utilisation of Funding Support Mechanisms	
Southern Poland	<p>A national organisation, the Voluntary Labour Corps (VLC), which is represented in Southern Poland through its regional office, makes use of funding support from the European Social Fund. Its primary objective is to create adequate conditions for proper social and vocational development of young people.</p> <p>One Silesian company interviewed uses the Voluntary Labour Corps as a source of new employees. The VLC is an example of good practice in identifying training and development options for the unemployed, especially young people.</p>
Rheinland-Pfalz	<p>The International Shoe Competence Centre has participated in an EU project under the Leonardo da Vinci Lifelong Learning Programme, together with Slovenian/Italian and Portuguese partners. The programme funds practical projects in the field of vocational education.</p> <p>The project involving ISC developed a handbook for different aspects of production and will provide training based on this.</p>
Veneto	<p>The Politecnico Calzaturiero has participated in a consortium carrying out the 7th Framework Programme for Research and Technological Development project IDEAFOOT (see Section 4.2.2). The project, which had a budget of €1.5 million, involved nine partners from three EU countries finished at the end of 2010.</p>
<p><i>Source: Interviews in Southern Poland, Rheinland-Pfalz and Veneto, October/November 2011</i></p>	

5.4 Developments in Training in the Case Study Regions

5.4.1 Introduction

Education and training within the sector has been impacted to a varying degree by the restructuring and modernisation that has taken place in the sector, as described in Chapter 3 of this report. It appears that the less significant an industry becomes in terms of production capacity, the less emphasis the education and training system will put on providing related courses.

The number of training institutes in the western EU countries has remained unchanged. However, during our visit to Romania for the task on SMEs (see Chapter 6 of this report), it was notable that, while the footwear production in the county of Timis has expanded due to the influx of (mainly) Italian manufacturers, there were no training institutes and few training programs available. Similarly in Southern Poland, while the manufacturing sector is still present in the region of Silesia, training and education is only provided by institutes in the neighbouring Malopolska region.

Veneto represents a very different picture. The region houses the Politecnico Calzaturiero, an education institute located in the centre of an industrial district with a wide array of national and international partnerships, as well as close ties to the industry. Due to its close integration with local manufacturers, as well as the nature of the sub-sector of high-end fashion shoes – which requires a continuous supply of workers - the Politecnico can provide its students with both placements within

companies as part of their courses and job opportunities in the region once they finish their courses.

The region of Rheinland-Pfalz has four training institutes with close ties to one another, while the range of courses offered by the institutes is very diverse.

5.4.2 Changes in Employment Structure

Employment in the footwear in Rheinland-Pfalz, Veneto and Southern Poland was heavily impacted by the economic changes that the countries underwent during the 1990s, described in Chapter 3 of this report.

Some regions with a strong presence in the footwear manufacturing sector, such as Veneto and Rheinland-Pfalz, were pressured to seek ways to maintain their competitiveness in the face of increased competition. Offshoring production to lower labour cost European countries, such as the Czech Republic and Romania, was one of the options. This led to reduced employment in Veneto and Rheinland-Pfalz. On the other hand, the Czech Republic and Romania, which received foreign direct investment in the form of outsourced production, were able to provide employment for both skilled and unskilled workers.

In the Veneto province of Treviso, housing the industrial cluster of Montebelluna, where many of the mountain, ski boot and sports shoes manufacturers are located, high Italian labour costs were mentioned as a driving factor for offshoring production.

In both Veneto and Rheinland-Pfalz, the remaining producers are experiencing difficulties in recruiting young people, which could lead to future skill shortages. The industry is not appealing to young people as it is considered old-fashioned and workplace conditions and wages are not competitive with more high-tech industries. In order to make the industry more appealing to the new generation, education institutes as well as enterprises are putting emphasis on fashion aspects, communication and other technology tools.

The acquisition of Veneto companies by foreign firms did not have a major impact on employment levels; similarly, the expansion of Veneto companies outside Italy meant that production (and thus turnover) increased but this did not bring about a rise in employment. Contractual work for luxury fashion labels, on the other hand, prevented the loss of employment in Brenta, Veneto. The luxury footwear sector has been less impacted by the economic crisis, so that, even since 2009, enterprises undertaking contract work in the region of Veneto have been able to expand. The constant level of demand provided for a stable production capacity and a continuous need for new employees, which provided employment opportunities for students studying at the Politecnico. Consequently, this has meant that training courses focusing on technical skills such as stitching remained important for the local industry. The driving factor behind the development of the high-end market in the region has been the long manufacturing tradition and the perception of quality of Italian footwear.

5.4.3 Skill Needs in the Case Study Regions

Companies in all three case study regions (Veneto, Italy; Southern Poland and Rheinland-Pfalz, Germany) identified similar skills as being the most important. While design skills are especially important for enterprises that produce their own brands, no significant barriers are expected in accessing these skills. Increased competition in the sector has required stakeholders to update their technology and new skills will be required in connection with this, for example the use of IT (CAD/CAM) and marketing.

The changes to the footwear sector in Southern Poland have required increasing skills in sales and marketing. Training in these skills specifically for the footwear industry seems to be lacking in the country. Even though the tertiary educational institutes of the region provide courses on business and management, the footwear companies of the region appear reluctant to hire highly qualified managers, apparently because they anticipate that the costs would be too high.

Sales skills and customer service are also an important requirement for the industry in the region of Rheinland-Pfalz. There has been a loss of these skills due to the closure of specialist retailers and the fact that the remaining retailers have, as a cost cutting measure, scaled back on employee training. One initiative in the region organised by the Chamber of Industry and Commerce is an e-learning platform for sales managers, consisting of 200 hours of online training, as described in Box 5.3.

Box 5.3: Training Initiative of the Chamber of Industry and Commerce
<p>The Chamber of Industry and Commerce (IHK- Industrie – und Handelskammer für die Pfalz) in Pirmasens has worked with a large European footwear wholesaler to develop an e-learning platform called ‘sales manager’. The course consists of 200 hours of online training and provides a store manager or regional sales manager certificate for those participating.</p> <p>The course built on an existing IHK e-learning platform, which the company wished to access, so the two organisations cooperated on its development. The IHK would like to expand the platform to other sectors and other regions of Germany.</p>
<p><i>Source: Interview in Rheinland-Pfalz, November 2011</i></p>

In Veneto, partnerships with customers, as well as technical skills, are a priority for the companies and the training institutes. The use of new media, such as social networking sites and smart phone platforms, are providing a wider forum for communicating with the supply chain, including customers. However, not all companies are able to utilise the opportunities provided by social media. Small, family owned businesses often struggle to maintain a website or open a web-shop. It is rather the medium sized or larger companies that invest in e-communication and use social media platforms for advertisements.

5.4.4 Activities of Footwear Training Institutes

Table 5.6 summarises the footwear training institutes in the regions of Rheinland-Pfalz, Veneto and Southern Poland; it also provides information on the degree to which local industry stakeholders are working with training and education institutes to maintain the competitiveness of the industry as a whole.

Table 5.6: Training Institutes in the Case Study Regions			
Institute	Courses	Outreach	Industry Links
Rheinland-Pfalz			
International Shoe Competence Centre	A range of specialist short, modular training short courses tailored to the specific needs of industry and trade.	Wide national and international appeal; it has about 400 national and international students.	Undertakes research for industry partners and co-operates in the 'Step up Shoes' campaign to encourage young people to apply for employment in to the sector.
Pirmasens campus of the University of Applied Sciences Kaiserslautern	Degree course on leatherwork and shoe technology leading to a Bachelor's degree in product and process engineering.	In 2011, 9 students enrolled in the Leatherwork and Shoe Technology programme. Overall, the institute has 20% of its students from outside Germany.	Practical experience in industry is a key part of the bachelor degree course.
Pirmasens School for Vocational Education	A 3 year vocational course in shoe manufacturing and a 2 year course in leather processing.	Of the 42 students enrolled into the school in 2011, 20 are from companies in Rheinland-Pfalz the remaining 22 come from other German federal states.	Students participate in international competitions and work with manufacturing companies on specific projects. The students spend the majority of their training course at companies.
German College of Footwear Design and Technology	Vocational further education in technical design and industrial engineering (in footwear technology).	This is the only training institute for the footwear sector in the country. It has an international appeal.	Students work closely with industry and are also offered practical training at the facilities of the ISC.
Veneto			
Politecnico Calzaturiero	51 courses listed are in the catalogue of the Politecnico for the year 2010/2011, ranging from secondary vocational to masters level degree programs.	A very wide national and international appeal and well established partnerships with universities as well as manufacturers from all over the world.	Students participate in competitions organised jointly with industry (e.g. BASF). Partnerships with industry include the provision of grants and internship at local companies.
Southern Poland			
Krakow School of Art and Fashion Design (Malopolska)	Non-degree vocational design course of 2.5 years, which includes a 3 semester-long footwear design module.	A wide national appeal with 65% coming from other regions than Malopolska; also open to international students (with Polish language skills).	Students regularly take part in international fashion competitions.

Institute	Courses	Outreach	Industry Links
Leather Training Institute (Malopolska)	Arranges specialist courses for manufacturers on request. These typically take place at the manufacturing site. No regular training courses.	National, with departments in Lodz, Warsaw and Poznan.	Acts as a platform for manufacturers of children's shoes in Malopolska.

There is a variety of educational and training courses in the regions of Rheinland-Pfalz, Veneto and Southern Poland. Training is available from secondary to tertiary level, with specialised courses ranging from design to marketing and IT (see Table 5.7).

Region	Institute	Courses	Number of Students
Rheinland-Pfalz	Pirmasens School for Vocational Education	Course on shoe-manufacturing	34
		Course on leather processing	8
	German College of Footwear Design and Technology	Courses on technical design and industrial engineering (in footwear technology), delivering a certificate of footwear technician or design technician	27
	Pirmasens campus of the University of Applied Sciences, Kaiserslautern	Bachelor of Engineering in Product and Process Engineering Leatherwork and Shoe Technology program	9
	International Shoe Competence Centre	Short training courses tailored to industry needs	400
Veneto	Politecnico Calzaturiero	Specialist courses	60-70
		Masters courses	100-150
		Courses for Unemployed	60
		Short Training Courses	*2 000
		Secondary School Course	25
Southern Poland	Institute of the Leather Industry	Range of part-time courses	n/a
	Krakow School of Art and Fashion Design	Fashion design	200

**Approximate number of people participating in such courses since its introduction*

There are no footwear-specific degree courses in **Southern Poland**, although fashion design courses at the Krakow School of Art and Fashion Design include footwear design workshops. However, the Technical University of Radom, which is located in central Poland (between Warsaw and Lodz) offers a footwear design and technology course (for a bachelor's degree) and a footwear design and technology course as a

specialization within the five-and-a-half year chemical technology course (for a master's degree⁸⁸).

Rheinland-Pfalz, Veneto and Southern Poland show a very diverse picture in terms of footwear training institutes. Training in Veneto is provided by the Politecnico Calzaturiero, an institute deeply embedded into the regional manufacturing sector, having excellent partnerships with national and international stakeholders. The Politecnico Calzaturiero runs a variety of footwear-related courses at both the secondary and the tertiary level. In addition, the Politecnico organises visits for primary school students to introduce them to the idea of footwear manufacturing.

Altogether, there are 50 courses listed in the prospectus of the Politecnico for 2010/2011, which include specialist, vocational and degree courses. Apprenticeships are also an important element of education and are typically offered for the courses. There are courses aimed at full-time students as well as workers currently active in the sector and unemployed people (including additional skills or re-qualification). For the academic year 2011/2012, the Politecnico has begun its first year as a secondary school, with 25 pupils enrolling. Furthermore, Masters courses on footwear design and marketing are run in partnership with the Polidesign centre of the Politecnico di Milano, while two other postgraduate courses, for collection coordinators and production managers, are held at the Politecnico.

The German region of Rheinland-Pfalz presents an interesting comparison. Despite the fact that the region has lost much of its production, which has been offshored to other countries, there are four footwear-related training institutes in the region. These are the International Shoe Competence Centre (ISC), the Pirmasens campus of the University of Applied Sciences, the Pirmasens School for Vocational Education and the German College of Footwear Design and Technology. Each provides a different type of training. The training institutes offer a wide range of courses aimed at both young people seeking to enter the footwear sector and professionals wishing to adapt their skills to changing technological requirements.

Courses at the ISC, for example are being developed continuously. By providing tailor-made training courses for individual firms, the centre can accurately target the needs of the specific companies. In comparison to the ISC, the curricula of the Vocational School and the University of Applied Sciences Fachhochschule are decided by State Ministries of Education. The Vocational School is responsible for vocational education within the German 'dual system' of training

While the region of Southern Poland has an extended network of training institutes, it has only two specifically associated with the footwear sector; the Krakow School of Art and the regional centre of the Leather Training Institute. The fashion design centre of the Krakow School of Art, Szkoła Artystycznego Projektowania Ubioru (SAPU), which is also open to international students, offers a two-and-a-half-year full time program for designers, with an average of 25 to 30 classes per week. The vast

⁸⁸ Politechnika Radomska (2011)

majority, over 90%, of the students are women. The courses include classes on design, textiles, fashion illustration, garment construction and garment styling.

The main aim of the Leather Training Institute (ILI) is to provide research and training for the footwear and leather tanning industries. The Institute is financed to a minor extent by the Polish state, and to a much larger extent by other, private sources e.g. property rental, research projects (including those supported by the European Commission), grants, training and expert consultancy. ILI manages a number of different specialist training courses on the request of the footwear industry.

Not all institutes offer training linked to apprenticeships; in fact the three case study regions have very different training and education systems. Apprenticeships have a long tradition in Germany and play a prominent part within the dual education system of the country, providing students with practical experiences.

5.4.5 In-House Training in the Case Study Regions

Although training institutes are an integral part of education in the sector, companies also rely on in-house training to update the knowledge and skills of their workers, as well as to introduce new employees to the practical elements of their jobs. In the case of smaller companies, this in-house training may be rather informal, and can include introducing staff to the use of machinery. By contrast, larger companies may have a wider range of more formal training courses. Examples of different types of in-house training are presented in Box 5.4.

Box 5.4: Contrasting Examples of In-house Training from Southern Poland and Veneto	
Southern Poland	<p>A large company in Silesia employs 320 people and has reduced the number of workers by 40% during the last four years.</p> <p>The company provides in-house training for newly employed staff members, which generally lasts one month. In addition, training is also provided to existing staff members every two to three years; the last training took place in 2009. Provided there are enough new workers who specialise in one part of shoe production process, general training is provided on the basic knowledge necessary for shoe making.</p> <p>The training sessions generally last two days and are held at the company's premises by experts from the Institute of Leather Industry. Office workers tend to spend no more than two day on training, providing basic knowledge on shoe making process.</p>
Veneto	<p>This large, multinational company was founded in Veneto and by the end of 2011 had over 2 900 employees worldwide. It has offshored its production to Asia while maintaining research, design, marketing and sales in Montebelluna.</p> <p>The company offers a wide range of training for its employees via the company training institute. These range from special skill-related courses on HR and cash-flow management to Masters courses. Masters courses on footwear design and marketing are run in partnerships with the Polidesign centre of the Politecnico di Milano while two other postgraduate courses, in the fields of collection coordinator and production manager, are held at the Politecnico.</p> <p>The company also offers placement for up to 10 students from educational institutes of the sector. At the conclusion of the initiative, tutors and a special commission the company verifies the performance of the training and projects.</p>
<i>Source: Interviews in Southern Poland and Veneto, October 2011</i>	

Table 5.8 below indicates (at a national level) the percentage of companies of all types providing vocational training in 2005 (more recent data are not available from Eurostat).

Table 5.8: Continuing Vocational Training at Enterprises as % of Enterprises in the Sector of Manufacture of Textiles and Textile Products; Leather and Leather Products				
	EU27	Poland	Germany	Italy
2005	30	14	56	13
<i>Source: Eurostat: Training enterprises as % of all enterprises, by type of training and NACE [trng_cvts3_01]</i>				

While the table suggests that, in the EU27, an average 30% of the companies within the textiles and leather products sector provide in-house training for their staff members, this number is significantly lower in two of the countries containing the case study regions (14% in Poland, 13% in Italy), while it is higher (56%) in Germany. Indeed, the real figure for Germany may be even higher if on-the-job training within companies under the ‘dual system’ is also included (see Section 5.4.3). In the case of Italy, where the industry has strong traditions, the widespread availability of educational and training centres could serve as one explanation for the lower percentage of companies offering in-house training.

Respondents to the EU survey were also asked what kind of investments enterprises had made between 2006 and 2011; 12 out of the 24 respondents mentioned employee training and all but one had implemented some form of training for their employees.

5.4.6 Partnerships between Training institutes and Business

Partnerships with industry can be a key factor in providing information for policy makers and training institutes on the changing skill requirements of the industry. From the point of view of the training institutes, partnerships with industry can also provide students with the possibility to find placements at enterprises. As discussed in Section 6.3.4 of this report, such partnerships can be particularly important for SMEs, which may lack the resources for in-house training and find access to skilled staff a particular barrier.

Such partnerships can also result in the development of research projects through which university-industry-research centre relationship can function increasingly as knowledge intensive partnerships. An example was found in Valencia during the task on research centres, where the University works closely with the regional research centre (INESCOP) and local manufacturing companies. While accessing funds for research might prove difficult (as described in Chapter 4 of this report), the creation of these partnerships is important, as the research activity itself provides a rich basis for teaching and learning at both undergraduate and graduate level, as well as for doctoral studies⁸⁹. One example of partnerships outside the direct footwear sector is

⁸⁹ Mihai A (2010)

that of the chemical company BASF, whose polymer materials can be used in footwear products (see Box 5.5).

Box 5.5: Research Partnerships between Training Institutes and Industry

The chemical company BASF manufactures polyurethane, a key element of soles and synthetic footwear. As part of its marketing activities, the company sponsors a footwear design contest for students of the Politecnico Calzaturiero in Padua, Italy, for sole designs using polyurethane.

The example of partnership with the Politecnico Calzaturiero demonstrates that not only footwear manufacturing companies, but also companies within the wider supply chain, are willing to engage with the training of future footwear industry employees. Such co-operation provides BASF with a way of ensuring that students are familiar with the properties of their products and may, therefore, be more willing to use them in their future work.

BASF also partners with PFI in Pirmasens by offering apprenticeships within a jointly organised vocational education program for laboratory technicians. The range of services offered by the PFI laboratories includes microbiological tests on products and materials such as consumer goods and clothing.

Source: BASF Footwear News edition 1/2011 downloaded from

http://www.polyurethanes.basf.de/pu/solutions/us/function/conversions:/publish/content/group/News_und_Medien/FootwearNews/Footwearnews_01_11.pdf

PFI Test and Research Institute (2008): Two Biology Lab Technicians Complete Their Training, Newsletter Issue 5/2008, downloaded from

http://pfi-germany.de/fileadmin/user_upload/media/PFI_Newsletter_Juni_2008.pdf

The involvement of industry professionals in business courses is also an important incentive for students. As the use of information technology becomes ever more advanced within the industry (as described in Chapter 4 of this report), it is important that experienced industry professionals work side by side with graduates. Similarly, learning from designers can provide added value for students, by allowing them to experience not only the creative aspect of the work itself but the limits of everyday reality, what creations can actually be manufactured, are wearable and can be sold.

Mentoring programmes that provide the possibility for personalised guidance on emerging and advanced technologies can also play a crucial role in supporting students with the most promising potential. Within these programmes, students can participate in working group sessions alongside an industry professional, learning to develop products and directly interacting with clients.

The four main training institutes in Rheinland-Pfalz co-operate closely with each other. The ISC, which is located adjacent to the campus of the University of Kaiserslautern, plays a central role in this. The workshop of the ISC is used by both the vocational school and the university to provide hands-on experience of the manufacturing process to those taking degree courses and the opportunity to work with the latest machinery to vocational course students. The dual system also provides a direct link between businesses offering apprenticeships and training institutes. Other examples of partnerships are given in Box 5.6 (next page).

Box 5.6: Examples of Partnerships in Training

In **Rheinland-Pfalz** the four main training institutes of the sector have worked together in utilising their wide industry partnerships in a project called “Footwear Industry Roundtable” founded in late 2010.

Participants include local footwear companies, the Central Federation of the German Footwear Industry (Bundesverband der Schuhindustrie), ISC Germany, the Pirmasens Job Fair, the Chamber of Industry and Commerce, and the Pirmasens School for Vocational Education.

Results of the partnerships include the Step-up Shoes campaign which has succeeded in increasing the number of applicants for apprenticeships amongst young people.

The Politecnico Calzaturiero of **Veneto** has worked with both local and international businesses. Industry experts from local companies participate in the courses as lecturers, and students are given the possibility for placements at the enterprises.

One example of partnerships between the training centre and industry is a design contest for the students of the institute organised with the chemical manufacturer BASF (which also has a presence in the region).

Furthermore, courses at the Politecnico are offered in partnerships with other tertiary educational institutes, including the Polidesign institute of Milan.

Source: Interviews in Rheinland-Pfalz and Veneto. October/November 2011

There are few examples of similar partnerships in the footwear sector in the region of Southern Poland, where footwear businesses appear to view each solely other as competitors and there is no platform for partnerships. However there are examples of partnerships in other sectors within the region which could provide a model for the footwear sector. An illustration of this is the wide range of partnerships built up by the University of Technology of Silesia. Amongst others, the university is engaged in research and technology partnerships which have resulted in the development of new technologies, creation of new workplaces and an improvement in competitiveness. Its research programs include technology of production, application of modern materials and biotechnology as well as environmental engineering⁹⁰.

Enterprises in Southern Poland could potentially benefit from partnerships with the Technical University of Radom located in the Masovia region. The University has a special footwear design course within the Faculty of Materials Science, Technology and Design. The design course is three and a half years long and offers the specialization of footwear and clothing designer.

⁹⁰ Ślusarek J *et al* (2010)

5.5 Success Factors and Barriers for Training in the Footwear Sector

5.5.1 Success Factors

The case studies indicated that the key success factors for effective training in the footwear sector are:

- close partnerships between training institutes and businesses; and
- the ability to attract young people.

Partnerships between Industry and Training institutes

Close partnerships between the training institutes and other regional stakeholders is crucial for maintaining an up-to-date curriculum that takes into consideration the best available technology and the limitations and necessities of the regional industry. Such partnerships also provide apprenticeship and placement opportunities for students, which can increase their future employability.

The importance of engagement of industry stakeholders in training programmes is highlighted through an example in Veneto (see Box 5.7).

Box 5.7: Example of Training Partnerships in Veneto
<p>The appearance of the large brands in the area of the Riviera del Brenta has contributed to the stabilisation of the industry in the region. One family owned manufacturing company which was established nearly 30 years ago manufactures 70% of its products for large brands, while the remaining capacity is directed to its own brand.</p> <p>The company works in close partnerships with the Politecnico Calzaturiero, with 30% of the staff receiving some form of training and all of their designers (five people) coming from the Politecnico. Special focus is given to employee training on IT and the use of the CAD/CAM.</p>
<p><i>Source: Interview in Veneto, October 2011</i></p>

The example of Veneto, and general experience in Rheinland-Pfalz, show that placement programs and close partnerships with manufacturing enterprises can provide added value by aligning industry requirements and the frameworks of training and education, while, for students, it can provide valuable experience regarding the practical implementation of work. Moreover, apprenticeships (such as under the German dual system) provide advantages for business by filling work places cost-effectively with trained personnel. Similarly, internship programs and placements can strengthen the employability of students and assist graduates to obtain the necessary practical training.

These models could readily be followed in any EU footwear manufacturing region where there are training institutes. As Section 5.2.1 showed, there is a wide range of institutes across the EU which undertake training relevant to footwear.

However, they depend upon the willingness and ability of both training institutes and industry to engage with each other. The example of Southern Poland indicated that, without such willingness, partnerships cannot be developed or do not function

effectively. The ability of training institutes to engage with industry may also be influenced by the way that curricula are set; for example, in Rheinland-Pfalz some industry representatives complained that nationally-set curricula failed to keep up with the pace of change in the industry, and thus became less relevant.

Partnerships between training institutes and industry are also important to provide students with practical training. The most successful courses appear to offer a significant element of industry placement. It is also difficult for training institutes to provide students with access to up-to-date equipment for practical training, unless this can be offered in conjunction with industry.

The Ability to Attract Young People

A key success factor in providing the future workforce needed by the footwear industry is the ability to attract young people into training. A key success factor here appears to be the ability to overcome the perception amongst students that footwear production is an outdated industry which offers little future.

Addressing this issue requires imaginative and innovative approaches, focused on the interests of young people. Stakeholders in Rheinland-Pfalz have initiated a number of successful projects to attract young people into the industry, such as the Step up Shoes' campaign (see Box 5.8). The initiative resulted in additional students taking up vocational training places in 2011⁹¹. Following this success, the campaign is being transferred to other regions within Germany; equally, it could be transferred to other footwear regions within the EU.

Box 5.8: Step up Shoes Campaign
There have been a number of initiatives aimed at raising the interest of young people in footwear manufacturing as a prospective career path. The International Shoe Competence Centre has co-operated with local industry and the Federal Employment Agency in a project called 'Step up Shoes'. This is a campaign to encourage young people to apply for jobs in the footwear sector and overcome the negative perceptions of the industry.
This initiative involved presentations to students, as well as organising a fashion show where companies exhibited their products. One of the most important messages the campaign is trying to convey towards young people is that the industry has an international nature (so employees have opportunities for travel as well as the ability to find work locally) and that it is possible to advance to a senior level without necessarily having a formal university education.
<i>Source: Case Study Interview in Rheinland-Pfalz, October 2011</i>

This campaign is part of a larger, regional initiative called the "Footwear Industry Roundtable" founded in late 2010. Participants include local footwear companies, the HDS, ISC Germany, the Pirmasens Job Fair, the IHK, and the Pirmasens School for Vocational Education.

One footwear company in Southern Poland has enlisted the Voluntary Labour Corps as a source for new young employees. VLC is a government body financed from the

⁹¹ International Shoe Competence Centre (2011)

state budget (and supported by EU funds) which aims to find employment for, and avoid the marginalisation and social exclusion of, people between the ages of 15 to 25. The organization is also involved in providing general and vocational training. Through the Vocational Training Centres, VLC organizes training courses to improve skills and qualifications so that participants can keep their current job or acquire new skills that are adaptable to the local skill requirements. Although this scheme is specific to Poland, many EU governments are developing programmes to tackle youth unemployment, in which the footwear industry could potentially participate.

This is an example of good practice in identifying training and development options for unemployed young people. Youth unemployment is a major problem in certain EU countries, but not in all. The countries where it is lower have appropriate mechanisms in place to help young people to start their professional life, with skills matching the needs of companies. Such an approach is likely to be increasingly important for the footwear sector in future.

Another approach which may help to recruit and retain staff is involving employees in the development of objectives and strategies. In the Task on SMEs (see Chapter 6), the lack of such involvement was seen as one reason for difficulties in recruiting and retaining staff in Emilia Romagna.

5.5.2 Barriers to Training and the Availability of Skilled Staff

Respondents to the EU survey listed the availability of skilled staff as the fifth most significant obstacle for companies. However, it was identified as the second most significant concern for the near future. The availability of skilled staff was also identified as one of the key concerns of stakeholders during case studies for the task on SMEs (see Chapter 6 of this report). In the region of Emilia-Romagna (Italy), companies were facing barriers in retaining skilled staff. One of the reasons given was that people felt unmotivated working in the industry as, even though they contribute to the success of the companies, they are not involved in the decision making processes. Similarly, enterprises in Timis County (Romania) expressed difficulties in attracting a skilled workforce.

The main barriers to recruitment of staff were identified as the poor image of the industry and the relatively low wages. The latter factor is due to the price pressures faced by the industry, due to competition from low-wage countries such as China (see Chapter 2 of this report). Trade unions in Rheinland-Pfalz indicated that the poor working conditions in some (particularly older) plants were also a barrier to recruitment.

The availability of training courses does not seem to be a major barrier. Respondents to the EU survey were also asked about changes in the availability of courses in their countries; the responses are shown in Figure 5.2. Figure 5.2 indicates that the overall availability of courses has remained broadly the same, with some increases (particularly in vocational courses) being offset by some reductions (particularly in apprenticeships). The industry associations responding to the survey agreed that, overall, availability had remained the same or had increased (particularly for specialist

courses). Although Trade Union respondents agreed there had been an increase in the availability of specialist courses, there had been a reduction in other forms of training.

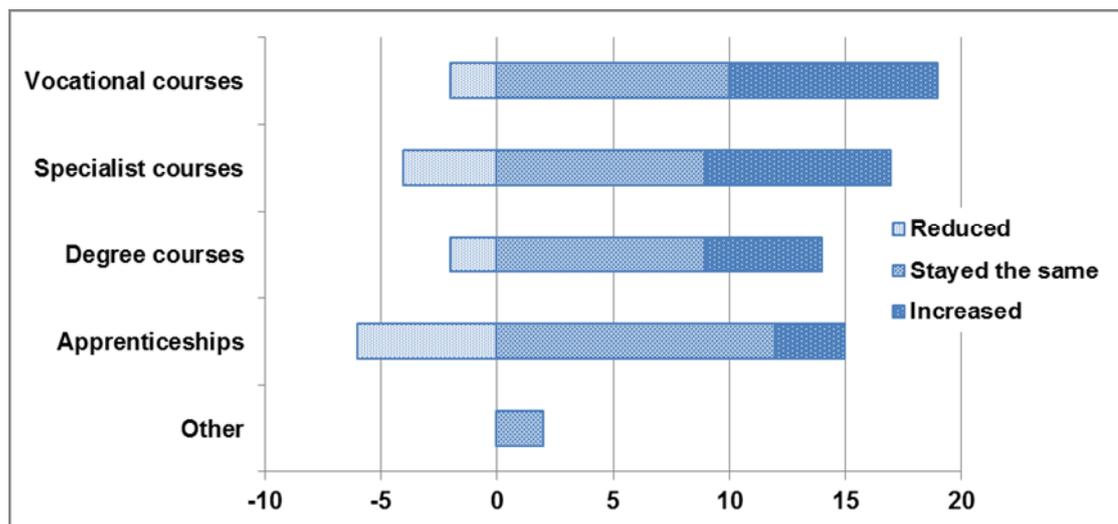


Figure 5.2: Responses from 24 Companies to: *Has the availability of training in your country for those who wish to be employed in the footwear sector changed in the last 5 years?*

Nevertheless, the overall view of the stakeholders interviewed for the case studies was that the education system may be producing too many designers and not enough technical professionals with the skills necessary for modern production approaches. One of the drivers that industry stakeholders identified for companies to relocate production from their home countries is the shortage of specific types of skilled workers in certain regions. High labour costs were also listed as a significant factor (although low wages are one reason for the poor image of the industry, footwear companies compete with industries in countries such as China where wages are much lower than in Europe). Furthermore, even those students that graduate and start working in the footwear industry can often be unprepared for barriers such as dealing with multinational competition, overseas manufacturing bases, highly computerised environments and complex logistical pipelines⁹².

In Veneto, the presence of strong local partnerships, the traditional skills that manufacturing companies have built up, as well as the continuing focus on local production, has helped to maintain highly skilled top end manufacturing in the region. Yet, for companies operating in the mass and lower end of the market and with manufacturing bases overseas, the skills gap is significant.

The continuing difficulties suggested a need for better HR planning in the companies within Rheinland-Pfalz, Veneto and Southern Poland, to identify ways to attract and retain skilled staff within the cost constraints they face, and also the importance of

⁹² Just Style (2008)

innovation (discussed in Chapter 4 of this report) in improving the efficiency of production and marketing. Such changes will allow companies to develop longer-term plans to ensure they have access to the skilled staff they need for their future development.

5.6 Future Trends

Future trends in training in the footwear sector depend on general development of the footwear sector, as discussed in Chapter 2 of this report. If the industry continues to shrink in size, fewer trained staff will be required. Recruitment will be limited to a small amount of replacement of existing staff, as they retire or leave the industry. This scenario will make it harder to recruit young people into the industry and it may become more difficult to justify the continuation of the large number of training institutes in the EU.

However, if the industry is able to remain stable or to expand through restructuring (as described in Chapter 3) and innovation (as described in Chapter 4), then the demand for trained staff could grow. New forms of training may be needed, in line with changes in processes, products and marketing, and particularly the increased use of IT.

The ability of the training institutes to develop partnerships with other stakeholders, including research centres as well as manufacturing companies, will be very important in ensuring that the new skill needs can be met. Such partnerships can ensure that the latest technological developments, as well as industry trends, are incorporated into the curricula.

It will also be increasingly important for the industry to attract young people into training and employment. While Member States have an abundance of skills and manpower, students currently often prefer other industries, due mainly to the differences in wages and perceived working environment. An increase in communication about the prospects for the sector, including visits to businesses, could attract a growing number of students to the relevant courses.

6. SUPPORT FOR SMALL AND MEDIUM ENTERPRISES

6.1 Introduction

6.1.1 Significance of SMEs in the EU Economy

SMEs are the backbone of European industry. In 2009⁹³, SMEs generated the majority of value added (57%) and employed most (nearly 67%) of the workforce in the non-financial business economy. Micro enterprises play a significant role, making up almost 92% of SMEs and providing employment to nearly as many people as large enterprises. Table 6.1 shows the distribution of EU enterprises by size in 2010.

	Micro	%	Small	%	Medium	%	Large	%
Number of enterprises	19 200 000	92.1	1 380 000	6.6	220 000	1.1	40 000	0.2
Number of employees	38 910 000	29.8	26 610 000	20.4	21 950 000	16.8	43 260 000	33

Source: Ecorys (2011)

6.1.2 Number of Footwear Companies and Employment

As Section 2.3.2 of this report indicates, the footwear industry is characterised by SMEs, employing on average 10-15 workers and with an average turnover of just over €1 million. While large scale manufacturers do operate in the industry, SMEs generate most of the revenue; the four largest footwear producing companies in the world accounted for only around 7% of sector revenue in 2010⁹⁴.

Table 6.2 shows the number of enterprises by size in the EU as a whole and the seven countries containing the case study regions while Table 6.3 gives the distribution of employees by company size in the countries containing the case-study regions (no EU-wide data are available).

⁹³ European Commission (2009e)

⁹⁴ IBIS (2010)

	Micro		Small		Medium		Large		Total
	No.	%	No.	%	No.	%	No.	%	No.
European Union	16 120	74%	4 478	21%	1 001	5%	115	1%	21 714
France	242	73%	50	15%	38	11%	3	1%	333
Germany	238	77%	72	23%	NA	NA	NA	NA	310
Italy	6 805	75%	1 991	22%	212	2%	17	0%	9 025
Poland	1 794	89%	141	7%	75	4%	9	0.4%	2 019
Portugal	1 506	63%	667	28%	192	8%	9	0.3%	2 374
Romania	713	52%	412	30%	218	16%	39	3%	1 382
Spain	2 631	79%	679	21%	NA	NA	NA	NA	3 310

Source: Eurostat: Structural Business Statistics
Note: NA = data not available

	Micro		Small		Medium		Large		Total
	No.	%	No.	%	No.	%	No.	%	No.
France	641	8%	1 563	19%	4 623	56%	1 374	17%	8 201
Germany	451	22%	1 571	78%	NA	NA	NA	NA	2 022
Italy	13 536	18%	34 622	46%	18 694	25%	7 718	10%	74 570
Poland	2 992	29%	NA	NA	7 497	71%	NA	NA	10 489
Portugal	3 936	10%	14 400	36%	16 544	42%	4 714	12%	39 594
Romania	1 967	4%	9 626	18%	24 352	46%	17 294	32%	53 239
Spain	4 539	24%	14 638	76%	NA	NA	NA	NA	19 177

Source: Eurostat: Structural Business Statistics
Notes:
 1 No data are available for the EU as a whole
 2 NA = data not available; marked 'confidential' in Eurostat table

Comparing Table 6.2 with Table 6.1 indicates that the footwear sector has a lower percentage of micro enterprises and a higher percentage of small, medium and large enterprises than the EU economy as a whole. SMEs make up the majority of footwear firms within Emilia-Romagna, Timis and Valencia:

- 94% of the 250 enterprises in the San Mauro Pascoli cluster of Emilia-Romagna are small or micro enterprises and the 85 enterprises remaining in the Bagnacavallo-Fusignano cluster employ fewer than 10 staff on average;
- over 99% of the 1,130 footwear companies operating in Valencia are SMEs and a high proportion of these are family firms; and
- around 95% of the 150 footwear manufacturing companies in Timis are SMEs.

6.1.3 Types of Products and Markets

No statistical data are available at EU level on the breakdown of production in different footwear categories by company size or on the markets targeted by companies of different sizes.

In Emilia-Romagna, Timis and Valencia, SMEs undertake a wide range of footwear-related activities, from raw material supply (including tanneries), component production, footwear design and manufacture, as well as support services such as IT. The number of suppliers is significantly larger than the number of footwear manufacturing companies; for example, AVECAL's member companies in Valencia have around 3 500 employees within the footwear sector and 5 500 in suppliers (unfortunately, no similar data are available for the other regions).

In Emilia Romagna, the cluster of San Mauro Pascoli is focused on the manufacture of women's shoes for the luxury/premium segment of the market. By contrast, in the Bagnacavallo-Fusignano cluster the majority (approximately 80%) of products manufactured still target the low priced segment, despite the intense competition in this market segment from imports (see Section 2.4 of this report). Footwear SMEs in Emilia Romagna are strongly focused on export markets. Two thirds of the outputs of the San Mauro Pascoli cluster are destined for export, mostly to the higher end markets in the European Union, Russia and the Far East. However, exports reduced significantly between 2009 and 2010. The Bagnacavallo-Fusignano cluster was also strongly focused on low-cost exports, particularly to central and eastern European and the United States. However, competition from lower-cost countries has meant the loss of many of these markets.

Footwear SMEs in Valencia operate in a variety of product segments, including children's shoes, slippers and comfort shoes and women's fashion shoes. It is notable that none of the SMEs in this region currently manufactures products for the lower price footwear segment, particularly men's shoes, as they were unable to remain competitive in this segment. Many of the SMEs in Valencia previously focused solely on supplying to the Spanish market. However, the on-going economic difficulties of the country meant that demand has reduced significantly. Therefore, companies are seeking to compensate for the loss of their home market by increasing exports. One of the most important, emerging markets for SMEs in Valencia, after the EU, is Asia (primarily China and Japan).

Timis has become a hub for Italian manufacturers outsourcing all or part of the manufacturing process. The majority of footwear products manufactured in Timis are for export. For companies that undertake outsourcing for manufacturers from Germany or Italy, the main immediate markets are other EU Member States. However, some of the products are then exported by the mother companies, outside the EU, to the USA and Russia. Only one of the companies we interviewed operates independently; its main market is domestic.

6.2 Barriers Faced by Footwear SMEs in the Case Study Regions

6.2.1 Introduction

While the footwear sector in general is working to adjust to the changing market environment (see Chapter 3 of this report), increased competition has had a particular impact on SMEs. This is because SMEs, particularly the very smallest firms, can have limited resources and expertise to undertake the types of restructuring discussed in Chapter 3 of this report, or to introduce the innovations identified in Chapter 4.

SMEs which adopted a ‘low road’ business model, as discussed in Chapter 3, have been particularly affected by the increased international competition discussed in Chapter 2 of the report, made worse by the economic crisis. Without clearly defined strategies or access to niche markets, many of them were unable to continue production, contributing to the reduction in numbers of EU footwear companies described in Chapter 2.

However, current market conditions also offer opportunities. Reduced numbers of competitors and emerging trends for fashion and customisation in footwear (see Section 2.2.3) provide companies with the opportunity to increase their market share. Effective business strategies, involving identifying niche markets, upcoming trends and responding to these opportunities in a timely fashion, could help footwear SMEs to take advantage of these opportunities.

SMEs located in Valencia, Timis and Emilia Romagna faced a number of significant barriers in maintaining and expanding their operations. These included:

- increased competition;
- access to finance;
- shortages of skilled labour;
- succession planning in family businesses;
- access to technology, particularly IT; and
- increasing costs of raw materials.

The impacts of the barriers varied by region and to some extent by company type.

6.2.2 Reduction in Demand and Increased Competition

Increased competition, especially international competition, is an issue across the European footwear industry (see Section 2.4). This has led to significant reductions in output and employment (see Section 2.3.3), which was reflected by SMEs in Emilia-Romagna, Timis and Valencia.

The footwear industry in Italy as a whole experienced a sharp decline in production value and quantity, amounting to a 12% reduction (198 million pairs, €6.5 billion) in 2009⁹⁵. In 2010, the losses continued, although on a smaller scale as the number of

⁹⁵ ANCI (2011)

shoe manufacturing companies has reduced by 3.7% (224 factories closed); the number of employees was also reduced, with an average 3.3% (2,754 jobs lost) compared to 2009. Short-term economic indicators from the Italian Footwear Association though, indicate that the value of production increased by approximately 4% in 2010 compared to the previous year⁹⁶. The Bagnacavallo-Fusignano cluster in Emilia Romagna has faced some of the steepest reductions. The cluster was home to more than 200 companies employing 3 000 workers in the early 1980s; by 2005 there were only 85 companies remaining, employing 800 people⁹⁷; in 2011, there were 48 companies with about 248 employees⁹⁸.

One of the key issues faced by footwear SMEs in Valencia is the reduction in domestic demand for their products, due to both the impacts of the economic crisis on consumer spending and the impacts of international competition, particularly at the lower end of the price scale. The number of companies in Valencia has reduced by 37% since 2005. One of the most significant reductions in the number of enterprises took place between 2006 and 2007, when approximately 10% of the companies went out of business; since then the rate of reduction has been slowing down. According to the regional footwear association, more than 25% of companies were forced out of business during the last five years, with approximately 30% of the remaining enterprises facing serious difficulties. All of the companies we interviewed had experienced a reduction in domestic demand, though the impacts on their overall business varied.

In Timis, there has also been a significant drop in the number of footwear SMEs. The region is highly dependent on demand from companies from Italy and Germany that have offshored their manufacturing operations to Timis. This places the companies at risk, should the offshoring company decide to change its activities or to move production to even cheaper locations (for example outside the EU), as they have no direct access to the markets for their products.

Information from the case studies confirms that the companies most affected by reduced demand are those focusing on domestic markets, which have been hit by the recession (particularly in Spain), and those producing lower-priced footwear, which is most vulnerable to foreign competition. Companies which produce higher-quality products, which have identified niche markets and which are able to compete in export markets, have been better able to maintain their turnover. This contrast is starkly demonstrated by the differences in impacts on the San Mauro Pascoli and Bagnacavallo-Fusignano clusters in Emilia Romagna (see Box 6.1).

⁹⁶ ANCI (2011)

⁹⁷ Emilia-Romagna regional portal: downloaded from <http://assemblealegislativa.regione.emilia-romagna.it>

⁹⁸ Il Sole 24 Ore (2011): *I Distretti in Caccia di Nuovi Mercati*, downloaded from: http://www.modena.legacoop.it/rassegna/2011/06/pressline20110628_258657.pdf

Box 6.1: Contrasting Impacts of Competition on San Mauro Pascoli and Bagnacavallo-Fusignano

Production in the cluster of San Maori Pascoli is focused on the manufacture of women's shoes for the luxury/premium segment of the market. The continuing success of the region is demonstrated by the brands of the companies which work in the area, which are among the most important in the world in the sector of women's luxury shoes. There are also a large number of companies involved in the production of semi-finished materials and components and design studios supplying to prestigious brands such as Prada, Louis Vuitton, Versace, Dolce & Gabbana and Gucci.

The footwear cluster of Bagnacavallo-Fusignano has always focused on the lower price end of the footwear market; low quality materials and hand-made production dominated the manufacturing process. The 1960s and 1970s saw a strong growth of the industry within the district, including an efficient system of subcontracting. The cluster was strongly focused on exports, particularly to European countries, the Eastern European market and the United States, but not towards the improvement of processes and quality systems. This gradually reduced the competitiveness of the district and it began to decline during the 1980s, as lack of development progressively exposed the cluster to strong international competition in low added value products. In the early 1980s the cluster was home to more than 200 companies employing 3000 workers, in 2005 there were only 85 companies remaining, employing 800 people and by 2011 this had reduced to 48 companies and less than 250 employees.

Source: Interviews in Emilia-Romagna, 2011

In response to this increased competition, the most successful SMEs have focused on product restructuring (as described in Chapter 3) and product innovation (see Chapter 4), targeting particular market niches where they can achieve a better price, because these are not the focus of large companies. Such niches include:

- the niche between medium price and luxury footwear, combining quality, fashion and customisation,
- the comfort shoes segment; or
- the functional and health shoes segment.

In general, though, the level of competition will remain high. Some footwear SMEs are highly professional, with strategic plans to address market changes and invest. Many others, though, are effectively living hand to mouth, depending on the major retailers or brands for future product orders and sometimes technical advice.

6.2.3 Access to Finance

Access to longer-term finance is crucial for small and medium-sized enterprises to set up or expand their operations, particularly within deteriorating market conditions. SMEs often find it more difficult to obtain finance than larger companies; they have fewer assets against which to secure loans and they may also have less awareness of potential finance sources. This can negatively impact their ability to innovate, train employees or restructure their business. Therefore, their potential to break out of a bad economic cycle is more limited.

Obtaining short-term financing is also important, to bridge the gap between invoicing and supply chain payments. Footwear manufacturers (and SMEs in particular) have traditionally been squeezed financially by both ends of the supply chain. Distributors

often make it a condition of trade that they will take longer to pay (their argument is that they take the risk by stocking the products and do not receive payment from the customer until the shoes are sold). The footwear manufacturers have to pay their materials and component suppliers promptly, as they are, individually, a very small part of the customer base. In Valencia, for example, while companies are obliged to pay their raw material suppliers within 60 days, customers are paying on 90 day terms and manufacturers are forced to bridge the invoice gap from their own resources.

In the case of both Emilia Romagna and Valencia, companies are struggling to find sources of finance, particularly as the economic crisis has led to the merger of the local banks that were previously their primary source of lending. In the current economic climate, financial institutes simply do not loan the same amounts of money as before; they can also renegotiate conditions on existing loans. As a result, even successful companies have cash-flow difficulties (see Box 6.2).

Box 6.2: Difficulties with SME Access to Finance

The biggest barrier a company manufacturing women's shoes in the medium-priced segment is facing is access to finance. The merger of local banks means that it is no longer able to receive loans from different banks in smaller amounts; it has had to turn to larger banks for a larger sum, which often comes with stricter conditions.

This barrier is also affecting retailers, and many of them have been forced to shut down. There have also been cases where orders through buyers were not paid or payment was delayed, bringing cash flow difficulties.

Lack of financing has a direct impact on the company's competitive position, as one of its targets is to increase its presence in foreign markets. Representation at trade fairs is a crucial element in building partnerships with foreign markets; however, attending industry events can become expensive and difficult to afford.

Source: Interview with SME in Valencia, May 2011

In both Emilia Romagna and in Valencia, one of the concerns for enterprises was the lack of information on the available options for financing; companies were unaware what sources of finances would be most suitable for them to utilise. This is supported by the findings of Handke⁹⁹ that SMEs in Alicante lack knowledge of finance and do not appear to be aware of financial tools to improve liquidity, such as factoring or leasing. The SMEs we interviewed had not been able to identify innovative ways to overcome the barrier of lack of access to finance. Although one company in Valencia commented that the national footwear association is helping to fund expansion of footwear manufacturing by trying to network customers with producers, SMEs appeared, in the main, to be simply putting expansion plans on hold until the financial climate improved.

SMEs in Timis mainly undertake manufacturing under contract for foreign (mainly Italian) firms that have offshored their manufacturing. They are, therefore, less directly affected by barriers to access to finance, especially if the contracting company supplies their raw materials. However, there is an indirect impact. As their

⁹⁹ Handke, M. (2009)

foreign customers struggle with financing, they are less able to expand or even maintain their operations, potentially leading to the stagnation of the industry in Timis.

6.2.4 Availability of Skilled Labour

Although the availability of skilled labour is an issue for all types of footwear business (see Chapter 5), it is particularly acute for SMEs, which may be less able to train their own staff and are less likely to have HR expertise.

Finding skilled workers has been highlighted as a particular difficulty in Emilia Romagna and Timis, although it was not identified as a barrier in Valencia (where there are few other employers). A lack of skilled staff limits the potential for expansion of SMEs in the footwear sector and makes it harder to maintain a high-quality output. Rapid turnover of staff, which is a particular barrier in Timis, increases costs and also absorbs management time. The reasons identified by SMEs for their difficulties in finding and retaining skilled staff are different in Emilia Romagna and Timis, as summarised in Box 6.3.

Box 6.3: Reasons for Shortages of Skilled Staff	
Emilia Romagna	Timis
Lack of succession planning for family businesses	Low wages compared to other sectors
Unattractiveness of the industry for young people (due to lower wages)	High overhead costs of labour
Lack of involvement of staff in developing strategies and objectives	Lack of interest from foreign owners to invest in human resource development
<i>Source: Interviews in Emilia Romagna and Timis, May 2011</i>	

In Emilia Romagna some of the small, family owned businesses have been struggling to find and keep skilled staff. This is despite the fact that many footwear firms in the area have closed down, leading to redundancies amongst footwear workers. It appears that skilled staff prefer to leave the industry and seek better-paying jobs elsewhere. The SMEs have attempted to address the barrier by establishing partnerships with local and regional education institutes. As discussed in Chapter 5, on training, the resulting partnerships between universities and enterprises have a positive impact in supporting the education and training of students and whilst helping to develop skills and knowledge applicable to the local and regional needs. Alternatively, companies are hiring unskilled staff and providing them with in-house training.

In Romania, the main reason for the lack of skilled staff is also the low level of wages compared to other sectors. Investment in the region by high-tech companies has given rise to demands for new skills, which are better remunerated. Therefore, some skilled footwear workers have retrained for the new industries. In addition, foreign investors have little incentive to invest in human resource development. To

exacerbate the barriers, many of the footwear-related vocational training institutes in the area have closed down, with only one institute remaining in the city.

6.2.5 Succession Planning for Family Businesses

A large proportion of SMEs in Emilia-Romagna are family businesses. A report conducted in 2008 for the European Commission on issues for family businesses¹⁰⁰ contained a case study on family businesses in Italy. According to the report, family firms in Italy represent 93% of the all companies. The report identifies two distinctive types of family business; these are described in Box 6.4. The family businesses we interviewed for the task on SMEs mainly followed Model 1.

Box 6.4: Types of Family Businesses in Italy	
Model 1	Model 2
<p>The family is closely involved in the business (managerial control).</p> <p>The entrepreneur works 40% in management, 35% in commercial operations and 25% on organising production.</p> <p>Close family members are involved; up to 55% in commercial roles, 45% in production roles and 26% in managerial roles.</p> <p>90% of family businesses adopt this model.</p>	<p>The family is the owner of the business; it is not involved in the operational activities but it is involved financially.</p> <p>Partners take 95% of the administrative and 5% of the management roles.</p> <p>Of these family businesses, 56% are micro, 38% small and 5% medium sized enterprises while 1% have more than 250 employees.</p>
<p><i>Source: European Commission (2009f)</i></p>	

A particular barrier for traditional family businesses in the region is succession planning. For example, one SME we interviewed noted that the company is being run by the second generation of the owning family, but the next generation has shown little interest in taking over and the family does not know what will happen to the business in future. Valuable skills and knowledge are being lost in the industry as traditional family firms are going out of business because younger generations do not wish to take over the businesses.

This is an issue not only for manufacturing companies but also for suppliers (and, indeed, for all types of family business, not just those in the footwear sector). One company we interviewed noted that lack of succession planning by suppliers of raw materials, leading to closure of supplier companies, means that manufacturers need to seek out alternative contacts and can face difficulties in finding the same quality of raw material produced locally.

It is interesting that similar barriers were not encountered in Norte; the case studies for the task on restructuring and modernisation (see Chapter 3 of this report) found several examples of family firms that had undergone significant restructuring by younger generations taking over the businesses. There is no obvious reason for this

¹⁰⁰ European Commission (2009f)

difference, other than perhaps the relative lack of other opportunities in Norte. It appears to be related as much to individual family dynamics as to external factors.

6.2.6 Access to Expertise and Technology

Chapter 4 of his report emphasised the importance of innovation for the footwear sector and noted that some research centres had found it difficult to develop partnerships with SMEs.

A key issue for Timis is that the business model followed after privatisation in Romania, focusing on low-cost production for foreign partners, provides limited incentives for skills and technology development. As the country had a long tradition of light industry, and had built close ties with other countries in the region, it was expected that some of the privatised companies bought by their employees would serve to re-establish the industry. Apart from a few examples, though, companies were bought by foreign investors and the country has become a location for offshoring of production for Italian companies under the *lohn* system (see Chapter 6.3.3). The companies that remained in Romanian ownership struggled to develop sales channels in Europe and many of them eventually closed down due to increased competition and lack of support.

The *lohn* system was successful in guaranteeing employment and providing significant trade and investment opportunities. However, this advantage may quickly come to an end if there is no upgrading of companies (e.g. development in the fields of design, marketing, distribution etc., both to local and export markets).

Enterprises in Elche in Valencia were in a similar position to that of Romanian companies in the 1950s, when foreign investors from the United States decided to close their US factories and move production to cheaper locations. Following nearly a decade of low-cost manufacturing for foreign owners, both a skilled Spanish workforce and technology were available. In the 1970s and 1980s, the Spanish footwear industry attempted to further reduce costs (often by shifting into clandestine production to avoid taxes, social security expenditures etc¹⁰¹). However, this strategy was not successful, given the rising wages in Spain and the rising currency against the dollar. Later on, using local incentives to facilitate entrepreneurship, previous employees founded their own companies, utilising their skills. The main positive factor was, however, market diversification (principally to the German, French and British markets) and improvement of sales channels through developing their own distribution systems and brands in the 1990s and up to the present day¹⁰².

However, the circumstances for Elche in the 1950s were rather different from those in Timis today, which limits the lessons that can be learnt from this experience:

¹⁰¹ Herrero G P and Puche A M (2003)

¹⁰² Miranda-Encarnacion J A (2001)

- the spatial division of labour was not yet developed, so companies were not prepared to relocate parts of production (e.g., upper production) abroad;
- Spain was not integrated into a regional market and had its own currency, resulting in different trade policies and export promotion policies;
- the US market was open to imports of low cost shoes at that time, and this was organized by large retail companies, not the footwear producers; and
- markets had not yet evolved in terms of fashion, (international) brands were not yet important in most segments of the market.

As a consequence, Timis has relatively less to learn from early experience in Elche but more from strategies followed elsewhere, e.g. in Italy and Norte, Portugal (see Chapter 4). For example:

- maintaining competitiveness by seeking cost reduction based on reducing wages, lower quality etc. is successful only for a very short period;
- invest as early as possible in improvement of quality and productivity, specialisation of products and/or processes, in access to sales channels (own brands and own distribution systems) and market diversification;
- establish intermediary institutions assisting in this upgrading of the sector;
- accept insolvencies of weak companies and reduction of employment but promote young entrepreneurs; and
- accept offshoring of parts of production which deliver low value added (i.e., make active use of the global spatial division of labour – see Section 3.1).

6.2.7 Increasing Costs of Raw Materials

The rising and unpredictable price of raw materials was identified as an issue in both Valencia and Emilia-Romagna. This is a direct effect of increasing oil prices, which directly impact the contract prices of synthetic raw materials used to make polyethylene (such as purified terephthalic acid/dimethyl terephthalate (PTA/DMT), monoethylene glycol (MEG) and polyester chips).

The barrier is exacerbated because, while orders for shoes and contracts for production are often signed three months in advance, raw materials are paid for as production proceeds, and prices are set at the time of purchase. As enterprises do not have the leverage to change contractual terms for their products, they are forced to absorb the difference.

6.3 Business Strategies for SMEs

6.3.1 Business Models

As with other companies in the footwear sector, SMEs have undergone restructuring in response to the barriers they face arising from the changes in the global footwear market (see Chapter 3).

Business strategies adopted by SMEs to achieve such restructuring can complement the activities of large firms, bringing advantages of flexibility and lower transaction costs to customers and to the supply chain. Their competitive advantages lie in their ability to interact more closely with consumers and to respond more quickly to their demands, while large enterprises can exploit the advantages of large scale production. Competitiveness for SMEs lies in their ability to combine effective use of labour skills with flexibility and the advantages of specialisation¹⁰³; the ‘high road’ business model described in Chapter 3 of this report.

However, not all SMEs have the ability to adopt a ‘high road’ business model. While certain patterns of specialisation, such as clusters focusing on particular types of product (like sports shoes), can be highly beneficial to growth, others may not be as innovative, and mainly continue customary activities, even in stagnant markets¹⁰⁴. Therefore, a business strategy of finding market niches and forecasting future trends in design, then adapting these to the skills and technology of a particular company, can be significant for the competitiveness of SMEs. Nevertheless, there are constraints to this approach. In sports footwear, only very large companies, such as Adidas or Nike (see Box 4.5 in Chapter 4), set design trends. The same holds true for the “fast fashion” of the large brand owners such as Zara or Mango. These large companies have the resources for trend scouting, product innovation and advertising/marketing. SMEs are, therefore, often followers, not trendsetters, in fashion.

SMEs within the case study regions of Valencia, Timis and Emilia Romagna have adopted different business models; Box 6.5 gives an example of very different business models within Emilia Romagna.

Box 6.5: Examples of Different Business Models Adopted by SMEs in Emilia Romagna

‘High Road’ Approach: focus on high quality/low volume production

One SME interviewed manufactures 25 pairs of hand-made shoes per day, using traditional methods. Generally shoes take two to four weeks to complete. The shoes are sold in the EU, South Africa, Japan, China, the Middle East and USA for €800-€1000, mostly through boutiques.

‘Low road’ approach: maintaining competitiveness in the low price segment

Another SME interviewed focuses on the other end of the market, making cheap polyester shoes with a sale price of €10-€17. The company remains competitive, although cheap imports from Asia target the same price range, because of its quick response to orders from the EU market, the reliability of quality and guaranteeing that their products do not contain colorants.

Source: Interviews with SMEs in Emilia Romagna, May 2011

¹⁰³ UNIDO (2006)

¹⁰⁴ UNIDO (2006)

Despite these differences, SMEs adopted a number of strategies. These include:

- developing formal business strategies;
- sub-contracting and outsourcing;
- rationalisation and cost-cutting;
- seeking new markets;
- strengthening brand identity; and
- new marketing approaches.

These strategies can be linked to the types of restructuring activities described in Chapter 3, as well as the forms of RDI identified in Chapter 4. For example, developing formal business strategies and rationalisation and cost-cutting are forms of operational restructuring; cost cutting can also involve process innovation. Seeking new markets and new marketing approaches are both forms of reorganisation of sales channels, whilst strengthening brand identity is a form of product restructuring which can also involve product innovation.

Sub-contracting and outsourcing of certain manufacturing operations by SMEs is a form of offshoring (as described in Chapter 3) in some cases. However, it mostly involves other firms within the same region and is very localised. SMEs within the Timis case-study region are also a destination of offshoring for (mainly larger) companies in other countries, particularly Italy.

6.3.2 Development of Formal Business Strategies

While SMEs in Emilia Romagna and Valencia have adopted medium to long-term business strategies in increasing numbers, there is still scope for further development. According to the Valencia regional association, AVECAL, approximately 30% of its member companies make formal business plans and have effective business strategies. The remaining enterprises face difficulties adapting to changes and effectively identifying new market opportunities. This finding implies that 70% of SMEs do not have formal business plans. However, they may still have informal strategies to manage the future of their businesses.

Nevertheless, the finding implies that a considerable proportion of footwear SMEs in Valencia may be operating on a day-to-day basis, without longer-term plans. This is fairly normal for SMEs. For example, research by a business insurance comparator of 400 British entrepreneurs indicated that 54 per cent of firms have no written business plan and more than two thirds of entrepreneurs make decisions on gut instinct alone (Simply Business, 2010).

Responses from businesses to the EU survey questions gave slightly different results. Responding to the question: *Does your company have a strategy in place ...?* 16 out of the 23 companies (43%) claimed to have a 'medium term strategy' in place. Respondents were then asked to mention which actions had been taken in recent years. The emphasis of responses was on improving the production and selling of existing products, through improved product design/quality, improved image/communication/service and product customisation.

A lack of forecasting and business planning can inhibit efficiency improvements as well as a lack of understanding of consumer demands and slow response to them. In Timis, the focus on subcontracting for foreign companies means companies do not have direct access to markets but are dependent on their foreign customers. There is little scope for the companies to become involved in business planning and strategy development.

Extending the involvement of employees in setting strategies and long-term planning has been found to be a particular asset in retaining staff. Companies in Emilia Romagna have faced the barrier of finding and keeping skilled labour (discussed in Chapter 5 on training). One of the reasons given was that people felt unmotivated working in the industry as, even though they contribute to the success of the companies, they are not involved in the decision making processes. Involving employees in the development of objectives and strategies can assist with staff recruitment and retention, potentially allowing SMEs to develop and grow. This is likely to require some form of training for employees; as noted in Chapter 5, partnerships with training institutes can help SMEs to identify the most suitable training courses.

6.3.3 Sub-Contracting and Outsourcing

SMEs in Emilia-Romagna, Timis and Valencia sub-contracted and outsourced certain manufacturing operations to other firms within the regions. In most cases, this is different to the offshoring of production described in Chapter 3 on restructuring, as it is very localised. It can also occur on a seasonal basis only, with some activities only subcontracted at times when a manufacturer is particularly busy, for example when a new collection is being prepared. There are some examples of offshoring, however, and Timis is a destination of offshoring from companies in other countries, particularly Italy.

Italy has traditionally merged footwear businesses into industrial clusters. The organisational structure of these industrial clusters is mainly based on vertically disintegrated supply chains. While leather is sourced from a variety of locations around the world, other raw materials are generally purchased locally. The extent of outsourcing of operations such as stitching has been reducing. However, established inter-firm partnerships remain a widespread feature. The more informal nature of inter-firm partnerships, especially within the cluster, is another important factor supporting the development and flexibility of SMEs.

SMEs in Valencia had made significant use of subcontracting, primarily to other companies within the region (see Box 6.6), although some had offshored certain activities to Romania or North Africa. This can range from contracting out individual production operations to subcontracting out the entire process, from design to finishing. The strong partnerships developed through clusters made this possible. By contrast, SMEs in Timis mainly undertake offshored production for foreign companies and need to keep their costs as low as possible to retain this business.

Box 6.6: Subcontracting within the Valencia Region

A fashion shoe company has changed in recent years from manufacturing to only designing shoes. It has subcontracted the manufacturing process; it purchases raw materials, which are then sent out to other local companies who make the shoes for them. This resulted in a reduction in the number of employees.

The company further reduced the number of employees in 2008, losing 58 people who used to deal with management and logistics. By purchasing a business management software package, the company was able to simplify procedures and reduce the amount of paperwork needed. Currently, the company employs only 16 people.

Source: Interview with SME in Valencia

In contrast to the other two regions, the footwear industry in Timis is dominated by production for manufacturers in other countries, particularly Italy. From the 1990s, offshoring of production to Timis was dominated by the *lohn* system, in which the contractor provides designs, material and equipment and the local company provides only the labour and the workplace. Whilst providing a cheap and rapid means of entering the market, this system risks instability in the longer term, as the contracting companies can quickly move their production to other countries with cheaper labour, and does not necessarily support local development (see Box 6.7).

Box 6.7: Lohn Manufacturing for a Third Party

A factory in Timisoara was working under foreign ownership, manufacturing components of footwear, not for its mother company, but for a single one of the mother company's clients, which had its headquarters in Italy, but also operated a large factory in Timisoara.

The operation of the Timisoara company was dependent on orders from the mother company's client; however, this client decided to leave its manufacturing site in Timisoara and cease partnerships with the local supplier.

Following the departure of its only client, the Timisoara company changed the types of products it manufactured; it decided to invest in new machinery and began the manufacturing of complete shoes and ski boots. It identified new clients located in Italy through contacts of the mother company. Therefore, while the product line has changed, its business model remains the same.

Source: Interviews with SMEs in Timis, June 2011

6.3.4 Cost-Cutting

Cost cutting has been an important strategy for SMEs. Box 6.8 lists the cost cutting approaches adopted by SMEs in Valencia and Emilia-Romagna. They include operational restructuring and process innovation, as well as product restructuring.

Box 6.8: Cost Cutting Measures Adopted in Valencia and Emilia Romagna

- Ceasing production of lower price range products
- Eliminating excess costs in marketing and administration
- Use of management and business administration software tools
- More efficient use of space in the factory
- Outsourcing production to cheaper partners
- Changing suppliers
- Sourcing cheaper raw materials and components
- Reducing profit margins

Source: Interviews in Valencia and Emilia Romagna, May 2011

In all three regions, SMEs have stopped manufacturing brands or product lines that can no longer remain profitable in the face of increasing competition from outside the EU. These are generally the lower-price range products. Whilst this can mean a significant reduction in output for the SMEs concerned, with a consequent reduction in employment, it does allow the companies to remain in business. This means that they can focus on more profitable niche markets which will hopefully provide the opportunity for growth in future (the ‘high road’ business model). This option is not open to the majority of companies in Timis, as their role as subcontractors for Italian and German companies means that they compete mainly on price.

In both Emilia Romagna and Valencia, SMEs have made increasing use of IT to reduce administrative and marketing costs. The most extreme example was an SME in Valencia, which replaced 58 management and logistics staff by making greater use of IT.

Although managing costs is essential for all footwear SMEs, manufacturers in Emilia Romagna and Valencia have realised that the ‘low road’ business model based on low costs and prices is not one that can be maintained in the long run, as there will always be locations outside Europe where manufacturing can be undertaken more cheaply. This is a significant challenge for Timis in the longer run.

6.3.5 Seeking New Markets

Restructuring their products to focus on the higher market segment, and ceasing production of cheaper brands, are ways in which both Emilia Romagna and Valencia SMEs have adapted to increased competition.

Additionally, almost all Valencia companies were seeking to access new export markets or to increase their presence in current ones (see Box 6.9). Most companies had been severely impacted by the contraction of the national market. The changing market environment and the loss of the national market requires Valencia companies to attach a higher value on RDI, as well as developing consumer services.

Box 6.9: Seeking New Markets – Examples from Valencia

A manufacturer of women's fashion shoes that previously focused only on the Spanish market also sells its products to Italy, Japan, the UK and Israel. It hopes to expand into Germany as well. The company has achieved a 50-50% split between Spanish and foreign markets. Sales to export markets are helping the company maintain its operational capacity. During the last two to three years, the turnover of the company decreased but it has managed to make up for that loss by extending its foreign client base. However, increasing exports brings additional costs in connection with insurance payments related to the transported goods.

Another manufacturer aims to counterbalance the loss of demand in the Spanish market by increasing sales in North America and in China. It is also looking to enter the Indian market. Its plan is to reverse its current sales proportion from 65% Spain and 35% export to 35% Spain and 65% export. The company has found that it takes approximately two years (four seasons) to establish its brand and presence in a new market.

Source: Interviews with SME in Valencia

Export strategies and moving into new markets are predominant in Emilia Romagna as well. For Timis, the fact that most footwear manufacturing is under subcontract to Italian or German companies, and there is no direct access to markets, means that the scope to seek new markets is limited.

Exploring and understanding new markets can enable companies to successfully implement export strategies. The example of an SME in Valencia, which had re-entered the US market following a previously unsuccessful attempt, shows that assessing risks and distribution channels can significantly increase the potential for succeeding in new markets. The company decided that changes in the way its products would be sold in the US, with greater use of e-commerce by its distributors, offered a greater chance of success.

There are various ways in which footwear enterprises can gather information on foreign markets, for example through industry associations or various private consultancies. However, SMEs often require more support to develop effective export strategies, including understanding market conditions and supply chains as well as calculating short and medium-term financial risks of entering new markets. They are also less likely to be able to afford the fees of consultancies to assist in this process.

Industry events, at both local and an international scale, are of crucial importance for SMEs in the footwear sector. Trade fairs, conferences and exhibitions can serve as a platform for conducting business but, most importantly, they are a source of market information. Not only do they provide an opportunity for promotion and marketing, they also allow manufacturers to review their current supply chain and extend it if necessary.

6.3.6 Strengthening Brand Identity

Strengthening brand identity provides a way for SMEs to expand their markets, for both high-end and lower price range brands. SMEs in both Valencia and Emilia Romagna have adopted this approach successfully (see Box 6.10).

Box 6.10: Increasing Profitability by Strengthening Brand Identity
A family owned company manufactures hand-made leather shoes. The company's production is becoming increasingly export driven (new markets include China); however, it is limited to 25 pairs a day even though the company is supplying to a growing market. The company has a loyal customer base for which additional services such as personalised models are available.
The company's strategy is to maintain its current production capacity and to increase prices and thus profit, and as the high quality and the strong perception of the 'Made in Italy' mark continues to ensure high demand for its products.
<i>Source: Interview with SME in Emilia Romagna, May 2011</i>

In Valencia, companies have survived difficult economic conditions by focusing their efforts on higher-quality brands and ceasing production of lower-priced, under-performing brands. A similar strategy was adopted by one of the few independent companies in Timis. However, this is not an option for the majority of companies in Timis, which only undertake subcontract manufacturing.

Brand awareness has also been the basis for campaigns aimed at consumers, such as the '*I Love Italian Shoes*' campaign, organised by the Italian Footwear Association, and the '*Made in Spain*' label. SMEs consider that such campaigns can have significant impact on the demand for European products. A similar approach has been adopted by the industry association in Portugal (see Chapter 3).

6.3.7 New Marketing Approaches

Another approach adopted by SMEs to address the barriers they face is the adoption of new marketing approaches. Companies in Valencia plan to rely increasingly on online sales. SMEs in Emilia Romagna did not yet appear to have adopted this approach, although one company upgraded its website, following our visit, to make it more consumer-friendly.

Another approach being adopted by SMEs is to offer greater customisation of products by buyers (see Chapter 4). This approach has been adopted by an SME interviewed in Italy (in the luxury segment) and is being attempted by one in Spain (in the medium-priced segment). As most companies in Timis undertake outsourcing, they do not have the opportunity to develop new marketing approaches.

6.4 Partnerships between SMEs

Partnerships (with other companies, research centres and educational institutes) are particularly important for SMEs, as their internal resources are likely to be limited compared to those of larger firms.

There is extensive literature on clusters in Italy, Spain, France, and Germany, as discussed in Chapters 2 and 3 of this report. This points to the diversity of clusters according to:

- age (some Italian clusters are relatively young, compared, for example, with the more than 100 years of others in Italy and Pirmasens, Germany);
- structure (some clusters have emerged as horizontal clusters often focusing only on low wage production while others have emerged as vertical clusters with a strong base in mechanical engineering and other suppliers);
- the institutional equipment in the cluster (research centres, industry associations, training and education); and
- whether restructuring has been successful or unsuccessful.

As discussed in Chapter 3 of this report, one consequence of this is the differentiation between a ‘low road’ and ‘high road’ approach to cluster development, either focusing on cost reduction (through outsourcing, home workers, low wages, non-compliance labour regulations) or investment in training and education, mutual support in marketing, RDI etc.

Footwear SMEs in both Valencia and Emilia Romagna work in traditional industrial clusters, composed of manufacturers, suppliers and other participants in the supply chain which are generally adopting a more high road, quality and fashion-driven approach (although examples of low-road’ competition on cost grounds remain in Emilia-Romagna). The footwear industry in Romania is more fragmented and retains a low road, cost competition approach. Even though the region of Timis hosts a large number of enterprises, these are mostly involved in the *lohn* system of low-cost subcontract production, thereby limiting their scope for developing local partnerships.

Italy has traditionally merged companies into industrial clusters; this is the case in Emilia Romagna. The organisational structure of these clusters is mainly based on vertically disintegrated supply chains. While leather is sourced from a variety of locations around the world, other raw materials are generally purchased locally. In other regions, however, there are clusters of leather tanning companies which provide quality leather to the footwear industry. Italian enterprises have a strong reliance on partnerships within and between clusters. In Emilia Romagna, clusters are supported by a number of government measures. There have been national incentives to increase the competitiveness of the industry in general, such as Industria 2015, as well as local programmes run through industry associations. SMEs that we interviewed for the study identified a number of advantages of being located in clusters, but these were mostly informal rather than formal partnerships. For example:

- one SME noted that, although many of the companies the SME could have partnered with have unfortunately now disappeared, the remaining local manufacturers have a good relationship and often point out to each other the best sources of raw materials;
- another SME partners with a local training institute; it also has informal links with other footwear companies in the region but has not undertaken any formal partnerships; and
- a third company indicated that there was considerable informal partnering between companies and it made use of personal contacts. It had entered into partnerships with six other companies to develop a joint marketing approach.

Valencia companies are also focused on increasing partnerships within clusters; however, there are no national incentives such as those in Italy. Local organisations within the cluster also play a significant role in encouraging innovation by SMEs. There are two organisations that work with SMEs in the region on research and innovation, as outlined in Box 6.11. These organisations were set up in response to the recognition that the cluster needed to become more innovative, if it was to survive the increase in international competition (see Chapter 4 of this report).

Box 6.11: Support for SME Innovation in the Valencia Cluster

C212 a.i.e. (Calzado, Componentes, Investigación e Innovación)

This is an industry group for technological innovation, set up and funded by footwear companies. It does not undertake R&D itself but provides representation for companies engaged in R&D. Most of its members are companies based within the cluster and its purpose is the promotion and implementation of national, European and international action in the footwear and components industry. One of its key activities was to assist in the founding of the Cluster Calzado Innovación (see below).

Cluster Calzado Innovación

This non-profit association was founded in Elda in 2008 by the regional research centre (INESCOP), the Spanish Federation of the Footwear Industry (FICE) and C212aie. It has a wider stakeholder base than C212 a.i.e. and it undertakes R&D. Its main aim is the development and promotion of the footwear cluster of Elda-Elche, especially through co-operative projects in R&D and innovation.

Source: Interviews in Valencia. May 2011

6.5 Support Mechanisms for SMEs

6.5.1 Availability of Support Mechanisms

A range of support mechanisms are available to SMEs within Emilia-Romagna, Timis and Valencia. These include:

- access to research centres and training institutes;
- export assistance services; and
- promotional campaigns.

6.5.2 Research Centres and Training Institutes

Industrial partnerships both horizontally, between manufacturers and vertically, along the supply chain, are extremely important for SMEs to gain up-to-date knowledge of technologies, trends and design. However, these can be enhanced through partnerships with research centres (see Chapter 4 of this report).

In Valencia, the SMEs we interviewed had worked closely with the regional footwear research centre on research and innovation projects. These projects included both product development (e.g. new soles) and software (design and software). SMEs in Emilia Romagna did not appear to have undertaken such joint projects, but a number had worked with regional training institutes to develop ways to address the lack of skilled staff.

Most manufacturers in Timis are subcontractors, and rely on their mother companies for innovation and technology development. There is, therefore, little scope to work with research centres. Partnerships with training institutes can also bring advantages for SMEs (see Section 5.4.6). Companies in Emilia Romagna and Valencia had benefitted from links with training institutes within the clusters. However, many of the vocational training institutes in Timis have closed; the lack of training institutes limits the potential for partnerships to address the issue of shortage of skilled staff (see Chapter 5).

6.5.3 Export Assistance

In Spain, SMEs can seek funding support for representation industry fairs. Both the Spanish Institute for Foreign Trade (ICEX) and the Valencia Institute of Export (IVEX) provide a 50% contribution to the cost incurred in relation to transport, accommodation and representation fees. These funds are not limited to micro sized companies or SMEs. Although the funds are seen as a valuable means of support, companies that are struggling financially are unlikely to benefit, as they will not be able to finance the remaining 50% of the attendance and exhibition fees. Similar funding support was available to SMEs in Norte, Portugal (see Chapter 3).

Such Government support does not appear to be available in Italy, probably because some of the most important fairs and exhibitions take place in the country, providing easier access for SMEs. However, the industry association (ANCI) does provide marketing support (see Box 6.12).

Box 6.12: Support for Marketing Provided by ANCI

The Italian National Footwear Manufacturers' Association (ANCI) organises annual conferences for member companies to introduce new markets, such as the Russian high-end market and the increasing Chinese and Indian middle class.

ANCI also organises visits to these emerging markets for 30-50 young entrepreneurs, out of a current membership of approximately 180. These market visits are part of a wider educational course that includes four to five seminars.

Source: Interview with ANCI, May 2011

The fact that most Timis companies operate as subcontractors to foreign firms means that they do not export on their own account. Therefore, access to export assistance is not an issue. The Timisoara Chamber of Commerce (TCCIA) does organise regular events for stakeholders from Serbia and Hungary to increase cross-border partnerships, and has lobbied for more support for such activities from the national government. However, this support is only available to member companies and only a small number of footwear SMEs are members, because of the Chamber's membership conditions.

6.5.4 Promotional Campaigns

Industry associations in both Spain and Italy have instigated marketing campaigns to promote locally- manufactured products. The SMEs in Valencia and Emilia Romagna both indicated that these campaigns were valuable in retaining existing markets and accessing new ones.

SMEs in Emilia Romagna considered that the *Made in Italy* label does provide additional assistance to enterprises, as does the industry's representation via the associations at various policy levels. Italian market presence is strongly linked to the dynamism of SMEs, who were able to identify new markets and products and thereby identify niches.

Valencia SMEs rated the strength of the *Made in Spain* label as below that of Italy and above that of Portugal. The label is growing in significance but is lacking the drive of big name designers and appears to remain little-noticed in large department stores.

The footwear industry of Romania is largely unknown to consumers in Europe, as manufacturing is undertaken mainly on behalf of companies from other Member States. It retains only a small presence in the national market.

6.5.5 Potential for Additional Support

The companies we interviewed identified a number of areas where additional support would be welcomed, including:

- easier access to finance;
- simplification of administrative procedures;
- increased support for the use of e-commerce tools;
- protection against counterfeiting;
- succession planning; and
- targeted support for technological development.

The SMEs we interviewed indicated that the invoice gap (between making payments to suppliers and receiving payments from customers) is a significant barrier. They are required to use their own financial resources to pay suppliers, until they receive payment from their buyers. Measures such as encouraging negotiation through clusters to obtain more favourable payment terms could assist manufacturers in overcoming some of the difficulties in relation to the gap in the invoice cycle.

The SMEs interviewed during the case study visits were reluctant to take advantage of EU or regional funding support mechanisms. This was primarily due to the fact that participation in these programmes is seen as bringing a heavy administrative burden which these companies do not have the resources to undertake. Simplification of procedures would, therefore, assist SMEs to take advantage of existing national and EU support mechanisms.

Initiatives, such as the e-commerce project of the Italian Footwear Association, can play a crucial role in encouraging use of internet in commerce and management. This is described in Box 6.13.

Box 6.13: Initiative to Support E-commerce by Footwear SMEs

Many of the smaller footwear manufacturing firms in Italy do not have websites or lack the knowledge to use them efficiently. The National Footwear Manufacturers' Association (ANCI) is therefore developing an e-commerce project that includes an online platform where member companies could sell their products.

Under a common platform, these companies would be able to market themselves and find new customers; at the same time, they would represent the Made in Italy label. ANCI has noted, however, that efforts to standardise last and size measurements could increase buyer confidence and further boost on-line sales.

Source: Interview with ANCI, May 2011

Another area of additional support suggested by SMEs concerned counterfeiting protection. SMEs, along with other footwear companies and organisations, did not feel that patenting their research results is an effective way to protect them, mainly because the results of their research generally constitute minor design developments rather than major technological breakthroughs (see Chapter 4). The SMEs considered that taking action against a counterfeit product is very expensive and it often not worthwhile for a small company. This is because in the increasingly fast-paced fashion sector, by the time action is taken, collections will have changed and the product will no longer be on the market.

In order to maintain the competitiveness of the sector and preserve the skills and knowledge contained in family owned businesses, it could be useful to review the extent to which artisanship in the sector is threatened due to a lack of succession planning. One possible approach would be to develop a succession planning programme, including assessing the skills and management needs, as well as recruitment barriers, to prepare the next generation of family business leaders and manufacturers.

There are a number of incentives at regional, national and EU level for businesses to improve their technological development. However, these funds are not specific to the footwear manufacturing industry. Most small and medium-sized companies decide not to engage in such regional or national support programmes. Programmes targeting the footwear manufacturing industry specifically would be more useful for the further development of the sector. SMEs would also like to see more projects focused on transferring existing technologies in other sectors into the footwear production process.

6.6 Success Factors and Barriers for Supporting SMEs

6.6.1 Success Factors and Transferability

The key success factor for SMEs appears to be the ability to identify a particular niche market in which they can be competitive. For many, but not all, of the companies we interviewed, this involved a ‘high road’ approach of moving to higher price segments, through product restructuring and innovation, together with building brands and restructuring market access. Some companies have been able to identify niches in the lower price brackets, based on reliability, flexibility and speed to market.

This approach is transferable to all SMEs operating independently; as the Timis case-study showed, it is more difficult for companies that rely on subcontracting to larger companies, whether within their own region or through offshoring, to adopt this approach. However, the past experience of Norte, Portugal and the current experience of Brenta, Veneto, show that it is possible (though difficult) to develop own brands alongside sub-contract work.

Identifying such market niches does require an understanding of market trends and developments. This is more difficult for SMEs, who have limited time and financial resources for market tracking. Trade fairs appear to be one of the most significant sources of market intelligence for SMEs, as well as providing sources of potential partners (see below). Access to funding from public support mechanisms for attending trade fairs, which can be found in Valencia and Norte, is therefore a significant contributor to success. The support available in these regions provides a model that could readily be transferred elsewhere in the EU, provided national and regional governments are willing to make funding available and/or assist with accessing EU support mechanisms (where available).

In order to take advantage of market niches, and to undertake the restructuring necessary to enter them, SMEs need to develop effective partnerships. SMEs are less likely than larger firms to have the internal resources available for RDI and training and thus are more reliant on partnerships with research centres and educational institutes. Such partnerships have developed effectively in Valencia and Veneto, and also in Norte and the other Italian case-study regions (see Chapters 4 and 5). Elsewhere, partnerships do not appear to have developed, for example Timis and Southern Portugal (see Chapters 4 and 5).

One reason why regions have been successful appears to be that industry associations are particularly active in promoting partnerships. This factor is less easily transferable; the strength of industry associations, and their ability to engage with SMEs, appears to be a complex mix of history, government support and industry traditions. Nevertheless, research centres and training institutes themselves can actively seek partnerships with SMEs, as the CTC in Rhone-Alpes is seeking to do (see Chapter 4). Such activities would be transferrable to all regions hosting research centres and training institutes.

6.6.2 Barriers and Solutions

Many of the barriers faced by SMEs are common to all sizes of firm within the footwear industry (see Chapter 3). However, the pressures can be greater for SMEs because of their more limited financial resources and expertise and their weaker bargaining position within the supply chain.

One significant pressure faced by SMEs is lack of access to finance, which has been made worse by the economic crisis. Although a range of public support mechanisms has been launched at EU, national and regional level to address this problem, it remains a significant one. There are a number of contributory factors, including lack of awareness of private financial options amongst SMEs and the (real or perceived) bureaucracy involved in accessing public support mechanisms. Where strong industry associations exist, they can play a role in advising SMEs on the availability of both private finance and public support mechanisms. Where there are no such associations, the role could be taken on by regional or local governments. However, the resources available to regional and local governments are severely constrained at present and whether they wish to focus on the footwear sector is influenced by its perceived importance to the economy.

Some barriers are intrinsic to small firms, including the need for succession planning for family firms and limited bargaining power in the supply. Succession planning is a complex issue; it appears to be dependent as much upon internal family dynamics as on the alternative options available to family members. As such, there is limited scope for outside assistance. However, it may be possible to provide access to information on the different approaches available, either through industry associations (where these are active) or regional and local governments.

The weak bargaining position of SMEs in the supply chain is an ongoing problem, leading to pressures to reduce prices and delivery times and increase payment periods

from customers and increased prices from suppliers. In a small number of regions, SMEs have been able to join together to purchase raw materials in bulk, and thus obtain discounts. This is transferable to any area where SMEs already have partnerships with other companies, although there may need to be some initial assistance (e.g. from industry associations or regional/local authorities). In relation to customers, partnerships are more difficult to develop because of competition between SMEs. However, partnerships with research centres, to implement innovative approaches to manage costs and improve efficiency could help SMEs to respond to these pressures. Such an approach, as indicated above, is transferable to any regions hosting research centres.

6.7 Future Trends for Footwear SMEs

As SMEs comprise the majority of firms within the footwear sector, the general trends outlined in Chapters 2, 3, 4 and 5 will apply equally to SMEs. Because of their more limited resources, though, SMEs are likely to be most impacted by changes in market conditions. In Valencia, Timis and Emilia Romagna, the number of footwear SMEs has contracted significantly in recent years due to reduced demand and increased competition. They are also faced by rising costs for raw materials, which SMEs are required to absorb because their sales are often on fairly long-term fixed contracts, whilst their raw materials are purchased on a spot price basis.

The three case studies show that, while SMEs in the footwear industry do face significant challenges, there are strategies that can help to overcome these. Choosing the right market niche, operating flexibly and working closely with the supply chain can help companies to remain profitable. Companies in Valencia and Emilia Romagna have concluded that competing on cost alone is not a viable option long-term. The strategies they have adopted, of focusing on a more ‘high road’ business model, are likely to continue in future. Nevertheless, there may be some lower-cost market niches that companies can continue to exploit. Thus a key trend for SMEs in this region will be monitoring the market and identifying niches that they can fill.

Unfortunately for Timis, the business model adopted by most SMEs means that continued sub-contract work for companies based elsewhere in the EU, particularly Italy, is their only option. This may bring further problems for the region in future, as these companies seek further cost reductions by offshoring their manufacturing to cheaper locations such as China and India. The companies will only survive if they are either, able to reduce costs further through process innovation, or to offer other advantages, such as flexibility, quality and fast response.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Situation of the EU Footwear Industry and Prospects for its Future

7.1.1 Current Situation of the Industry

This study has reviewed developments in key aspects of the footwear industry (restructuring, research and innovation, training and the position of SMEs) through interviews with stakeholders in nine footwear-producing regions in six Member States, as well as an EU-wide survey and a review of the literature.

The EU footwear industry has undergone a period of major restructuring over the past 40 years, in response to significant changes in the international market. This has resulted in a major contraction of the industry, with reductions in numbers of companies, output and employment across the EU. It has followed different routes in different parts of Europe.

Regions in northern Europe (including Rhône-Alpes and Rheinland-Pfalz) began to face increased competitive pressures from the 1970s, which began the process of restructuring. Their industries mainly responded to the crisis by relocation of production to lower-wage economies within the EU, such as Norte in Portugal and Valencia in Spain (which were not members of the EU at this time), secondly to North Africa. In the 1970s, footwear producers in southern Europe (e.g. Lombardia, Veneto, Emilia-Romagna and Valencia) were still competitive in their domestic markets.

Norte and Valencia companies benefitted from this process during the 1980s and 1990s, in the form of foreign investment and increased production capacity and employment. However, they came under increasing competitive pressure from low wage countries outside the EU (such as China) from the early 2000s. Similar pressures were felt by companies in Lombardia, Veneto and Emilia-Romagna. These regions adopted different responses to the pressures. Companies in Veneto and Valencia began to offshore production themselves (to Timis and North Africa respectively), while companies in Norte, Emilia-Romagna and Lombardia focused on improvements to process efficiency and product design and quality, together with improving sales channels.

The remaining companies in northern Europe have focused on upgrading in fashion, quality, speed to market and, hence, the price range of their products. For larger companies, this is often based on spatial division of labour, with design, marketing and logistics managed in their home country while production is offshored around the world, either to factories they own or through outsourcing. There is evidence that companies are beginning to relocate some production back from China to lower-cost economies in eastern Europe, due to cost increases in China and the need to meet demands for fast fashion and increased quality.

Eastern European countries appear to have followed different strategies, depending on the size of their domestic markets. Companies in regions where consumers have relatively limited purchasing power (such as Timis in Romania, together with regions

in Hungary and Bulgaria) have become subcontractors to the major producers in western Europe, particularly companies from Germany and Italy. Companies in countries with a larger domestic market (such as Poland) have remained competitive in their home market through privatisation and improved process efficiency, though at the cost of significant reductions in employment.

The major stages of restructuring appear to be largely complete, and the level of output, the number of firms and employment appear to be stabilising. Most companies we interviewed see their focus in the next few years as consolidating their position in the market. This is one reason why the economic crisis appears to have had a limited effect on restructuring. Nevertheless, footwear companies recognise that restructuring is a continuous process and that they need to continually adapt to changes in the market in order to stay in business.

7.1.2 Key Barriers

It is clear from our case studies that **international competition** has been the key driver of restructuring in the EU across all the case-study regions. Despite process improvements, footwear manufacture remains a highly labour-intensive activity so is always vulnerable to competition from low-wage economies. This process was accelerated by the removal of tariff barriers following the entry of China into the WTO. SMEs comprise the majority of footwear companies within the EU, both in terms of numbers of companies and employment. Because of their more limited resources, SMEs are likely to be most impacted by changes in market conditions.

The competitive pressures faced by the footwear industry in recent years are likely to continue in future. The growing importance of issues such as the environmental aspects of production, new supply chain organisation, the growth of ‘fast fashion’ and a demand for customisation, together with new developments in materials, IT and robotics, may also provide opportunities for the sector. The rising costs for raw materials, which tend to be purchased on a spot price basis, are often required to be absorbed by manufacturers as their sales are often on fairly long-term fixed contracts. These pressures apply to the footwear sector across the EU.

One major issue is a growing barrier of **skill shortages**. The current workforce has a high proportion of older workers and it is proving difficult to attract young people into the industry in all of the countries of the case study regions, despite the impacts of the recession on employment. Innovative approaches will be needed to overcome the perception by young people that footwear is an industry with no future. If this is not successful, it could result in a further round of production relocation and the closure of small firms that are not able to undertake this step. Added to this is the problem of **succession planning in family firms**, where a lack of interest amongst younger generations to take over firms may lead to closure

Access to finance has been identified by enterprises as a particular barrier for SMEs in all case study regions, due to the limited availability of internal resources. They need access to loans not only for expansion and innovation, but to cover cash flow barriers caused by different payment terms for suppliers and customers. This has

become increasingly severe following the financial crisis. The rationalisation of the finance sector, particularly in Spain, Italy and Portugal, has led to the closure of smaller local banks which provided small loans to footwear SMEs (with companies often taking out a number of small loans from different banks). Companies are forced to seek larger loans from the larger banks which have replaced the smaller ones. These are not only more difficult to obtain, they also come with more demanding conditions and higher costs.

Innovation is critically important to the industry across the EU, given the continuing competitive pressures it faces, but there are a number of barriers:

- companies in Norte, Valencia, the various regions in Italy and Rheinland-Pfalz work very closely with research centres, footwear associations and suppliers at regional, national and, in some cases, international EU level. These close partnerships results in the rapid uptake of research and innovation results by companies. Nevertheless, the fact that research centres work mostly with regional and national partners means that there is overlap between the research subjects covered by different institutes and potential duplication of effort; in some cases, competing technologies and approaches have been developed. This is a potential source of inefficiency;
- involving smaller firms in joint projects is more difficult, because of their limited financial and staff resources. Research centres are very conscious of this barrier and are seeking a range of methods to address it. Working with clusters appears to be a useful approach in Valencia, Norte and some Italian regions, such as Lombardia; it improves the efficiency of partnerships for both research centres and companies. However, it is not always effective. For example, the Vigevano region of Italy is considered to have fallen behind other regions in Italy, despite its proximity to two major research centres;
- the increasingly short timescales to which the industry operates across the EU and the tight financial situation means that most technological innovations take the form of incremental improvements rather than major breakthroughs. Protection of intellectual property remains a barrier in all the case-study regions, with the process of registering and defending patents and designs seen as costly and ineffective;
- larger-scale and longer term research projects are more difficult to finance and harder for companies (other than the largest players) to participate in. Although EU funding under the Framework Programmes has helped to develop such projects, stakeholders in all the case-study regions have found the process of bidding for them, and their management, difficult and time consuming. Long-term projects also tend not to deliver results that can be readily adopted by industry. However, such multinational projects do have significant advantages in terms of networking; and
- despite the apparent successes in transferring the results of R&D into marketable products, the research centres all agreed that more needs to be done to ensure the

uptake of innovation by the European footwear industry, to help to ensure its long term competitiveness.

7.1.3 Success Factors

The EU footwear industry has some very significant advantages compared to other producers, especially proximity to one of the largest footwear markets in the world and to the major centres of fashion and design such as Milan, Paris and London. It also has a **well-developed infrastructure**, which includes research and training institutes and a series of well-established regional clusters. Another advantage is access to well developed and innovative suppliers, which offers important support in production of quality footwear. This includes a sophisticated mechanical engineering industry for the footwear sector in Italy and Germany (and a developing industry in Portugal), high quality standards of leather production in Italy and innovative products in the chemical sector (colours, adhesives), including environmentally-friendly products, from Germany.

These factors have helped the remaining EU footwear companies to find ways in which to stay competitive and successful. One of the key characteristics of successful companies, both large and SME, is a ‘high road’ or **higher added-value approach** with a focus on exports (including intra-EU trade) and a move to the higher quality end of the market. Success in higher price brackets requires high quality in both materials and production, together with a high design input and awareness of fashion trends. Some companies have also used innovative marketing approaches, such as online sales and product customisation, to increase their sales. However, many SMEs in particular have still to exploit the potential of e-commerce.

Even in the higher price ranges, it is still important for footwear companies to **manage their costs effectively**. Companies across the case study regions have achieved this through a combination of measures, including ceasing production of non-profitable brands, outsourcing production and use of management software. This has resulted in reductions in employment in the sector, but has ensured that companies can remain in business, with the potential for future growth.

In Norte, several regions in Italy and Valencia, the existence of **industry clusters** has been a significant advantage, particularly for SMEs. It provides a closely integrated local supply chain, often with informal partnerships developed over the years. For example, most outsourcing by companies in Valencia is to other companies within the cluster. Clusters may also receive funding support from national and local government, which SMEs can access. Clusters also provide a driver for innovation, as companies are able to exchange information and ideas, including information on fashion and market trends. The lack of clusters in Southern Poland (which appears to be due to mistrust between companies) and Timis, and the predominance of foreign ownership and subcontracting in Timis, where there is effectively an Italian cluster, means that SMEs in these regions do not have access to such advantages.

Footwear companies also benefit from a number of **financial support mechanisms**. In Valencia and Norte the ones most appreciated, especially by SMEs, are support for

attendance at trade fairs (related to the focus on increasing exports) and the potential for partnerships with regional footwear technology institutes. In most regions, companies have also benefitted from the presence of training institutes and work with them to address the barrier of skill shortages. Neither of these resources is available in Timis.

The **RDI infrastructure** appears to be a particular advantage for EU footwear companies. Our case studies indicated that:

- there are active programmes of research and development under way in all of the regions examined, delivering a wide range of different innovative outcomes covering materials, design, manufacturing processes, customer services and marketing. There are also advantages in terms of marketing, training of staff and the transfer of expertise through exchange of staff between research centres and industry;
- footwear research centres across the EU have different structures and models of financing; the regions in which they are located are also different in terms of industrial structure and support mechanisms. Nevertheless, all of the institutes work very closely with industry partners at regional, national and, in some cases, international level. These close partnerships, from the initial research ideas throughout the projects, ensures that projects are closely focused on industry requirements and results in the rapid uptake of research results by companies; and
- many of the research centres were set up at the request of industry. Usually, industrialists form part of the management structure, advising on the direction of any research. In recent years, the increased competition from Asia has led to more pressure by companies for the research centres to develop products, materials and processes to give them a competitive edge over imports, rather than competing amongst themselves (although this has not yet happened in Southern Poland and Timis). This has tended to strengthen the relationship between industry and the research centres

Together, the case studies show that, while the footwear industry does face significant barriers, there are strategies that can help to overcome these. Choosing the right market niche, operating flexibly and working closely with the supply chain can help companies to remain profitable. Companies in most regions have concluded that competing on cost alone is not a viable option long-term. Unfortunately for Timis, the business model adopted by most companies means this is their only option, which may bring further barriers for the region in future.

7.1.4 Prospects for the Future

The prospects for the future of the EU industry vary between different regions and different types of companies.

In the longer term, the footwear industry in Rheinland-Pfalz and in the Italian regions appears reasonably stable. The model of production being mostly offshored, with high-added-value activities such as design and marketing within the EU, appears set to continue (although this could change if China develops its own capability in fashion and design). Small-scale production is likely to remain in Europe, focusing on niche markets such as luxury fashion, quality safety footwear and footwear designed for people with health problems. Eco-friendly footwear may provide another niche in future.

In Norte, although good progress has been made in moving to the ‘high road’ business model, this process is still ongoing. There is potential for further improvements in efficiency, including upgrading of technology. In Southern Poland, the picture is more mixed. Progress in restructuring has been more variable.

The regions covered by the SME case studies (Valencia, Emilia-Romagna and Timis) are rather different in economic terms. A number of lessons for SMEs in the rest of the EU footwear industry may be learnt from these differences, for example:

- restructuring of regions can be achieved successfully, by focusing on ‘high road’ business strategies, including developing brands and exports (San Mauro, Emilia-Romagna and Elche, Valencia) and by outsourcing some production (from San Mauro to Timis); and
- regions are only successful for a certain period if they do not adapt to market changes (as in the case of Bagnacavallo, Emilia-Romagna and Timis). Timis experienced initial success from the inflow of foreign, particularly Italian, capital taking advantage of the *lohn* system. Companies in Timis remain vulnerable to changes in offshoring policies by their customers, however. This is because they have not yet developed the skills in design and marketing to become more independent. By contrast SMEs in Valencia and Norte have successfully achieved this development.

As a consequence of the pressures they face, SME footwear companies in particular will need to continue to restructure and develop. However, the form may differ depending on the characteristics of the region and/or the type of business model:

- in the more economically-developed regions (such as Rheinland-Pfalz, Rhône-Alpes and the Italian regions, together with Norte and Valencia), this could focus on strategies for the development of brands, higher price segments and exports:
 - for many producers in this type of region this means improving their partnerships outside the sector, with companies such as large retailers, luxury brand companies, sports brand companies and fast fashion labels. This is likely to require modernisation of IT in production planning and order processing, process flexibility, training of skilled labour force, learning the operating approaches of large customers; and

- companies that wish to strengthen their capabilities in exporting will need better information about potential new markets, such as Asia and Russia, and on ways in which to access these markets;
- in other regions, such as Southern Poland and Timis, restructuring may focus on process efficiency, increasing productivity through modern machinery and training of the workforce; and
- in order to reduce or change their dependence on large customers and fluctuations in markets, it may be useful for SMEs to try to recover their home markets. This could be achieved through offering a flexible and rapid response to customer demands, which will require skills in marketing, logistics and distribution.

Table 7.1 summarises the strengths, weaknesses, opportunities and threats for the EU footwear industry in future.

Table 7.1: SWOT Analysis of the EU Footwear Industry	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Restructuring has left the industry resilient, more stable and more efficient • Proximity to one of the major world footwear markets • Closeness to the most influential centres of fashion • Skills and experience in high-quality design and production • Well-developed research and training infrastructure • Established footwear clusters providing mutual support • Well developed and innovative supply infrastructure (including equipment supply, leather and chemicals) 	<ul style="list-style-type: none"> • The industry has shrunk significantly in size, employment and output and is no longer a leading producer • Remains a highly labour-intensive industry in a labour-cost economy so always vulnerable to cost competition • Footwear is part of a highly-developed world market but most companies remain highly dependent on EU markets • Low wages and a history of redundancies make the industry unattractive to younger people
Opportunities	Threats
<ul style="list-style-type: none"> • The markets for quality and fashion footwear appear relatively unaffected by the global recession and provide an attractive opportunity for expansion • Targeting niche markets, which may be too small for large producers, provides opportunities for smaller firms • The trend to fast fashion, a wider range of styles and shorter production runs can be met more easily by local EU firms than importers • Increasing focus by Chinese producers on domestic markets may make switching production back to the EU more attractive • Growing consumer interest in eco-friendly, more sustainable products provides a further potential growth area for EU producers 	<ul style="list-style-type: none"> • Development of fashion capabilities in China could challenge EU producers at the top end of the market • Improved production efficiency and quality in non-EU suppliers could increase competition in future • Continuing recession in Europe threatens local markets and affects the availability of finance • The ageing workforce and failure to attract young people could limit production in the EU • Competition for raw materials, and consequent price rises, could add to the cost burden

7.2 Recommendations: the Way Forward for the EU Footwear Industry

7.2.1 Introduction

The study has highlighted that the EU footwear industry will continue to face a series of barriers in the coming years, including international competition, potential skill shortages, difficulties in accessing finance and the need for further innovation. The aim of this section is to set out ways in which the various stakeholders could assist the industry to address these barriers whilst supporting the strengths of the industry, particularly the well-developed infrastructure and the high level of partnerships between different actors.

We first describe the actions which could help to address each of the key barriers faced by the industry, then summarise the actions that could be taken by each of the main actors; the European Commission, Member State and regional authorities, research centres, training institutes and industry associations.

7.2.2 Actions to Address Barriers

The study findings indicate that the main ways in which the industry can address the challenge of **international competition** are through product innovation (fashion and high quality, plus niche markets) and reorganisation of sales channels. Restructuring should focus on products and sales channels (fashion and high product quality, design, logistics, distribution) rather than on process technology.

- *Initiatives and support to enter new export markets:* industry associations, national and regional governments and training institutes should work together to assist companies to develop new export markets through measures such as providing readily accessible information on export markets (which might cover applicable tariffs, consumer requirements and distributors, technical and regulatory barriers), providing export credit guarantees, training in export management and encouraging SMEs to develop partnerships with existing footwear exporters to take advantage of their partnerships.
- One particularly valuable approach, especially for SMEs, seems to be offering *funding support to attend trade fairs* (including covering part of the costs and providing loans for the remainder for the smallest firms). Such assistance has been successful in Norte, Valencia and the Italian regions, but is either not available, or SMEs are not aware of its availability, in Rhône-Alpes, Rheinland-Pfalz, Southern Poland or Timis. The industry association in Norte has been particularly successful in helping companies to be aware of and take advantage of EU funding to attend international trade fairs. This approach could be transferred to other countries and the EU could draw on the Portuguese experience to promote the assistance it provides.
- An issue for firms in many of the case study areas, but particularly Norte, Emilia Romagna and Southern Poland, was a lack of marketing skills. *Training in marketing and sales*, targeted particularly at SMEs, could help to overcome this

problem. This could best be addressed by training institutes, in conjunction with industry associations, offering specialised short courses. The ISC in Rheinland-Pfalz, for example, offers a range of training courses for marketing and sales staff. Financial support, in the form of low costs, would encourage SMEs to participate. This would need to be provided by regional or national governments, perhaps by helping training institutes and participants to take advantage of the existing EU financial support mechanisms for training;

- *Assistance in branding and accessing niche markets:* branding, high quality and niche markets are ways of moving to higher value positions in the supply chain for footwear companies, and many of them are already taking such steps. Learning from the experience of successful companies could encourage others in the region to take similar steps. This approach has been adopted in Norte, where the industry as a whole has agreed on a strategy of moving to a ‘high road’ approach, with a focus on brand development. Although developing brands is not an easy task, ‘best practice’ seminars organised at regional and national levels, tailored to footwear company needs could help with this process. Such seminars could also cover the development of market research capabilities, to identify potential niche markets.
- *Showcasing the industry’s products and qualities:* for example, APICCAPS exhibits at trade fairs on behalf of the footwear industry in Norte as a whole. Associations could also consider setting up small stores showcasing products at key locations, such as airports or major tourist centres. However, this will depend on the resources available to the associations. In Hauenstein, Rheinland-Pfalz, such initiatives have been taken by individual companies on a profit-making basis; a combination of a discount shoe mall and a shoe museum has created a hub for ‘shoe tourism’. Another approach might be for local authorities to offer unused local buildings for local manufacturers to sell their products from; this is being considered in Rheinland-Pfalz. Most such initiatives are at regional/national level; there may also be scope, though, for EU-wide activity to support cross-border marketing.

The case studies indicate that **skill shortages** may become a critical issue for the sector in the near future. Companies in many of the case study regions mentioned concern about future shortages of skilled labour, due to an ageing workforce and difficulties in attracting young people to the industry. Addressing this issue will require a combination of upgrading training programmes, liaising closely with industry to ensure training is relevant and promotion of the industry to young people.

- *Strong ties between training institutes, manufacturing companies and industry associations* can help foster a mutually beneficial environment, where education and training centres receive feedback from the companies regarding the content of the courses. Training institutes, industry associations and trade unions should work together to encourage partnerships, with SMEs in particular, to develop customised training which could be delivered by the training institutes.

- *Cross border initiatives between education and training centres* could provide a platform for partnerships, knowledge transfer to share best practices and disseminate knowledge. There may also be scope for joint training, such as the proposed partnerships between the ISC in Pirmasens and Bata School in the Czech Republic. There could be a role for the Commission in encouraging *exchange of experience in training and recruitment* between countries and regions.
- Existing *funding mechanisms for training* should be evaluated by their deliverers to make sure the training support is properly targeted at the training needs of the sector, especially SMEs. This should address the current mismatch between the focus of students on design and the industry's needs for operational and engineering skills. Aligning local supply and demand for skills by directing increased public investments and strengthening local training institutes in areas of increased skill demand can lead to a better understanding of long-term local industry needs.
- One innovative approach to *promotion of the industry to young people*, which could be transferred to other regions, is the Rheinland-Pfalz 'Step up Shoes' campaign. This campaign has been developed by the local employment agency and industry representatives (see Box 5.8 in Chapter 5) to address the difficulty experienced by local companies in recruiting suitably skilled staff. This has proved successful (resulting in an increase in the number of young people taking up vocational training places by 20 from 2010 to 2011) and is being transferred to other regions in Germany. The fact that jobs will be available for young people at the end of their training is, of course, a key factor in its success.
- Supporting companies in mapping out clear progression routes to higher level skills for young workers and *providing advice on recruitment and HR management techniques* can further support the involvement of young workers.

The barrier of access to funding encompasses both access to private loan and investment finance and access to EU and national/regional public support mechanisms. **Access to private finance**, for investment and to address cash-flow problems, has been a particular problem for footwear SMEs since the economic crisis. This is a general problem for SMEs across economic sectors, and national and regional governments have introduced a number of measures to encourage banks to lend to SMEs. We do not consider that it would be feasible to introduce additional such measures specifically targeted at the footwear sector, particularly as the sector lacks a critical mass in many Member States (for example, companies and the industry association in Rheinland-Pfalz indicated that the industry had little political influence in Germany due to its small size compared to other manufacturing sectors). In contrast, the sector has much more political influence in Portugal, because of its role as a major exporter. However:

- National and regional governments should *ensure that footwear companies are eligible* for policies aimed at encouraging bank lending to SMEs.

- To improve communication on the prospects for and financing needs of the industry, it might be helpful for industry associations to *invite representatives of banks to participate* in their regular activities (such as conferences and seminars with their members), or to *make presentations on the footwear industry* to conferences and seminars organised by banking organisations.
- Industry associations, national and regional government could also assist SMEs in particular by providing *information on different options for financing* the purchase of new equipment, e.g. through leasing.
- SMEs could also be encouraged by industry associations or regional governments to *negotiate with suppliers through clusters*, to obtain better payment terms and cheaper prices.

Access to **public funding support mechanisms**, including mechanisms to support RDI, has also proved problematic for the sector

- *Providing better information on available funding support mechanisms:* national/regional authorities and industry associations could assist companies to access EU funding mechanisms better, through providing guidance on what mechanisms are available, what types of activities can be supported by these mechanisms and how to access the different initiatives and programmes at the EU, regional and national level. For example, DG Enterprise is currently developing a guide for the tourism industry on EU funding mechanisms which could be used to support tourism-related activities.
- *Reduce the administrative burden on accessing funding:* Funding applications and access to EU and national government support mechanisms should be further simplified. Mechanisms offering funding support to the footwear industry, such as those supporting innovation, should be encouraged to examine the potential for reducing administrative requirements for smaller funding requests and to provide categories of funding specifically targeted at footwear SMEs.

RDI is critical to the future of the sector. Measure to support RDI, and its translation into marketable products, include:

- *R&D should continue to focus on the full range of issues of concern to the industry* and ensure through close cooperation with industry that it addresses significant future issues for the industry. This includes not only innovation in materials and production processes, but also in customer services and marketing. For example, INESCOP's initiative to set up a model shop, to familiarise retailers with new technology available for customisation, will help ensure that innovation can result in improved sales. Addressing the industry's limited current use of e-commerce would also be a valuable innovation.

- Joint projects with industry are likely by definition to be of relatively short timescale and incremental. *The EU should continue to focus its funding, therefore, on more ambitious projects which are further from the market.* However, the research centres expressed concern about the time and resources required to submit applications for and to manage the large-scale projects which are the main focus of EU support. The Commission could consider *providing support for smaller-scale but still ambitious projects*, for example, by dividing the current large projects into separate steps and involving fewer partners in each step, as well as considering whether administrative requirements could be simplified.
- There remains a gap between the outputs of the more ambitious and longer-term projects funded by the EU and the practical needs of companies. To meet this gap, there should be a requirement on project participants to develop methods for *effective dissemination of results*, not only through publication but through active engagement with companies in the sector. In Norte, the research centre has found that practical implementation of the outputs of research projects can be developed into practical outputs initially with larger firms (who have the resources to undertake this work) and then cascaded down to smaller firms through demonstration projects. National/regional governments could be *encouraged to direct their RDI funding to this step.*
- Research centres need to *continue to work closely with industry* at regional and national level. Partnerships with industry are vital in ensuring that R&D is targeted at the specific needs of enterprises in the sector, thus increasing the likelihood that the outputs of R&D will be taken up by industry.
- Research centres need to place a *particular focus on communication and partnerships with SMEs*; approaches such as working with clusters and developing personal contacts could be explored further. Most SMEs are not interested in long term research projects because they do not have the absorptive capacity (in terms of resources in human capital and finance) and have limited scope for long-term planning. There are exceptions, however, where SMEs have focused on particular product niches which depend on longer-term innovation (for example the equipment manufacturer in Norte). As a result, partnerships with SMEs require different modes of communication and co-operation than those with large companies. In order to attract SMEs' attention to these research centres, tangible benefits (for example, free advice sessions or brief consultancy visits) could be offered in the short term. At the same time, industry participants need to give guidance and set the direction throughout research projects in order for the outcome to be relevant, applicable and successful
- One way to ensure this would be the development of "*Centres of Excellence*", bringing together research centres, industry, policy makers and universities to innovate and share resources. These would not be separate institutions, but would involve closer partnerships between existing institutions. Examples include the forum in Rheinland-Pfalz and the partnerships between the training institutes and research centre in Pirmasens. One option might be to develop a common web portal through which companies could access a range of information relevant to

RDI (e.g. ongoing projects, funding support mechanisms etc). Another could be to hold regional seminars bringing together all the parties with an interest in RDI, with the aim of improving partnerships.

- Although the research centres we interviewed are aware of each others' activities, and have worked together, there appears to be significant overlap and duplication in their work. To some degree, this may be inevitable, given their regional/national focus. However, the Commission could encourage *greater exchange of experience* by setting up an expert group or by promoting activities such as the European Footwear Products and Processes Technology Platform, which aims to establish a European Know How Pool between industry, research organizations, and other stakeholders.
- *Innovation training:* footwear companies, in particular SMEs, may not fully understand how current and emerging technologies and their applications are relevant to their business. One option to address this issue is to incorporate innovation into training programmes. This could include both a focus on innovation in existing training programmes and the operation of short courses for footwear company owners and managers, organised through industry associations and research centres. The effect could be enhanced through "train the trainers" programmes, so that the knowledge gained could be cascaded to other employees. This could also help to address the gap between the outputs of research projects and marketable products, by making SMEs more aware of how RDI could assist their businesses.
- *Easily accessible advice and support tools:* industry associations and research centres should work with SMEs in particular to develop their capability in e-commerce. Both SMEs and footwear related organisations emphasised the need for online support tools and digital media to access suppliers, agents, customers and generally to promote their brand and products. It could also assist companies to develop market research capabilities to identify niches for future product innovation. This would help companies in remote areas to get support when required, as well as making the most out of partnership opportunities to access knowledge and expertise Europe-wide.
- *Support for protection of innovations:* many companies we spoke to considered that the process of protecting designs and innovations was too costly, too slow and too difficult to enforce. In the absence of reform of the EU patent system, industry associations, research centres, national and regional governments should examine mechanisms to provide administrative and funding support for companies who want apply for footwear patents.

A number of actions could be taken to strengthen the **infrastructure** supporting the industry. Our case studies indicate that there is not yet a common EU market for footwear, but a series of regional markets. We believe that there is scope for the EU to encourage closer linkages between these different markets.

- The role of *industry organisations* in assisting companies with the process of restructuring has been noted as a key success factor. Some association, such as APICCAPS in Norte, appear to have taken a strong, proactive role. Others have been less successful. This is partly a function of the requirements of the industry; whilst companies in Norte and Veneto appear keen to work closely together, competition remains the norm in Southern Poland and, until the 2010s, in Rheinland-Pfalz. There may be a role for both the European Commission and European industry associations in fostering closer partnerships and exchanges of best practice between national associations.
- Industry associations, national and regional governments should provide support for the *development and enhancement of innovation-focused footwear industry clusters*, including ‘virtual’ clusters for companies, especially SMEs, located separately from the main industry locations. This could be achieved, for example, by providing an online platform where SMEs could exchange problems and opportunities, and access advice and assistance. This will encourage information exchange and provide a network for outsourcing and local supply to enhance efficiency;
- *Succession planning for family firms* could be assisted by the development of information platforms designed to bring together firms with potential investors and buyers. In some regions (but not those covered by our study) industry associations already take the role of bringing together firms and potential investors. Regional governments could also consider mechanisms to provide risk capital to help with the funding of management buy-outs of such firms, while training institutes could also provide management training to footwear students and encourage them to take on management of businesses.
- The case studies indicate that there is a trend towards relocating production back from China in particular to lower-cost locations in eastern Europe. At the same time, manufacturing companies in eastern Europe are seeking work. However, our interviews indicate the two groups are not always aware of each other and that industry associations and the specialist press, the usual channels for assisting this process, are not working effectively. There may be scope for the Commission to work with industry associations to examine the potential to *develop a more effective platform for producers and potential subcontractors to get into contact with each other* to help address this barrier.

7.2.3 Summary of Recommendations

Table 7.2 summarises the recommendations of the study, identifying the stakeholders that could contribute to the actions.

Barrier	Solution	Recommendation	Delivery Partner
Increased international competition	Develop new export markets	Raise awareness of accessible information on export markets (including tariffs, customer requirements, distribution structure), for example the DG Trade Market Access Database	European Commission, Industry associations, national and regional governments
		Provide export credit guarantees	National and regional governments
		Provide funding support to SMEs to attend trade fairs to regions where it is not already available and ensure SMEs are aware of the availability of support	National and regional governments, industry associations
		Provide training in export management	Industry associations, education institutes
		Encourage SMEs to work with existing exporters to take advantage of their partnerships	Industry associations, regional governments
	New marketing approaches	Provide training in marketing and sales	Industry associations, education institutes
		Showcase the industry's products and qualities at key locations	Industry associations, national and regional governments
	Strengthen brand identity	Provide assistance in market research, branding and accessing niche markets through 'best practice' seminars	National governments, industry associations
	Skill shortages	Improved staff training	Encourage partnerships between industry and training institutes to customise training to local needs
Encourage cross-border initiatives between training and educational institutes to exchange experience			European Commission, training institutes
Evaluate funding mechanisms for training to ensure support is properly targeted at industry needs			National and regional governments
Promotion of the industry to young people		Develop promotional campaigns aimed at young people, focusing on opportunities within the industry	Training institutes, industry associations, national and regional governments
		Provide advice on recruitment and HR management techniques	Training institutes, industry associations

Table 7.2: Study Recommendations for Additional Support to Footwear Sector

Barrier	Solution	Recommendation	Delivery Partner
Access to private sector finance	Provide advice on finance for SMEs	Provide information on mechanisms to finance new equipment purchase, e.g. leasing	Industry associations, national and regional governments
		Improve communication with banks, e.g. through inviting bank representatives to industry activities	Industry associations
		Encourage SMEs to negotiate with suppliers through clusters	Industry associations, national and regional governments
Access to public funding support mechanisms	Improve targeting of, and access to, public funding	Provide better information on available funding support mechanisms	Industry associations, national and regional governments
		Reduce the administrative burden on accessing funding	European Commission, national and regional governments
The need for innovation	Focus R&D to cover the full scope of industry needs	Ensure research centre activities address the significant future issues, including innovation in customer service and marketing	Research centres, industry associations
		Continue to focus EU funding on more ambitious projects, which are unlikely to receive funding from other sources	European Commission
		Require EU-funded projects to develop methods for effective dissemination of results	European Commission
	Ensure effective partnerships between stakeholders	Focus on communication and partnerships with SMEs. This requires a different approach to that adopted for large firms.	Research centres, industry associations
		Consider developing virtual ‘Centres of Excellence’ to encourage closer cooperation between existing researcher centres, educational institutes, industry and policy-makers	Research centres, national and regional governments, education institutes, industry associations
		Encourage greater cross-border exchange of experience between research centres	European Commission
	Facilitate participation in RDI, especially by SMEs	Develop innovation training, especially for SMEs, through modifying existing training programmes and providing new short courses	Industry associations, research centres
		Provide easily accessible advice and online support tools to assist companies to take advantage of e-commerce opportunities	Industry associations, research centres
	Support protection of innovations	Provide advice and administrative support for companies wishing to apply for patents	Industry associations, research centres, national and regional governments

Table 7.2: Study Recommendations for Additional Support to Footwear Sector

Barrier	Solution	Recommendation	Delivery Partner
Variations in support infrastructure	Strengthen infrastructure	Encourage a proactive role by industry associations	Industry associations, national and regional governments
		Consider the development of ‘virtual clusters’, in the form of online platforms to exchange information, for isolated companies, especially SMEs	Industry associations, national and regional governments
	Assist succession planning for family firms	Develop information platforms to bring together family firms lacking succession planning and potential buyers/partners	National and regional governments, industry associations
		Provide risk capital to support staff buy-outs of family firms	National and regional governments
		Train footwear students in management techniques and encourage them to take on businesses	Education institutes
	Assist firms to move production back to the EU	Consider developing a more effective platform to bring producers and potential EU subcontractors together	European Commission, national and regional governments, industry associations

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