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COMMISSION STAFF WORKING PAPER

**Economic and Competitiveness analysis of the European textile and Clothing Sector
in support of the Communication**

“The future of the textiles and clothing sector in the enlarged Europe”

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1. EXECUTIVE SUMMARY

This document examines the competitiveness of the European textile and clothing (T/C) industry. The concept of competitiveness used is a broad one based on a variety of indicators of industry performance and of its underlying determinants as it is clearly impossible to isolate a few indicators that can characterise the competitiveness of an industry adequately.

On the basis of developments in productivity, labour costs, quality of products, and international trade performance, it can be said that the European T/C industry remains competitive internationally and has improved its position vis-à-vis the US.

A special section examines the consequences of enlargement. The analysis shows that these countries are very dependent on the textile and clothing industry in terms of value added and employment. The existence of a huge productivity gap poses major challenges to the policy makers in Europe.

The salient features of this paper are the following:

Economic Structure and Competitiveness

- The EU T/C sector is an important part of European manufacturing industry with a turnover of € 200 billion produced in roughly 177.000 enterprises employing more than 2 million people.
- The share of textile and clothing in total manufacturing value added at EU level amounts to roughly 4%, the share of total manufacturing employment around 7%.
- The textile and clothing industry is concentrated in the 5 most populated countries of the EU, which account for about three quarters of EU production of textiles and clothing, i.e. Italy, the UK, France and Germany, followed by Spain.
- As regards specialisation, Portugal, Greece, Italy, Spain and Belgium can be considered as relatively more specialised in T/C. The share of their T/C value added in the total manufacturing value added is higher than the aggregate EU figure of 4%. Their share in total industrial employment is higher than the corresponding EU figure of 7%.
- As regards the two sub-sectors (textiles and clothing), southern countries such as Italy, Greece, Portugal, and, to a lesser extent, Spain and France contribute relatively more to total clothing production while northern countries such as the UK, Germany, Belgium, the Netherlands, Austria and Sweden contribute relatively more to textile production.
- Labour productivity is significantly below productivity for manufacturing as a whole, i.e. at EU-level it is on average around 50%. Personnel costs are also lower, though not fully compensating for the lower productivity, which leads to a level of personnel costs per unit of value added that is higher than in total manufacturing. When comparing the sub-sectors, textile production presents a

much higher productivity than clothing, as more advanced technologies can be used more extensively in a capital-intensive industry.

- The distribution of investment across the EU corresponds well to the respective size of the Member States, with Portugal being an exception ranking relatively high. Smaller countries like Ireland, Portugal, Belgium and Greece have invested a higher share of their value added since 1995. As regards investment per person employed, Belgium, the Netherlands and Austria have invested most following their policy of investing in high productivity processes for specialised markets. Textile producing countries generally perform better than those with a high proportion of clothing production.
- The analysis of the size distribution shows that the EU T/C sector is predominantly an SME-based industry. Enterprises of less than 50 employees employ 60% of the workforce in the EU clothing sub-sector and produce almost 50% of value added.
- As regards the external T/C trade performance, more than 20% (23% in the case of textiles) of EU production in value is sold on the external market despite limited access to third markets due to tariff and non tariff barriers encountered by EU industry. This high figure reveals a high export potential and explains the insistence of the EU industry on the need for a trade policy geared towards the opening of external markets. The comparison with manufacturing as a whole clearly indicates that external markets are of higher importance for textiles and clothing than for the rest of EU industry.
- Equally, average import penetration is significantly higher than for manufacturing as a whole, especially in clothing (41% in value) where the EU industry has experienced serious difficulties in competing with foreign operators working with lower labour costs and less stringent social and environmental regulations. Furthermore, there is a strong correlation between the level of concentration of the T/C retail industry and the level of imports in the different Member States, as strong retailers have the financial and management capacity to organise their sourcing on the global market.
- The information relating to individual Member States is more difficult to interpret. The northern countries are known to have diversified their T/C businesses more towards niche markets. As they are, therefore, able to sell equally on the internal and the external market, they are more trade oriented. Southern countries, which are still more concentrated in clothing (mass) production, sell an important part of their production on the EU market.
- An analysis of “quality competitiveness”, which is particularly important in the context of textiles and clothing, shows that in a comparison of export and import values for a range of relatively homogeneous products European products generally have a positive quality mark-up. For apparel fabrics and garments, the quality premium of EU products is even substantially higher than 100%. This analysis emphasises the strategic importance of increased market access to emerging economies where a middle class is growing and forming a growing quality conscious market, where the EU has the highest competitive advantages.

Competitiveness developments

- As regards the development of competitiveness since 1995, in which the WTO Agreement on Textiles and Clothing (ATC) was signed, marking the beginning of a 10-year phase-out of the import quotas for all WTO Member States, the analysis illustrates that a substantial adjustment process has taken place in the EU, in both textiles and clothing. The sector has been adopting new technologies at a fast pace, both with regard to information and communication technologies and new production techniques for processing of multisectoral applications/products and for protecting the environment (e.g. concerning hazardous materials) or the consumer (e.g. labelling requirements). Equally, the EU industry has a leading role in the development of new products, such as technical textiles.
- During the period 1995-2000 (which was chosen in order to compare with the US for which data was only available up to 2000), a substantial increase in labour productivity has been achieved on both sides of the Atlantic, showing among others the outsourcing of more labour-intensive operations.
- In Europe value added increased slightly, while employment went down by more than 2.6% per year. This development is true for both textiles and clothing, whereas it is in contrast to the development in total manufacturing, where a more expansionist strategy in terms of value added took place with employment levels being maintained.
- In the US the adjustment process was much more radical. During the years following 1995, the US industry was not able to maintain production, and value added decreased by an average of approximately 2.5% per year. This led to major layoffs in the sector with an average negative change more than double the EU average (-5.4% per year). The number of layoffs was so high in the US that the growth in labour productivity was higher than in the EU.
- As regards investment during the period 1995-2000, investment in constant prices declined on average by 1.2% per year in Europe, and by 5.6% per year in the US. If, however, investment is corrected by declining employment figures, a positive trend can be noticed in Europe while in the US investment per person employed declined slightly.
- Although care is required when interpreting the data and comparing different regions, it appears that the restructuring process was less destructive in the EU than the US. This may indicate that in the European Union industry has adapted more in a more timely manner, and has been better able to diversify production and expand towards new areas, whereas in the US the impact of liberalisation was felt harder in the second half of the 1990s and adaptation has been more focused on reduction of capacities.
- The conclusion that, in comparison with the US, the EU T/C industry has shown a much better development, seems to be supported by data showing a higher import penetration in the US, which seems to indicate that the US industry is much less able to respond to the needs articulated by the consumers on its home market. Also, some core trade data show that the EU industry is better able to compete on third markets.

- A comparison of two sets of EU figures, 1995-2000 and 1995-2002, shows that 2001 and 2002 were very difficult years for the T/C industry with major declines in production and employment.
- As regards recent developments in the different Member States, in many of them changes took place as described for the EU as a whole. Labour productivity rose substantially, value added remained quite stable while employment declined, leading to productivity increases. Portugal and Italy are typical representatives of this pattern. As an example of a more positive development process, the Greek T/C industry achieved a substantial positive growth in value added of 2.5% during the period 1995-2002, with textiles contributing even more than clothing. At the other end of the spectrum, there are the countries where industry neither achieved positive growth rates in value added nor productivity gains above average despite a reduction in employment that ranks among the highest in Europe, e.g. France, Germany and Austria.
- As regards the development of trade, the trend in EU exports shows that despite the difficult market access conditions, the EU industry has been performing very well on external markets with a growth rate of around 35% of extra-EU exports since 1995. In absolute terms, the textiles sub-sector has led most of this growth. In relative terms, however, the clothing sector has performed even better with a growth rate of 50%, at least partially derived from the adjustments that the industry has experienced in the last decade in order to face the dramatic change in the competition situation. In contrast with the evolution on the export side, the substantial growth of imports is mainly due to the clothing sub-sector (both in absolute and relative terms).
- While the growth in clothing imports is partly caused by outsourcing of labour-intensive EU clothing production to neighbouring countries, a lot of this import growth is a result of the liberalisation process following the signature of the WTO Agreement on Textiles and Clothing. China, India, Pakistan, Indonesia, Bangladesh and, to a lesser extent, Sri Lanka, Vietnam and Cambodia have been the main winners of the opening of the EU market. China's accession to the WTO has, however, significantly modified the market trend as all the above countries, except Pakistan, have since then experienced a drop in or sudden stagnation of their T/C exports. This evolution most likely anticipates the post-2005 increased concentration of EU imports in the hands of Chinese exporters, which are already today both the most competitive and the most constrained in accessing the EU market.
- A comparison of trade performance with the US and Japan based on the Revealed Comparative Advantage shows that in both textiles and clothing, the EU has a better competitive position than the US or Japan.
- As to the evolution of quality positioning of the EU industry on world markets it is shown that the EU has improved its quality position.

The new dimension of the T&C industry in the enlarged Europe

- In the Acceding and Candidate countries, textiles and clothing have traditionally been a major sector of manufacturing industry. In relation to the EU15, however, these countries only produce less than 10% of the EU15 value added while employing in T/C 60% of EU employment.
- Within these 12 countries, roughly three quarters of T/C production is located in the large countries Poland, Romania, the Czech Republic and Hungary. Furthermore, a major challenge will be posed by the accession of Romania and Bulgaria. Those two countries alone contribute to roughly half of the T/C employment in the twelve Acceding and Candidate countries. Lithuania and Slovakia also contribute proportionally more to employment than to value added.
- In terms of specialisation in T/C in relation to total manufacturing within each country, in all Acceding and Candidate countries the T/C industry is more important than the EU15 average. This is true not only in terms of value added but also particularly in terms of employment.
- A big productivity gap in the sector exists between the EU15 on the one hand and the Acceding and Candidate countries on the other. Only the Maltese labour productivity is comparable to average labour productivity in the EU15; all others rank very much below this reference value. It must be noted, however, that until now the sector in the Acceding and Candidate countries was at least partially able to compensate for low productivity with relatively low labour costs.
- A high level of economic integration between the Acceding and Candidate countries and the European Union in the T/C sector has already been established. Almost 90% of Extra-C12 exports in T/C stay within the EU27 and more than 75% of total C12 imports come from the EU27. While this high level of integration shows that businesses have already anticipated enlargement in their business strategies, it also indicates a high vulnerability of the C12 economies to the changes ahead in the international trade regime, i. e. the dismantling of quotas in 2005.
- Strong competitive pressure can be expected on those C12 exports to the EU market which fall under quotas that are still to be liberalised. To the extent that these exports will be crowded out by products from Asia and other strong competitors, this is likely to lead to structural problems in the C12 economies.
- In addition, when looking at the competitive position of the Acceding and Candidate countries from the import perspective, vulnerability to the changes ahead can be concluded, as import penetration from Extra-E27 in Acceding and Candidate countries at around 20% is still rather low compared with the average value for the EU.
- After enlargement it is likely that competitive pressure will increase. This will be due to the growing importance of sourcing decisions by a highly concentrated multinational distribution sector, the fact that labour cost advantages will erode in the medium term following enlargement, and the fact

that after accession to the European Union and after 2005 the new Member States will have neither tariff nor quota protection.

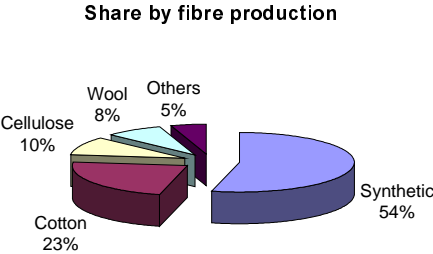
- The T/C sector in the Acceding and Candidate countries will face major structural challenges.

2. ECONOMIC STRUCTURE AND COMPETITIVENESS

2.1. Definition and Scope

- The “textile and clothing (T/C) sector” is a diverse and heterogeneous industry, which covers a very wide variety of products from hi-tech synthetic yarns to wool fabrics, from cotton bed linen to industrial filters or from nappies to “haute couture”. This diversity in end products corresponds to a multitude of industrial processes, enterprises or market structures. In this context of heterogeneity, a variety of classifications within the sector would be possible.
- One could classify the sector according to the industrial activities related to the production and transformation of different fibres, i.e. synthetic, cotton, cellulose, wool and others. According to this grouping, the sector would be structured as follows (shares based on volumes produced):

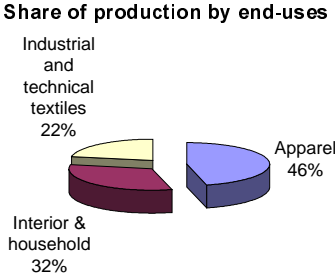
Graph 1



Source: CIRFS

Another possibility for presenting the scope of the sector would be a market-based approach whereby the sector would be divided into end-use sub-groups, i.e. apparel, interior and household, and industrial and technical textiles. With such a classification the sector would be structured as follows (*share based on volume produced*):

Graph 2



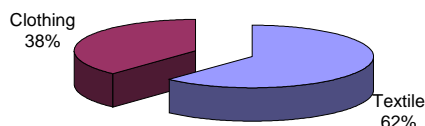
Source: CIRFS

- The classification for which the widest statistical data are available, and the one that will therefore be used in the present report, is based on industrial activities as defined by Eurostat in the NACE. In this classification, the sector is divided into two groups:

- The manufacture of textiles which includes (1) preparation and spinning of textile fibres (cotton, wool, worsted type fibres, flax, silk and synthetic and artificial filament yarns, other), (2) weaving (for the same fibres), (3) finishing of textiles, (4) manufacture of made-up textile articles, (5) manufacture of other textiles (including carpets), (6) manufacture of knitted and crocheted fabrics, (7) manufacture of knitted and crocheted articles.
- The manufacture of wearing apparel, and dressing and dyeing of fur, which includes (1) manufacture of leather clothes, (2) manufacture of other wearing apparel and accessories, (3) manufacture of work wear, (4) manufacture of other outerwear, (5) manufacture of underwear, (6) manufacture of other wearing apparel and accessories, (7) dressing and dyeing of fur, (8) manufacture of articles of fur.
- The sector so defined would be structured as follows (based on the value added in 2002):

Graph 3

Share of production by industry



2.2. General overview of the textile and clothing industry

- The EU textile and clothing (T/C) sector is an important part of European manufacturing industry. Table 1 shows that in 2002 the sector produced an overall turnover in Europe of more than € 200 billion in 177.000 enterprises. Unless specified otherwise, the figures are in principle based on Eurostat Structural Business Statistics, where all enterprises are included. (Textiles are defined as NACE Rev1, DB17 and Clothing as NACE Rev1, DB18. Further statistical and methodological notes are presented at the end of the analysis.)
- In 2002, T/C enterprises in Europe employed more than 2 million people and spent almost € 41 billion on total personnel costs, which include social security levies. Almost half of this employment is generated by the clothing industry and by comparison with value added it can be noted that the clothing sector is much more labour-intensive than the textile sector.
- Consequently, labour productivity (value added per employee) is much lower in clothing than in the textile sector: one person produces roughly €33.000 in textiles per year and only €22.000 in clothing. However, personnel costs per employee are also lower in clothing: whereas in textiles personnel costs per person amount to € 22.500, in clothing it is only € 16.500.

Table 1: Core data on the European Textile and Clothing industry in 2002

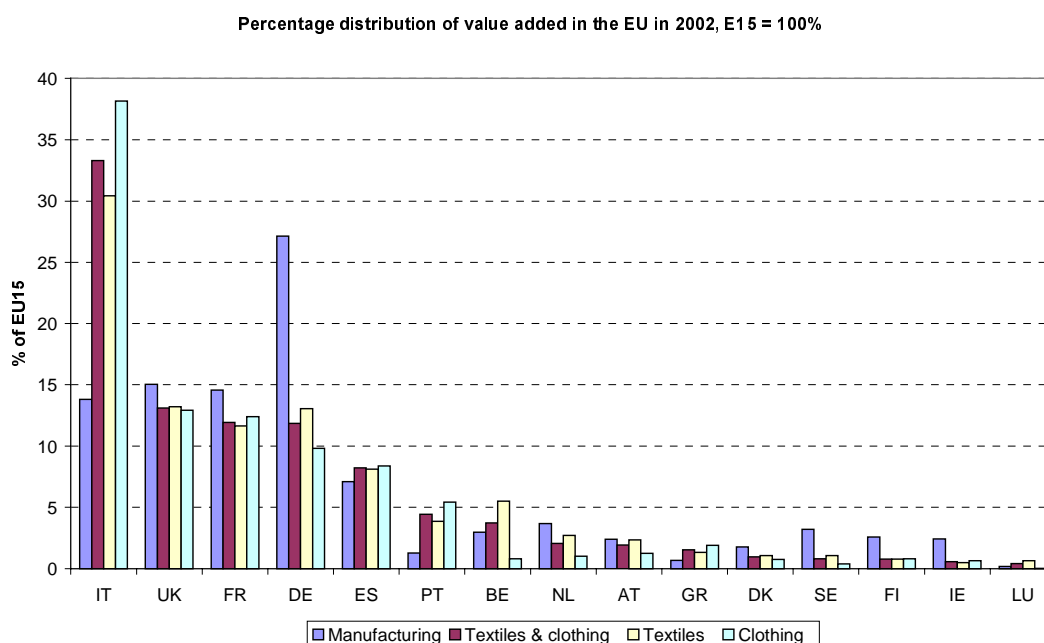
	E15	FR	NL	DE	IT	UK	IE	DK	GR	PT	ES	BE	LU	SE	FI	AT
Number of enterprises (in thousands)																
Manuf.	1,834	219	43	222	600	157	5	20	25	80	240	38	1	54	27	25
T/C	177	16	3	9	72	10		1	3	14	25	3		3	2	2
Textiles	70	5	1	4	28	5			1	4	10	1		2	1	1
Clothing	107	10	2	5	44	5			2	9	15	1		1	1	1
Turnover or gross premiums written (in million of €)																
Manuf.	5,485,080	909,471	217,086	1,419,685	859,567	726,418	104,615	77,226	30,697	69,727	409,666	178,801	8,381	161,197	130,885	111,931
T/C	203,683	26,121	3,879	23,326	78,303	20,198	856	1,750	2,271	7,985	15,275	9,096	597	1,430	1,216	3,397
Textiles	115,600	15,552	3,221	14,341	36,712	12,739	493	1,177	1,226	4,321	9,384	7,196	593	1,117	678	2,528
Clothing	88,083	10,569	658	8,984	41,591	7,458	363	572	1,045	3,664	5,891	1,900	4	314	538	869
Value added at factor cost (in million of €)																
Manuf.	1,494,306	217,793	54,981	405,410	206,326	224,843	36,003	26,309	9,919	18,970	105,823	44,544	2,475	47,738	38,646	35,558
T/C	56,761	6,767	1,173	6,718	18,907	7,440	312	539	871	2,516	4,658	2,118	227	456	448	1,096
Textiles	35,517	4,130	961	4,633	10,801	4,697	174	377	468	1,366	2,880	1,949	225	377	279	834
Clothing	21,244	2,636	212	2,085	8,106	2,743	137	162	404	1,150	1,778	169	2	79	169	262
Number of persons employed (in thousands)																
Manuf.	28,660	3,884	863	7,194	4,801	3,794	253	468	298	958	2,651	655	33	791	440	618
T/C	2,072	196	26	177	613	198	10	12	42	227	237	52	1	14	12	27
Textiles	1,092	109	19	116	312	120	6	8	18	96	113	42	1	11	6	18
Clothing	980	87	6	62	301	77	3	4	24	131	124	10		3	6	9
Personnel cost (in million of €)																
Manuf.	967,893	153,471	30,010	308,470	122,867	133,206	8,150	17,586	5,436	11,063	65,353	26,358	1,521	30,885	18,652	23,803
T/C	40,748	5,922	769	5,195	12,390	4,873	208	379	562	1,878	3,679	1,414	81	357	333	829
Textiles	24,622	3,299	634	3,546	6,973	3,230	121	267	278	907	2,056	1,233	79	294	183	615
Clothing	16,126	2,624	135	1,649	5,417	1,642	87	112	284	971	1,623	181	1	63	150	214
Gross investment (in million of €)																
T/C	5,034	602	155	744	1,579	385	31	41	137	431	429	289		35	45	131
Textiles	3,509	447	141	612	842	267	24	18	93	321	324	255		32	36	97
Clothing	1,525	155	14	132	737	118	7	22	45	110	105	34		3	9	34
Extra-EU Exports (in million of €)																
Manuf.	934,238	124,399	49,135	285,137	117,736	115,629	31,050	16,474	4,894	4,964	33,574	59,181	1,535	38,262	21,467	30,804
T/C	43,047	5,444	1,824	9,638	13,	3,670	210	828	601	801	2,130	2,134	121	613	316	1,270
Textiles	26,862	3,073	1,554	7,111	6,593	2,338	113	423	223	532	1,310	1,912	116	432	198	936
Clothing	16,185	2,372	270	2,527	6,854	1,332	97	405	379	269	820	222	4	182	118	335
Extra-EU Imports (in million of €)																
Manuf.	916,728	111,345	97,650	220,251	103,987	161,978	17,821	12,336	14,659	7,849	49,468	56,154	2,948	22,229	12,341	25,713
T/C	69,207	8,607	4,647	18,282	9,401	13,977	446	1,691	585	456	3,521	4,143	98	1,585	499	1,268
Textiles	18,922	1,770	1,056	4,409	3,690	3,071	116	315	396	386	1,243	1,394	48	403	141	483
Clothing	50,285	6,837	3,591	13,873	5,711	10,906	330	1,376	189	70	2,278	2,749	50	1,182	358	785

- The personnel costs per unit produced (total personnel costs per value added), which is a core indicator of competitiveness, can then be calculated as 0.69 (or 69%) in textiles and 0.76 (or 76%) in clothing. This means that personnel costs per person in relation to labour productivity are higher in clothing than in textiles, indicating a better labour related cost competitiveness of textiles than clothing.
- Gross investment amounted to roughly € 5 billion in 2002, which is approximately 9% of value added. Again, almost 70% of this investment goes to textiles and only roughly 30% to the clothing sub-sector. It is, however, important to bear in mind that investment figures are rather volatile as they react sensitively to the economic environment. In addition, they are influenced by the equipment life cycles and depend therefore on the level and the timing of past investment. In order to get a better idea of the structural rate, later in the text when the structure across individual Member States is discussed, we therefore consider annual average investment since 1995, the year when the WTO-Agreement on Textiles and Clothing came into force.
- The T/C industry is a highly globalised industry where European enterprises play an important role in the world economy. It is important to notice that the EU trade balance for textiles is positive. Only in the clothing subsector do Extra-EU imports exceed European exports. The quantitative importance of clothing imports leads to a negative trade balance for T/C as a whole.

2.3. Location and Specialisation levels

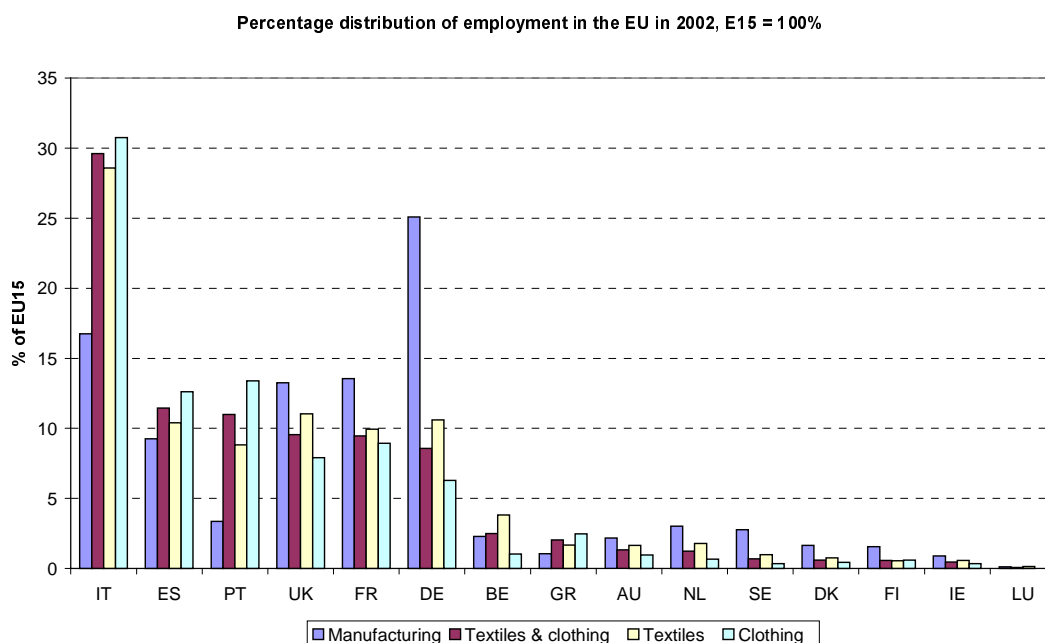
- Graph 4 shows that the textile and clothing industry is concentrated in the 5 most populated countries of the EU, which account for about three-quarters of the EU production of textiles and clothing. This concentration is very similar to the level of concentration of total manufacturing industry in the EU.

Graph 4



- With a share of almost a third of the total value added of the sector, Italy is by far the most prominent location for the T/C industry. This prominence is particularly remarkable in the clothing sub-sector where Italy accounts for close to 40% of EU production. Behind Italy, the UK, France and Germany share a relatively even part of the total EU T/C value added of around 13%. They are closely followed by Spain. Among the smaller countries, Portugal, Belgium and Greece appear as the main contributors to the total EU 15 value added.
- As regards the distribution of the value-added produced in the sub-sectors, southern countries such as Italy Greece, Portugal and, to a lesser extent, Spain and France contribute more to total clothing production while northern countries such as the UK, Germany, Belgium, the Netherlands, Austria and Sweden contribute relatively more to textile production.
- Graph 5, which presents the distribution within the EU of total manufacturing and T/C employment, shows in a rather striking manner that distribution in terms of production does not necessarily match with the social stake associated with the textile and clothing sector. While Italy keeps its strong leadership in terms of its contribution to total T/C employment, Spain and Portugal follow as second and third contributors. Greece also takes a higher rank when employment is taken into account. This illustrates the labour intensive nature of clothing production by comparison with the more capital-intensive production of textiles.

Graph 5

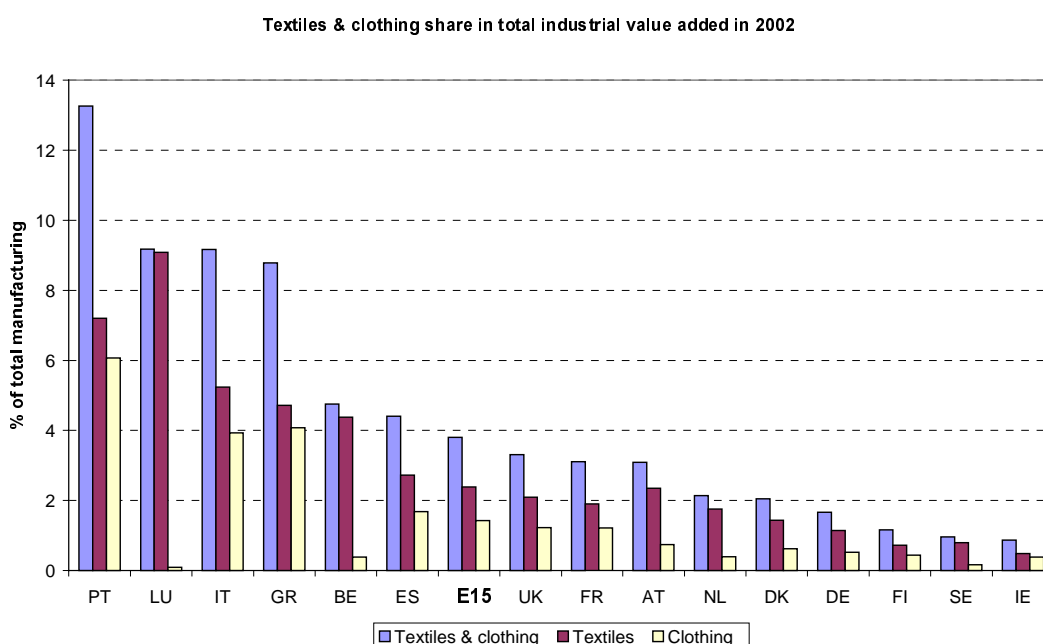


- Of note in this context is the fact that, as a result of the adjustment process that is taking place under the pressure of international trade liberalisation, a gradual shifting from production to design and marketing of T/C is taking place in the EU and, in particular, in the northern countries of Europe. The employment related to the more service related T/C activities are not included in the

traditional T/C statistics and may therefore underestimate T/C employment figures in the EU.

- The relative weight of T/C and total manufacturing in the respective Member States which can be observed on the above graphs gives a first indication of the different levels of specialisation of the various Member States as far as the T/C sector is concerned¹.
- The following two graphs focus on this aspect of specialisation and present the relative importance of textiles and clothing in total manufacturing value added and employment. The value for the EU 15 can be considered as the benchmark that allows an assessment of the relative degree of specialisation in T/C of each Member State's economy.

Graph 6

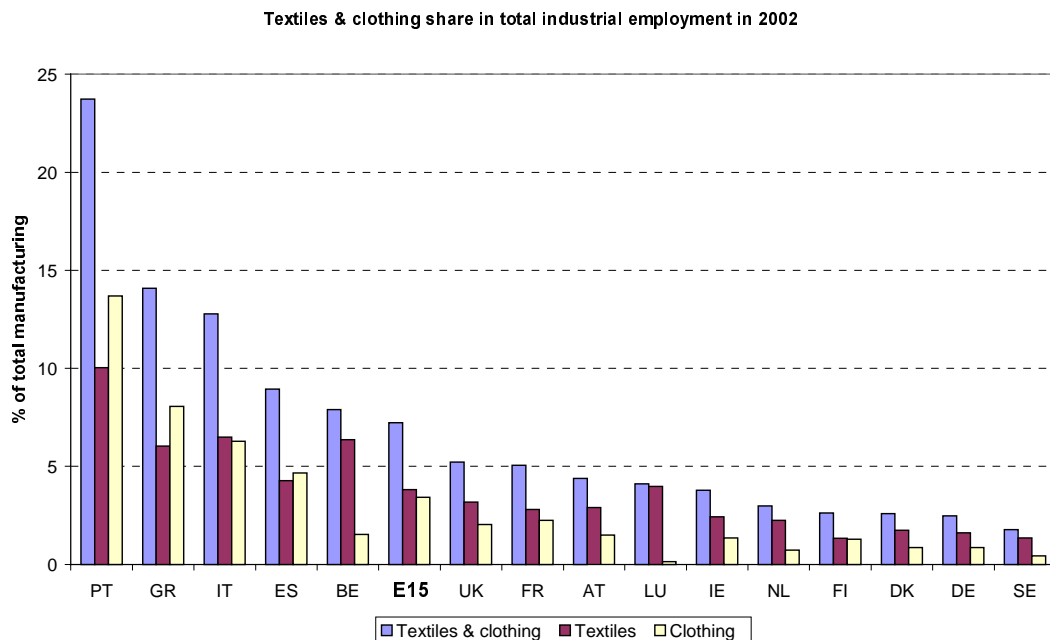


- 5 countries, i. e. Portugal, Greece, Italy, Spain and Belgium can be considered as relatively more specialised in the T/C sector. As is shown in Graph 6, the share of their T/C value added in total manufacturing value added is higher than the aggregate EU figure of 4%. Graph 7 confirms that the share of their employment in the total industrial employment is higher than the 7%, corresponding to the EU figure.
- Graph 7 also shows a particularly high dependence on the T/C industry of Portugal and, to a lesser extent, of Greece in terms of employment. Close to one in four industrial workers in Portugal is employed in the T/C sector.

¹ Luxembourg has a small manufacturing basis and a small T/C industry. These small numbers pose problems arithmetically as quantitative relations often tend to be extreme. Very often, Luxembourg is, therefore, eliminated from presentations of the T/C sector. Here, we chose to include this Member State for reasons of presentational completeness, however, we do not discuss in detail the figures that must not be over-interpreted.

Graph 8, which focuses on specialisation from the point of view of exports, confirms this dependency.

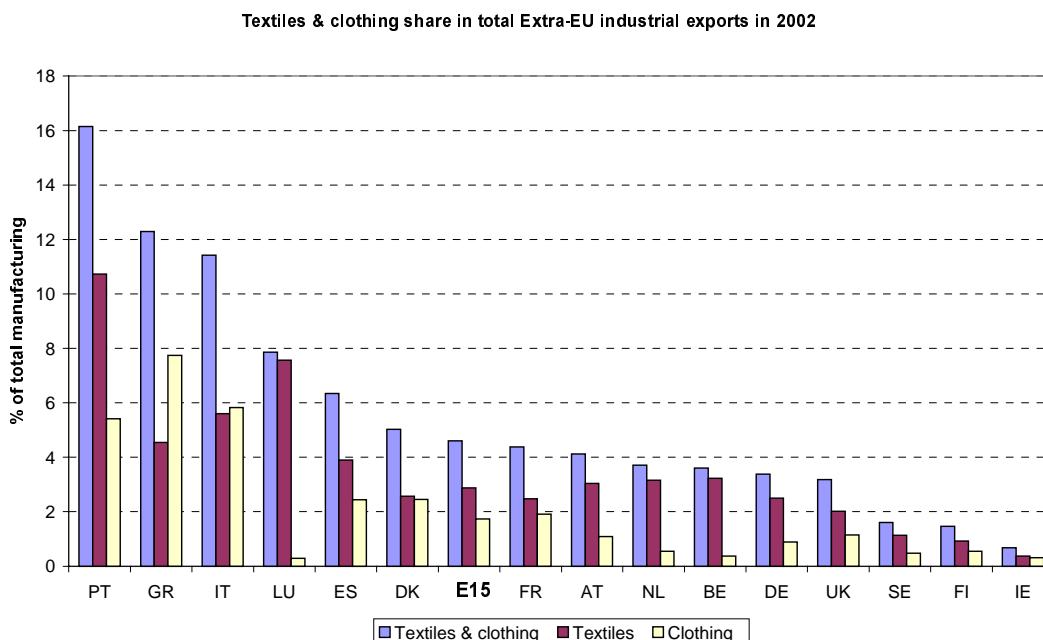
Graph 7



- France, traditionally known as a T/C country, the UK and, even more, Germany with its wide industrial basis, are much less dependent upon the T/C sector as demonstrated by their relatively low level of specialisation.
- The relative share of the textile and clothing sub-sectors can also be observed from these 2 graphs. In Portugal, Greece and Spain more than 50% of the T/C workforce is occupied in the clothing sector. This is of particular note, as the clothing sector is known to be more fragile especially in a context of growing international trade liberalisation, the main reason being that as a labour intensive production process it is more exposed to competition from countries where labour costs are significantly lower. At the other end of the spectrum, Belgium concentrates 92% of its value added and 80% of its employment in the textiles sector. A similar structure can be observed in Austria and in the Netherlands. Among the four major T/C producers, Germany appears to be the least dependent upon clothing with close to 70% of its activity based on textile production. The UK and France are both around the 60%-textile/40%-clothing mark, corresponding to the EU average.
- Beyond the confirmation of previous remarks related to relative levels of specialisation, the Graph 8 gives some additional information on the relative weight of textiles and clothing in the extra-EU T/C exports of Member States. It is interesting to note that while Greece (63%) and, to a lesser extent, Italy (51%) have the largest share of their extra-EU T/C exports in the clothing sector. All the other countries are predominantly textile exporters. This is of particular note in the case of Portugal which, despite a more clothing-oriented production structure, concentrates 66% of its extra-EU trade on textile products. This indicates that Portuguese clothing exports are rather oriented towards the Internal Market. The low performance of Belgium as far as exports

is concerned is also explained by the fact that most of its external sales are made within the EU and therefore do not appear in these extra-EU trade statistics.

Graph 8



2.4. Productivity

- The analysis of efficiency in the use of the resources is a core element of a competitiveness analysis². Based on existing data, three indicators can be calculated. The first one (Graph 9) indicates labour productivity by calculating the value added produced by employee³. The second indicator (Graph 10) estimates the personnel costs per person employed, dividing the total labour costs in the industry by the number of people employed. The third indicator, the personnel cost per unit produced (Graph 11), can be considered as a proxy for the unit labour cost, i.e. it is the ratio between the total labour cost and the value added.
- Before commenting on Graph 9, a word of caution is necessary. This kind of measure of productivity provides a “snapshot” of productivity at certain point in time. In the case of a downturn in the business cycle, which was in fact the case in 2002, structural labour productivity is bound to be underestimated as

² In the context of the T/C sector, such an analysis is unfortunately highly constrained by the lack of data. Important sectoral data such as the stock of capital and number of hours worked are not available

³ Irish productivity (value added per head) is particularly high, compared to the European average. This is particularly so in the following activities of Manufacturing:

NACE Rev.1 22.3 Reproduction of recorded media

NACE Rev.1 24.1 Manufacture of basic chemicals

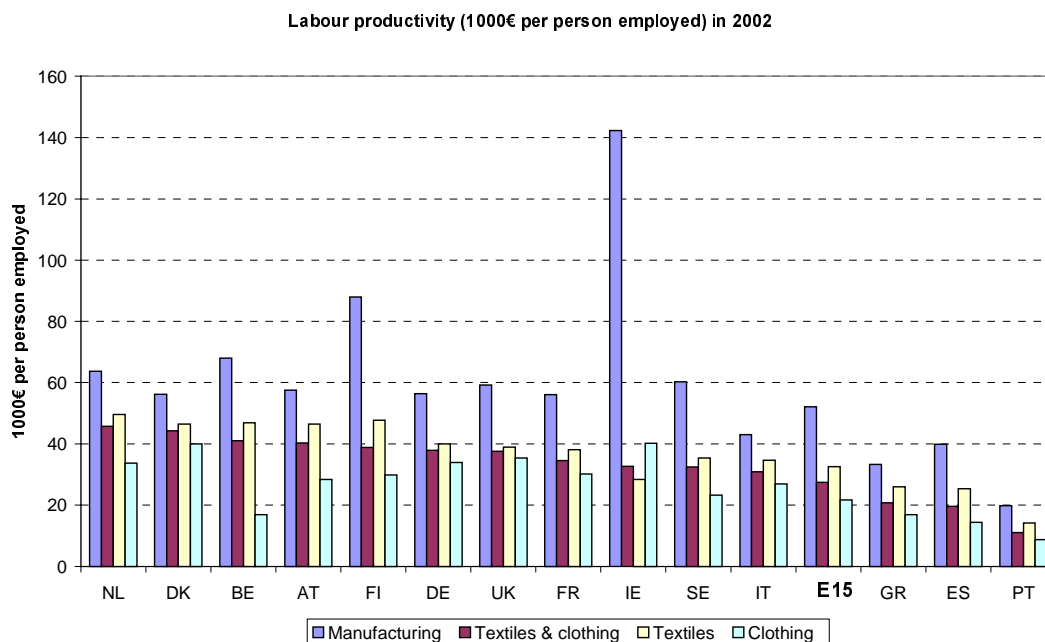
NACE Rev.1 24.4 Manufacture of pharmaceuticals, medicinal chemicals and botanical products

NACE Rev.1 30 Manufacture of office machinery and computers

Eurostat informs that this is mainly due to the presence of foreign owned enterprises with high value added in these sectors.

the labour factor only partially adjusts in the short-term to the negative variation of production.

Graph 9

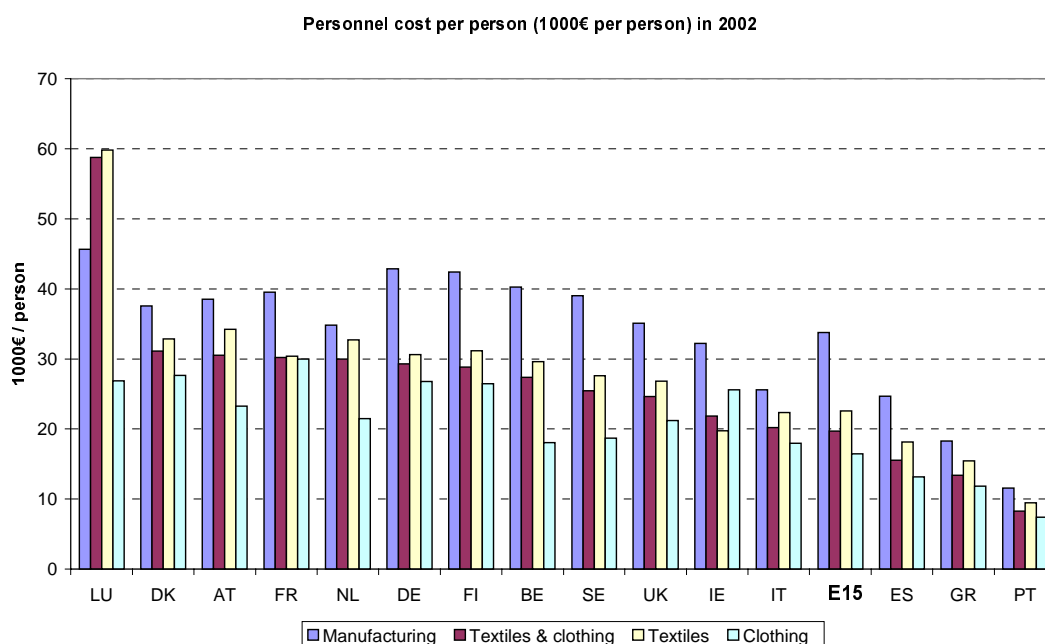


- The first striking element in Graph 9 is the fact that the productivity of the T/C sector is significantly below the productivity of manufacturing as a whole, i.e. around half of the EU average⁴. As all the Member States present a relatively similar ratio, one can assume that this is basically a structural feature partly due to the technical characteristics of the respective industries. A similar observation can be made regarding the relative productivity of the textile and clothing sub-sectors. Textiles display a much higher productivity, as more advanced technologies can be used more extensively in a capital-intensive industry.
- Another remarkable feature of this graph is the significant discrepancies among Member States regarding the levels of productivity, with a ratio of about one to four between the lowest productivity (Portugal) and the highest (the Netherlands). Surprisingly, the four countries where T/C is – in absolute terms and/or proportionally – the most important, i.e. Italy, Spain, Greece and Portugal, are precisely the countries where the level of productivity is the lowest. This cannot simply be explained by the fact that those countries are more clothing oriented since, even in the clothing sector, the northern countries exhibit a higher productivity level.
- What could therefore be the explanatory factors for such discrepancies? Graph 10, which presents the personnel cost per person employed, probably contains the main elements of an answer. Having relatively lower salary levels,

⁴ As explained above labour productivity is defined as value added (in 1000€) per employee. The international comparison needs, thus, to be interpreted with care due to the possibility of exchange rate fluctuations. This is important, for instance, for the U.K. who is not a member of the Euro-Zone.

enterprises based in these countries have had fewer incentives to move from a labour intensive mode of production and to look for productivity enhancing investment. In contrast, countries with higher salary levels which have had to compete on the Internal Market with Member States with low(er) labour costs have had more incentive to move towards higher value added production. It is precisely this adjustment process that has already led to the closure of production capacity in the northern part of the EU in particular in the clothing sector.

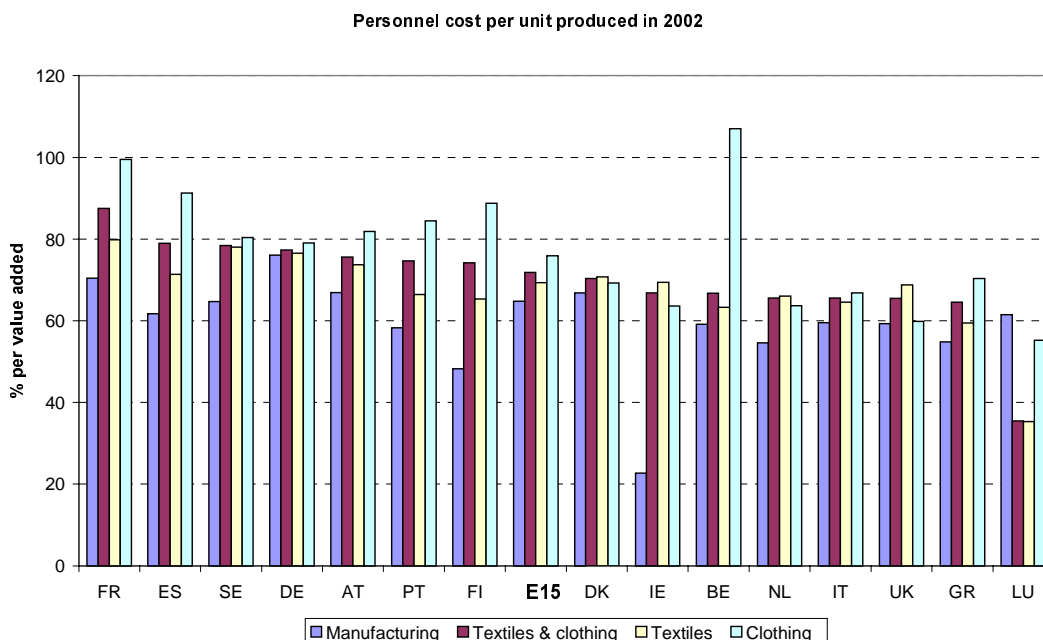
Graph 10



- In order to assess the sector’s competitiveness, the graphs on labour costs and the productivity indicators have to be combined with the personnel cost per unit of value added in order to give a clearer picture of the relative positions of each Members State. What can be said at this stage, already, is that many important T/C countries in the EU, i.e. Portugal, Greece, Spain and to a lesser extent Italy derive an important part of their competitiveness position from lower labour costs rather than from higher productivity. This makes them, therefore, more vulnerable than others to salary increases and to trade liberalisation with countries competing on a low cost basis.
- As regards international competition, it is difficult to find reliable and/or comparable data on personnel costs for the EU’s main international competitors. It can be estimated, however, that the labour ratio between the EU average and countries such as China and India is one of 1 to 30, or even 1 to 70 in the case of Bangladesh. The impact of such an unfavourable ratio is partially mitigated by the productivity differential in favour of the EU when compared to these low labour-cost countries. Unfortunately, reliable productivity data is equally difficult to obtain.
- Graph 11, which provides a more accurate assessment of the relative position of Member States as far as price competitiveness is concerned, presents a rather contrasted picture in comparison with the previous graphs. Among the

traditional T/C producers, Greece, the UK and Italy appear to have the best competitiveness position, i.e. they achieve the best balance between productivity levels on the one hand and labour costs per person employed on the other. Surprisingly, contrary to what is the case in most Member States, the UK's competitiveness is better in clothing than in textiles.

Graph 11



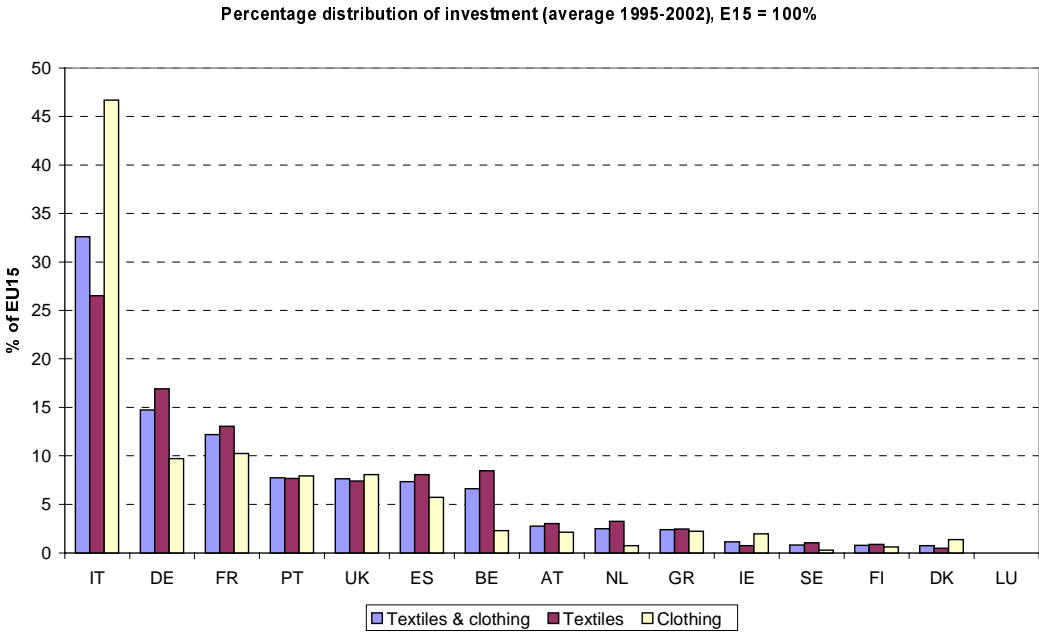
- The T/C producing countries where the personnel costs are the highest in proportion to the value added are France and Spain. Since this ratio is also an indicator of the operating surplus⁵, the high levels registered for those countries tend to indicate that a very significant part of the industry in those countries may face structural profitability problems. This is particularly obvious in the case of the French clothing sub-sector where all the value added was consumed in 2002 to pay the workforce. Belgium performs slightly better than the EU T/C average despite a disastrous performance in clothing where the industry has incurred significant losses.
- Among the other countries with a substantial T/C industry, Germany and Portugal perform rather poorly, in particular in their relative areas of specialisation: only France and Sweden have higher relative labour costs than Germany in the textile industry, while the Portuguese clothing sector only ranks 11th in the EU on the basis of the same indicators.
- Graph 11 also indicates that despite its significantly lower labour costs, the EU T/C competitiveness position is weaker compared with the rest of manufacturing industry.

5 The operating surplus which is calculated as the difference between the value added at factor costs and the personal cost gives “the balance available to unit which allows it to recompense the providers of own funds and debt, to pay taxes and eventually to finance all or a part of its investment” as per Eurostat explanatory notes

2.5. Investment

- After analysing EU competitiveness as regards the use of the factor labour, it would be useful to assess the cost and efficiency associated with the use of capital⁶. In this context, investment figures are of particular importance to assess the efforts made by the industry to strengthen its capital base. Obviously, these aggregate investment figures do not provide information on the nature of the investment, e.g. productivity enhancement, shift towards specialised higher value added production, or towards flexibility and handling smaller production batches. Training of human resources is also a way to invest in the sector by helping workers to adapt to technological changes and to better face crisis situations. The aggregate investment figures presented here provide, therefore, only a limited insight into the potential contribution of investment to improving the sector’s competitiveness. It can, however, be assumed that a high level of investment correlates positively with the competitiveness position.
- Three indicators are proposed for the analysis. The first one simply gives the percentage distribution of investment in the EU. As investment is a volatile indicator, a snapshot of the year 2002 might lead to misinterpretations. Therefore, we look at the average annual investment from 1995 to 2002. The second indicator is the investment rate, i.e. the share of value added which is used for investment. The third indicator is the ratio “investment on persons employed” which gives a picture of the capital deepening in the sector.

Graph 12

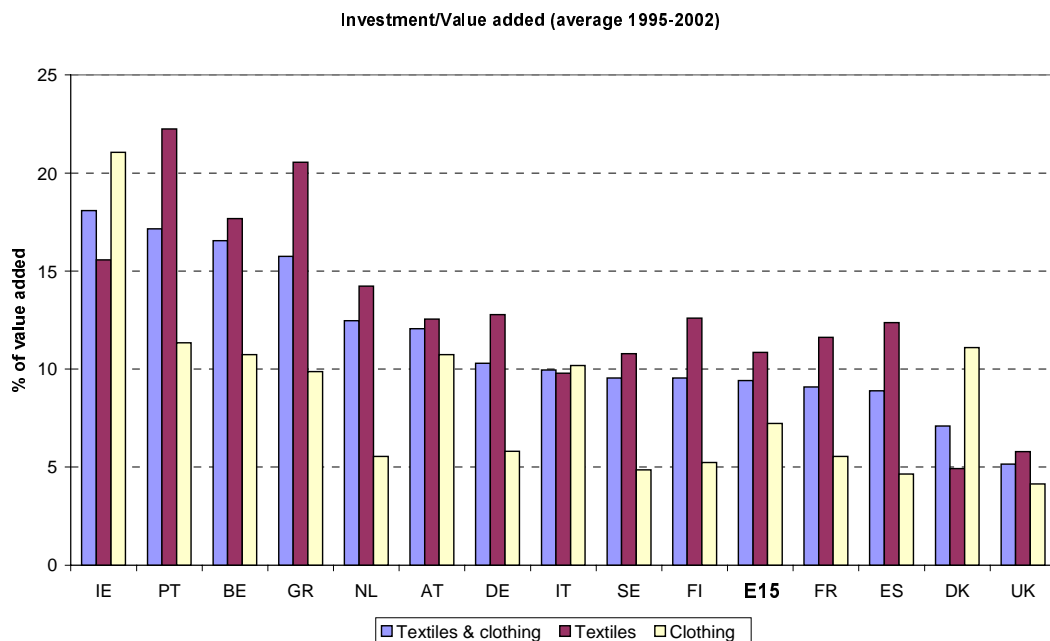


- The distribution of investment across the EU corresponds roughly to the respective size of the Member States as reported for T/C production, with Italy

6 As mentioned above, knowledge about the capital basis of the T/C is seriously constrained by the lack of data.

accounting for more than 30% of investment in the European Union (45% in the clothing sector!). Portugal is, however, a notable exception in this ranking. While Portugal ranks 6th in terms of share of value added in the total EU value added, far behind the fifth place, it ranks 4th in terms of investment ahead of both the UK and Spain whose T/C sector is much bigger in absolute value. In the textile sub-sector, Belgium also accounts for a bigger investment share than the UK, Spain and, less surprisingly, Portugal.

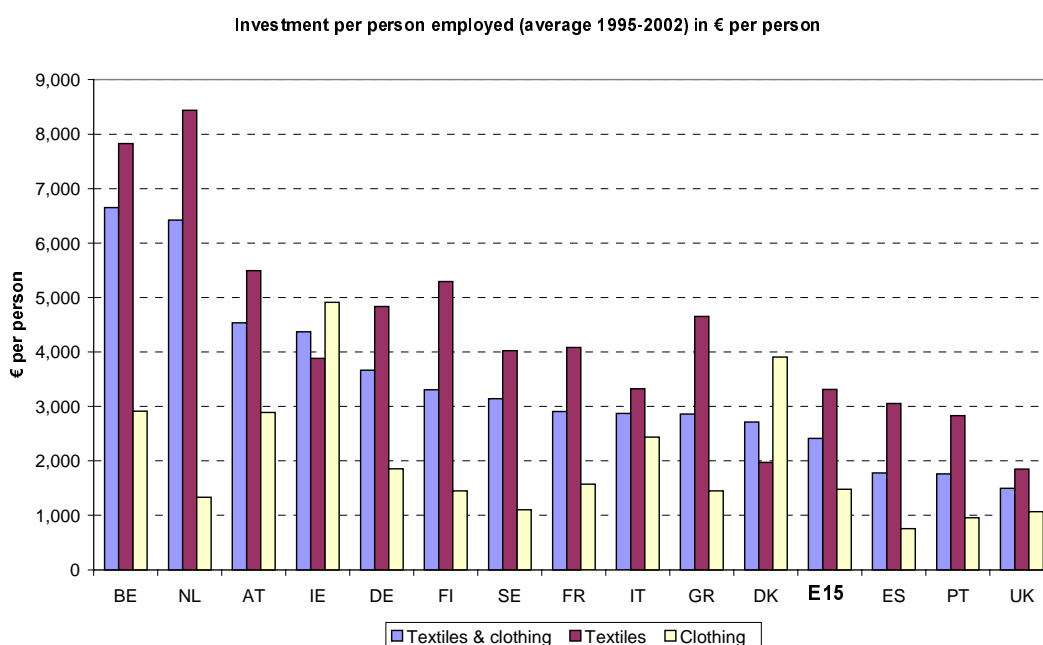
Graph 13



- The best performance of smaller countries in terms of investment appears clearly in Graph 13, where Ireland, Portugal, Belgium and Greece have invested more than 15% of value added in the purchase of equipment. At the other end of the scale, with less than half of the EU average of 11%, the UK's performance is particularly worrying. France and Spain are also below the EU average. With 10% of its value added invested, Italy's performance is no more than fair, considering the weight of the T/C sector in its economy.
- France and Spain's poor performances have to be looked at in the light of their low labour-related cost competitiveness as illustrated in Graph 11. First, from a purely financial point of view, the very high proportion of value added used to pay for labour costs leaves very little margin for financing equipment. Secondly, the relatively high cost of labour in relation to productivity is a strong incentive to de-localise production through direct investment or through outward processing trade and sub-contracting arrangements. The situation of the UK is different as it performs rather well in the price competitiveness area. A possible explanatory factor for its poor record in terms of investment is to be found in the purchasing policy of the major retail companies in the UK. Of late, these companies have been seen to shift their sources of supply to outside the UK, leaving only a gloomy perspective for the highly dependent local companies and thereby reducing their incentive to invest.

- The impressive performance of Ireland is encouraging as it interrupts a slow process of de-industrialisation in the T/C sector since the early nineties. Particularly remarkable is the fact that the investment rate has been higher in the clothing sector than in textiles. In contrast, for all other EU countries but Italy, the investment rate was higher in textiles, which is consistent with the capital-intensive nature of the industry.
- The ratio of investment per person employed is usually considered to be a good indicator of the effort made by an industry to develop its competitiveness by modernising and deepening its capital base. The positive figures for countries such as Belgium, the Netherlands and Austria depicted in Graph 14 illustrate their policy of investing in high productivity processes for specialised markets. Textile producers generally perform better than those with a high proportion of clothing production – with the exception of the UK, where there are converging indicators of a progressive de-industrialisation process in T/C.

Graph 14



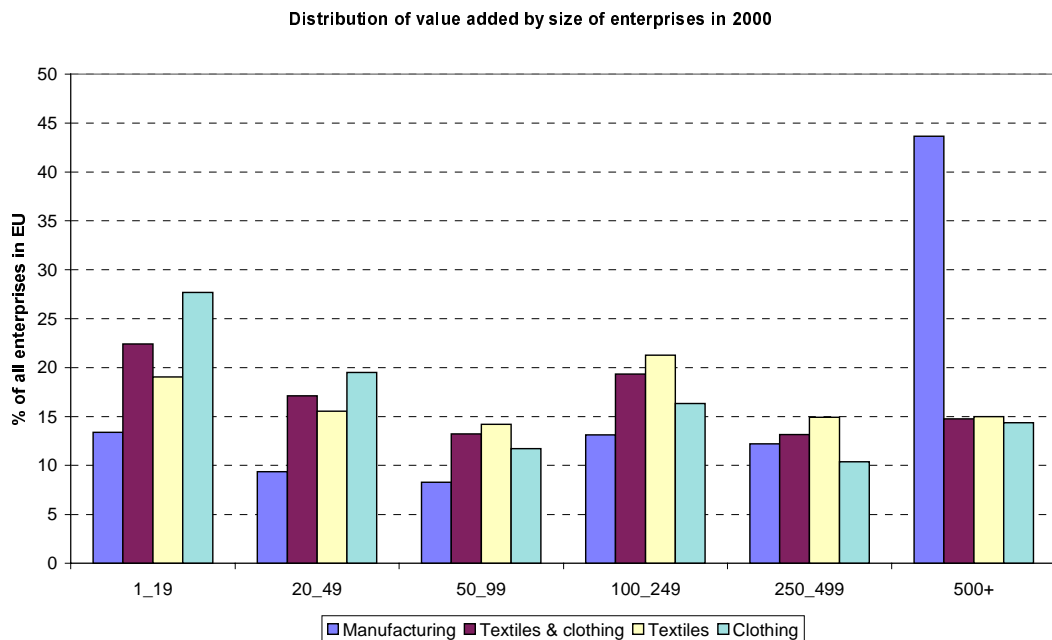
- Despite its dynamic investment strategy, Portugal retains a low level of investment per person employed, as does Spain (less surprisingly), as a result of their industries still being dominated by labour intensive production processes. In this context, Greece’s performance above the EU average is to be noted as another sign of the competitiveness of the Greek T/C sector.

2.6. Enterprise distribution

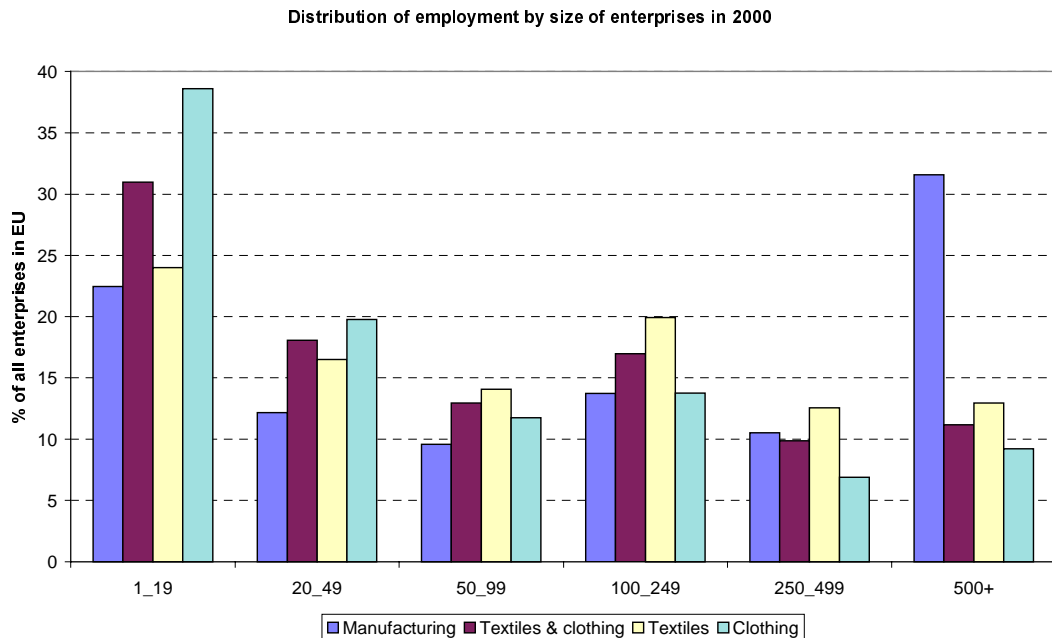
- The following two graphs give an overview of the structure of the T/C industry as far as the size of enterprises is concerned. Enterprises are divided into 6 groups, taking the number of people employed as the indicator of size. The group of smaller companies includes all the companies with less than 20 people; the group of bigger companies includes companies with 500+ people employed. Graph 15 gives the distribution of value added by size of enterprise,

while Graph 16 looks at the distribution of employment by size. The figures for the T/C sectors are compared with those for manufacturing as a whole.

Graph 15



Graph 16



- The well-known fact that the T/C sector is predominantly an SME-based industry is clearly confirmed by the above graphs. Within the sector as a whole, clothing is concentrated in even smaller units than textiles.
- In manufacturing in general, a very significant part of both value added and employment are concentrated in enterprises with more than 500 employees. In

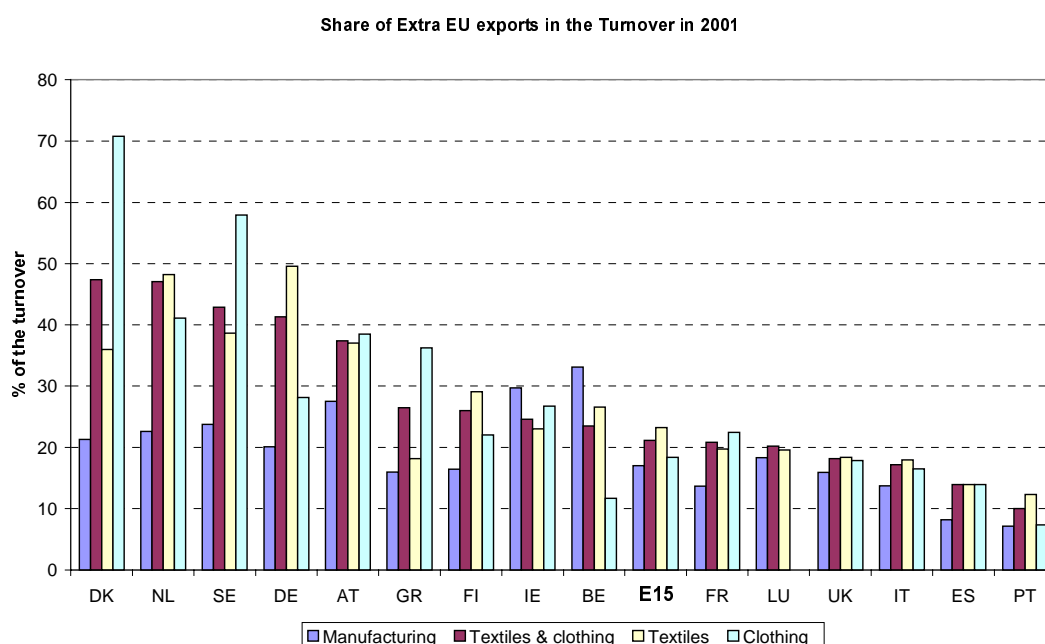
the T/C sector, these big enterprises only account for 10% of employment and 15% of value added.

- The textile sector is relatively evenly distributed among the various size-classes, with 50% of enterprises employing between 50 and 500 workers. Despite the capital intensity of this sub-sector, enterprises with less than 20 employees still account for an important part of employment (24%) and value added (19%).
- Enterprises with less than 50 employees employ 60% of the workforce in the EU clothing sub-sector. This fact is a source of concern in view of the 2005 trade liberalisation, as both clothing production and smaller enterprises usually present a higher degree of vulnerability.

2.7. International trade performance

- International trade performance is the key indicator of the competitiveness of an industry, as it reveals the capacity of this industry to compete on the international market. A comprehensive statistical presentation of international trade situation is provided in separate document. We will therefore limit our presentation to a few basic indicators. The first one, presented in Graph 17, gives the relationship between exports and turnover. It measures the extent to which the industry depends upon the external market to sell its production.

Graph 17



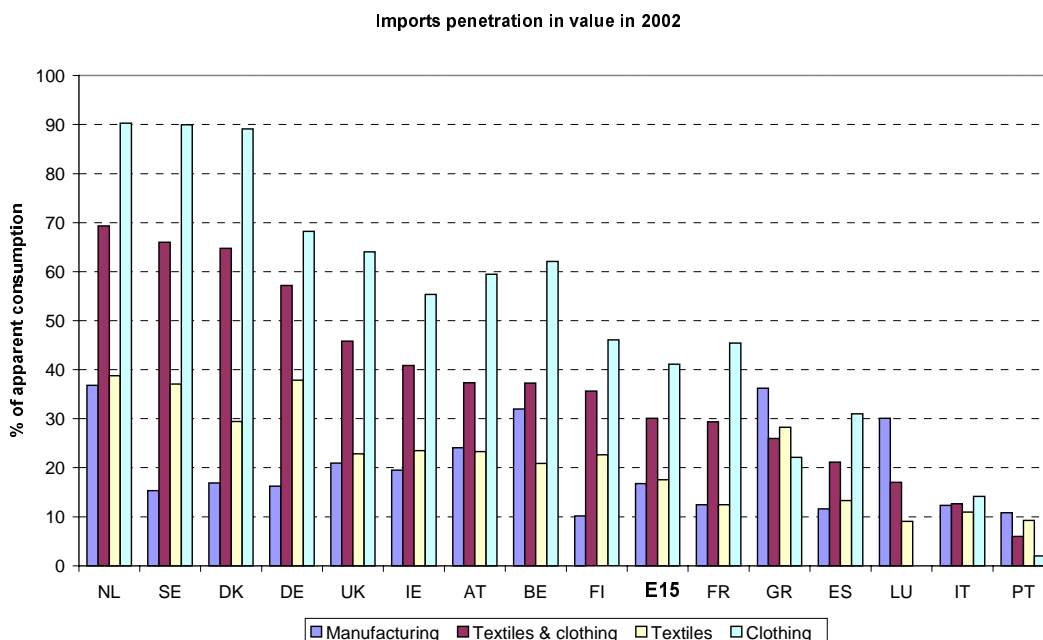
- The most interesting feature of this graph concerns the EU aggregate for T/C. It indicates that more than 20% (23% in the case of textiles) of EU production is sold on the external market⁷. This is to be seen in a context where access to

⁷ As explained in the Methodological Notes at the end of the text, this ratio has to be interpreted with care because it mixes trade data (exports) with industry data (turnover) which stem from different sources with different data structure.

external markets is made extremely difficult because of tariff and non tariff barriers encountered by EU industry. This high figure, which reveals a high export potential, explains the insistence of the EU industry on the need for a trade policy geared towards the opening of external markets. The comparison with total manufacturing clearly indicates that external markets are of higher importance for the T/C sector than for the rest of EU industry.

- The information relating to individual Member States is more difficult to interpret, as it seems to contradict the data on production and specialisation levels. In this graph, the countries with higher T/C production present the lower share of export on turnover while at the same time being the main exporters. Several explanations can be offered. The northern countries are known to have diversified their T/C businesses towards design and marketing, and are therefore more trade oriented. The high ratios of clothing exports of Denmark and Sweden, which are not known as specialised clothing producers, tend to confirm this interpretation. In addition, these countries have specialised their production in niche markets where they are able to sell equally on the internal and external markets. This is illustrated by the high ratio for textiles in Germany, the Netherlands, Sweden and Austria. On the other hand, southern countries, which are more concentrated in clothing mass production, sell an important part of their production on the EU market. It is another indication of their vulnerability to trade liberalisation shocks such as the end of the quota regime in 2005. The only exception among southern countries, Greece, whose performance is once again noteworthy with more than 30% of its clothing turnover being sold on third markets, demonstrates a strong capacity to compete on the external market.

Graph 18



- Another important trade related indicator is the import penetration, which gives an indication of the industry’s capacity to compete with imports on the local market. Unfortunately, because of lack of coherent (production) data, it is not possible to calculate the import penetration in volume. We therefore present

import penetration in value terms in Graph 18. It is to be noted that these figures underestimate import penetration in volume, as the value of products imported from extra-EU production is usually well below the market value of identical goods produced in the EU.

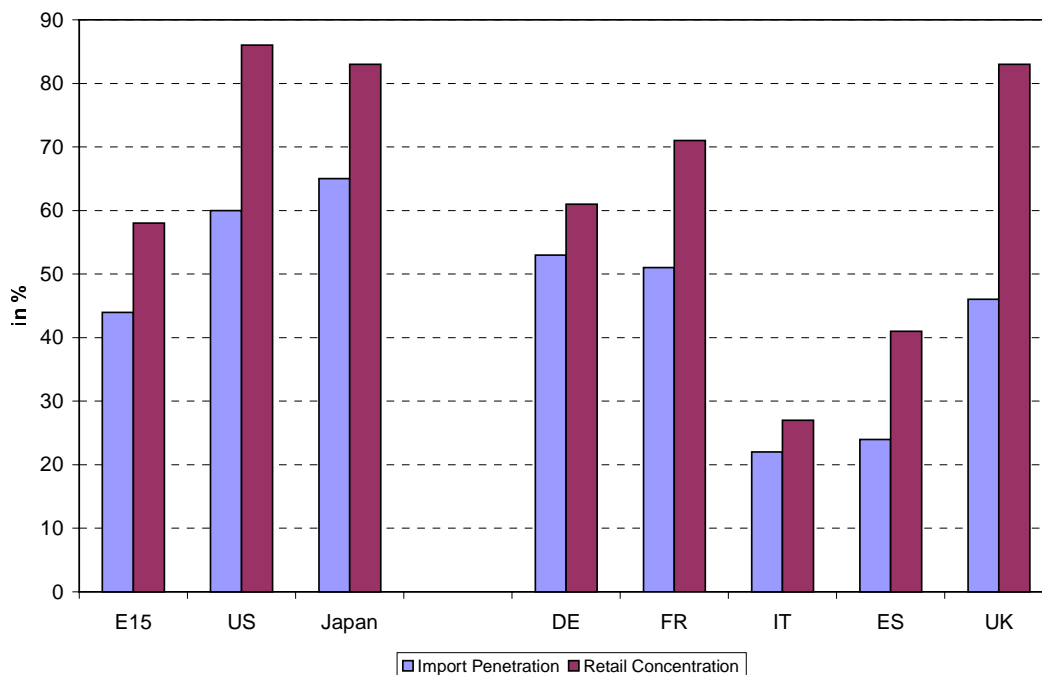
- The figure of an EU average of 30% for import penetration is significantly higher than – actually almost double – the import penetration for total manufacturing. This is mainly the result of the very high level of import penetration in clothing (41%), where EU industry has encountered serious difficulties in competing with foreign operators working with lower labour costs and less stringent social and environmental regulations. It is to be noted, however, that part of the clothing imports stem from outward processing arrangements. In the area of textiles, average EU import penetration is very similar to the figure for the rest of industry. Import penetration is expected to rise further with the end of the quota regime, which currently limits the exports from a number of key EU competitors, in particular China.
- Apart from the globally high level of import penetration in the EU, another striking element is the huge discrepancy between the Member States. While in the Netherlands, Sweden and Denmark, 90 % of clothing products come from outside the EU, in Portugal virtually all clothing products consumed are made in the EU. Italy with 10% import penetration and, to a lesser extent, Spain also present very low penetration rates. This perfectly reflects the trade versus production oriented structure of the EU T/C sector, based on labour cost differences in its different geographical locations throughout the EU. Despite a strong T/C production, the UK and Germany also present a relatively high import penetration rate. Some of the explanatory factors can be identified in Graph 19.
- Graph 19 provides a different import penetration figure based on a different data source⁸. A significant difference, which probably explains most of the differences between the two graphs, is that in Graph 19 imports are valued at consumer price level, instead of by import prices as in the Eurostat data base. The variation may partially reflect the extent to which low prices are reflected in the final pricing to the consumer on the different markets. The main interest of this graph is that it combines import penetration data with the level of concentration of the retail industry⁹ in the different EU markets for which data are available. In order to support the analysis, data for the US and Japan has been included.
- This graph tends to corroborate the fact that there is a strong correlation between the level of concentration of the T/C retail industry and the level of imports to a country. Strong retailers have the financial and management capacity to organise their sourcing on the global market. In addition, they usually position themselves towards the lower end of the market with a strong emphasis on price. Most of their products therefore come from low labour cost producers in Asia.

8 Institut Français de la Mode using national panel data.

9 The concentration of the retail industry is calculated as the ratio between the sales in organised retail (i.e. total retail excluding independent retailers and fairs) and the total sales in the consumer market.

Graph 19

Import Penetration and Retail Concentration in 2001 for EU, US and Japan



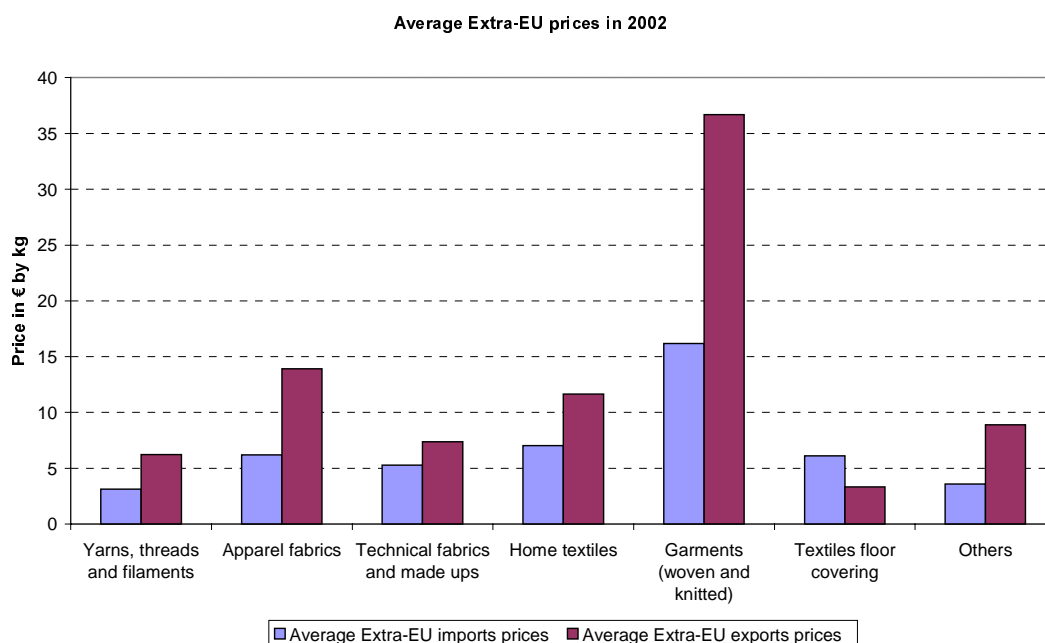
- In the US, where the concentration of distribution is the highest, import penetration is significantly higher than in the EU. Quota-free Japan shows the highest import penetration rate; here again, the concentration of distribution is very important.
- In Italy, where the major retailers hold less than 30% of the market, import penetration has been kept at a very low level. The situation in Spain is similar though the concentration level is slightly higher. Important Spanish retailers are, however, known to source most of their products in Spain. The UK is a particular case as it shows a very high rate of concentration in distribution with proportionally lower penetration rates. This is, however, changing progressively as some of the important retailers are gradually shifting their traditional sourcing outside the UK. (Clothing imports to the UK have grown twice as much as the EU average over the last 3 years).
- The global figure for the EU trade balances will be presented in the last section of the following chapter, which analyses the evolution of competitiveness in the recent past.

2.8. Quality competitiveness

- This analysis has, up to now, focused on a number of quantitative indicators of competitiveness which are directly or indirectly linked to T/C enterprises' efficiency in the use of resources. However, the competitiveness of an industry as revealed in trade performance data also depends upon a series of important factors that are more difficult to capture because of their very nature.

- These factors, which we regroup here under the generic term of “quality competitiveness”, are particularly important for assessing the competitiveness of the T/C sector as they are actually the main explanation for its rather good international trade performance (i.e. positive textile trade balance and growing exports of clothing), despite the very significant comparative advantages in terms of labour costs enjoyed by most of its competitors.
- The factors that allow EU production to differentiate itself from its competitors beyond the price element include:
 - the *quality* of production, as defined by the superior technical quality of the products for both fashion and technical applications, but also their aesthetic characteristics and “fashion content”;
 - the capacity to develop highly demanded *brands* which are also associated with fashion content and with the capacity to build a strong image thanks to a combination of tradition, promotion and marketing;
 - the ability to deliver the products in a speedy, flexible and reliable way. This is particularly important for responding to an ever more demanding market with rapidly changing fashions
 - the sustainability and safety of industrial systems both as regards to their interaction with the environment and with the enterprises’ workers.
- These competitive advantages stem from several elements that often characterise the EU industry, i.e. the high skill of the labour force, the quality of the management, the ability to create and innovate, efficient industrial organisation including the use of information and communication technologies in the production and distribution processes, access to finance, and the geographical and/or cultural proximity to important consumer markets.
- Although it is difficult to capture in statistical data, this ability to differentiate can be broadly assessed with a rather simple indicator, i.e. the unit value of export as compared to the unit value of import of a similar product. The difference between the two unit values can be defined as the “quality premium”, quality being defined in the broad sense described above. For instance, the average unit value of shirts exported by the EU was 23€ in 2002, while the average unit value of shirts imported by the EU from India was 5€. The difference of 18€ is the premium that consumers are ready to pay to purchase an EU-made shirt, which integrates one or all of the quality characteristics described above.
- Graph 20 proposes a comparison of unit values for a range of relatively homogeneous products, i.e. yarns, threads and filament, apparel fabrics, technical fabrics and made ups, home textiles, garments, textile floorings and others. The statistical scope of these product groups is provided in the Methodological Annex.

Graph 20



- The above graph is a striking confirmation of the quality positioning of EU production, as all the products except floor coverings (where EU industrial production is cheaper than the high quality handcraft of traditional eastern carpets) have a positive quality mark up. For the apparel fabrics and garments, the quality premium of EU products is even substantially higher than 100%.
- This graph emphasises the strategic importance of increased market access to emerging economies where middle classes are growing, representing a growing quality-conscious market where the EU has the highest competitive advantages.

3. COMPETITIVENESS DEVELOPMENTS

- The following chapter looks at the development of competitiveness since 1995, which marked the end of the Uruguay trade negotiations in the WTO. 1995 was an important year for the European textile and clothing industry because in this year the WTO Agreement on Textiles and Clothing (ATC) came into force, marking the beginning of a 10-year phase-out of import quotas for all WTO Member States.
- This section examines how the EU T/C industry has developed since the signature of this Agreement. It looks at the development of the EU in comparison to the United States. In addition, we examine the developments in different EU Member States, where the industry has reacted with different strategies to meet the challenge of a quota-free world in 2005.
- For the EU as a whole, the analysis is separated into two steps. To compare the development with the US¹⁰, we look at the period 1995-2000. In order to provide an insight into the particularly difficult phase 2001-2002 that was marked by declining production and business closures, the EU development from 1995-2002 is looked at in parallel.
- In order to see the development in real terms, the indicators are expressed in constant prices. This way, the influence of price developments, which is principally incorporated in growth figures, is eliminated.

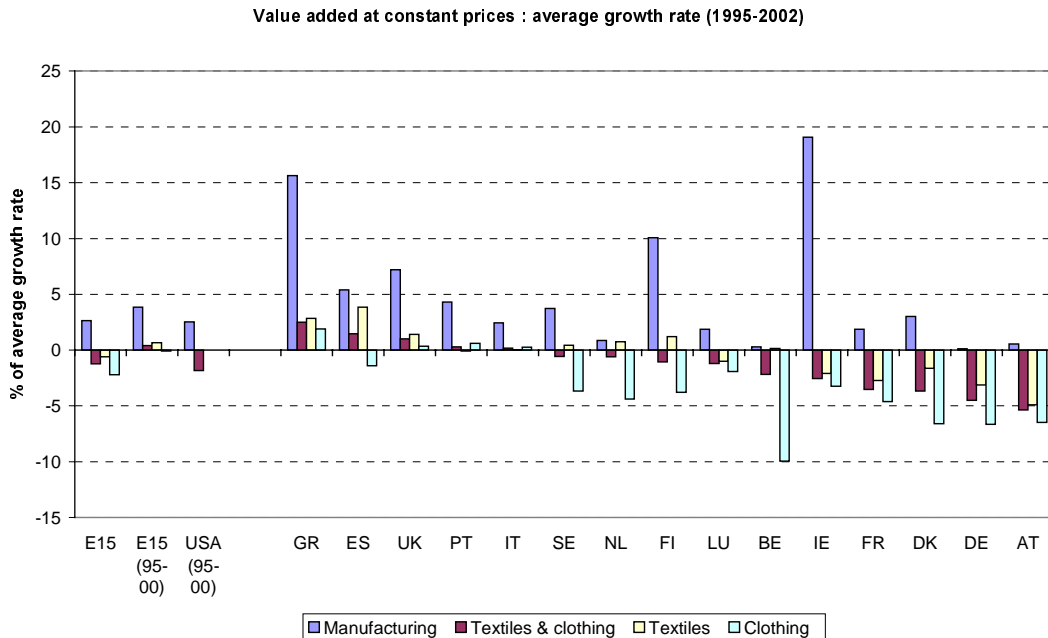
3.1. Output, employment, productivity, labour and personnel costs

- Graphs 21 to 23 reflect the principal adjustment processes that have taken place since 1995. Graph 21 shows the development of value added. Graph 22 looks in parallel at the development of employment, and Graph 23 shows the resulting development in labour productivity during this phase.
- Together they give insight into a substantial adjustment process that has taken place in the EU. The sector has been adopting new technologies at a fast pace, both with regard to information and communication technologies and new production techniques for the processing of multisectoral applications/products and for protecting the environment (e.g. hazardous materials) or the consumer (e.g. labelling requirements). Equally, the EU industry has a leading role in the development of new products, such as technical textiles.
- Despite the fact that it is generally acknowledged that the quality of the European workforce exceeds that of other world regions, the recent restructuring process has also involved the outsourcing of more labour-intensive operations. As a result, a substantial enhancement of labour productivity has been achieved (Graph 23). At the same time, Graph 21 shows that during the years 1995-2000 value added increased only slightly in the EU, while employment fell by more than 2.6% per year (Graph 22). This development is true for both textiles and clothing, whereas it is in sharp

10 As described in the Methodological Notes, only data up to 2000 was available for the US.

contrast to the development in total manufacturing, where a more expansionist strategy in terms of value added took place with employment levels being maintained.

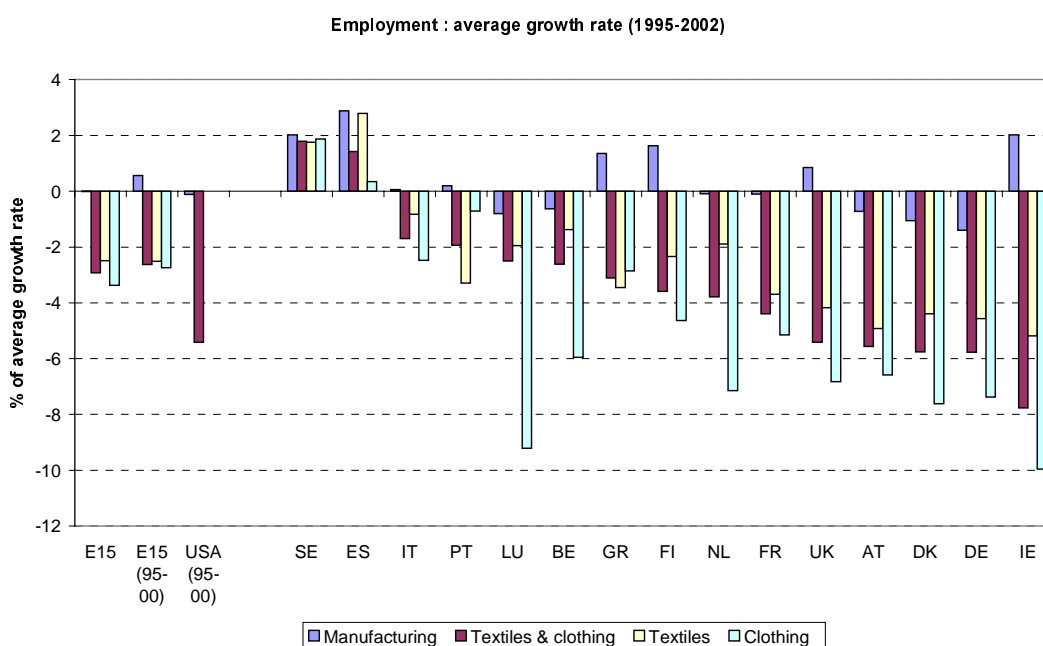
Graph 21



- In the US the adjustment process was much more radical. During the years following 1995, the US industry was not able to maintain production levels, and value added decreased by an average of approximately 2.5% per year (Graph 21). This led to major layoffs in the sector (Graph 22) with an average annual decrease more than double that of the EU (-5.4% per year). The amount of layoffs was so high in the US that the growth in labour productivity was higher than in the EU. As will be discussed in more depth in the following sections on investment and international trade, this may show that the US industry has adapted in a less timely manner to the increased amount of competition on their home market as well as on third markets, and has been less able to diversify its production, expanding into new areas and applications.
- Great care is required when analysing these figures. The same value of a given indicator may be the consequence of many factors, some of them being more positive, some of them being negative or even damaging. For example, growth in value added per employee can be an indicator of upgrading production, relocation of production or lower-cost sourcing of inputs. It may also be the result of investment in technologies that enhance productivity, or it may be caused by the marginalisation of the workforce.
- The comparison of the two sets of EU figures, for 1995-2000 and 1995-2002, shows that 2001 and 2002 were very difficult years. The growth rate for T/C value added was negative during the longer period (-1.2% per year), both for textile (-0.6% per year) and clothing (-2.2% per year). Employment also fell to a larger extent than in the period 1995-2000 and productivity rose less strongly over the longer period.

- As regards developments in the different Member States, in most of them productivity grew in line with the figures for the EU as a whole. In many cases, value added remained quite stable while employment fell and labour productivity rose. Portugal and Italy are both exemplary of such a development. It is important to note, however, that in contrast to Italy, even in 2002, Portugal still had relatively low productivity, as it started from a much lower level (see Graph 9). Finland and the Netherlands also show this principal development pattern, their value added, however, showing a slightly negative development.

Graph 22



- As an example of a more extensive development process, the Greek T/C industry achieved a substantial positive growth in value added of 2.5% during the period 1995-2002, with textiles contributing even more than clothing. At the same time, here also, employment fell, while a strong growth in productivity was achieved. To a lesser extent, the UK also followed this development. However, the value added increased to a lesser extent and the decline in employment was sharper, resulting in similar productivity growth rates. Again, it needs to be said that similarly to Portugal, despite the positive growth rates even in 2002, Greece is below the European average as regards productivity. The process indicates, however, that differences are being reduced and that these countries are catching up.
- At the other end of the spectrum, there are the countries such as France, Germany and Austria, where the adjustment took the form of a destruction of production capacity without the significant corresponding gains in terms of productivity. This is illustrated by the fact that these countries neither achieved positive growth rates in value added nor productivity gains above average, despite a reduction in employment that ranks among the highest in Europe. In Ireland and Denmark value added also declined but layoffs high enough to achieve a positive development in labour productivity in relation to the EU average. The development in these countries is thus similar to the one

described in the US (with Ireland being particularly strong in productivity growth).

- Sweden and Spain both show a very particular development as they have increased employment during the period 1995-2002. In the case of Spain, this development was accompanied by growing value added, leaving productivity more or less constant. Sweden, however, exhibits almost 2% per year employment growth in times where value added fell slightly, leading consequently to a substantial decrease in labour productivity (more than -2.% per year).
- The Belgian case is interesting because value added in clothing declined massively. While also accompanied by huge layoffs, the productivity continued to decline sharply in the clothing sector.

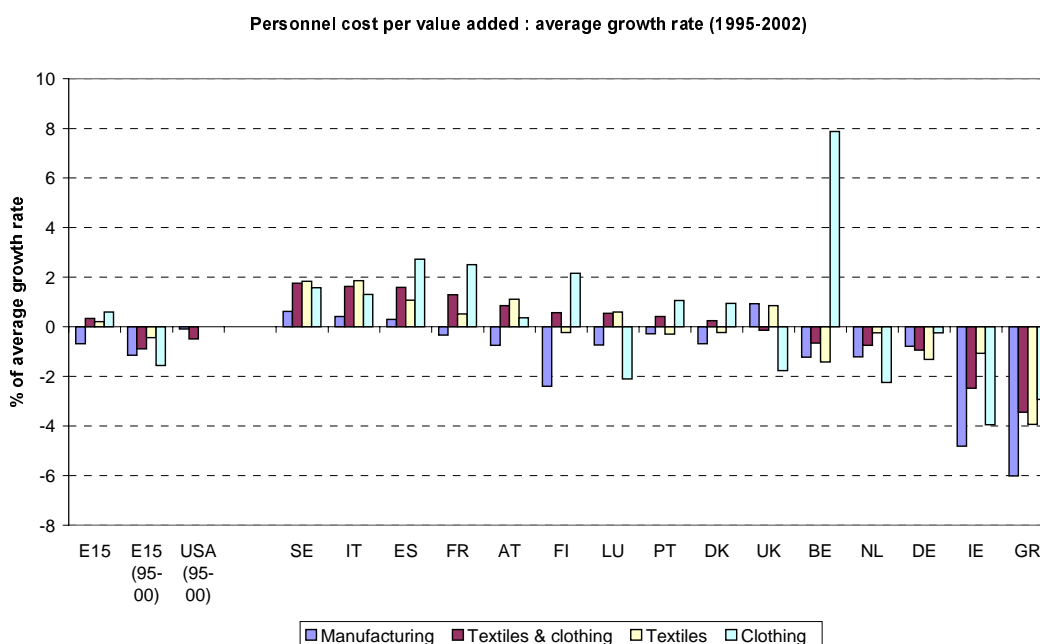
Graph 23



- Graph 24 gives an indication of how the developments described above translate into changes to cost competitiveness as regards the labour factor.
- Clearly, as can be derived from the changes that took place between 1995-2000, the EU has improved its position vis-à-vis the US in both total manufacturing and T/C. While labour costs per unit of value added fell by almost 1% per year, in the US it was only 0.5%.
- Again, it can be seen that 2001-2002 were difficult years for the sector. Over the whole period, labour costs per unit of value added grew slightly
- As regards the development in Member States, one can notes that the relatively favourable development described above for Greece also translates into an improvement of its competitive position. That this development was particularly successful has already been seen in Graph 11, where it is clear that Greece is among the countries with the lowest labour costs per unit produced.

- It comes as no surprise that at the other end of the spectrum, Sweden and Spain had growing labour costs per unit of value added as a result of their employment expansion described above. But also Italy and France and to a lesser extent Austria, Finland, Luxembourg, Portugal and Denmark had growing labour costs per unit of value added during 1995-2002. Clearly, the very difficult years 2001 and 2002 darken the picture of a development that started out fairly well after 1995, as the comparison with the US between 1995-2000 shows.

Graph 24

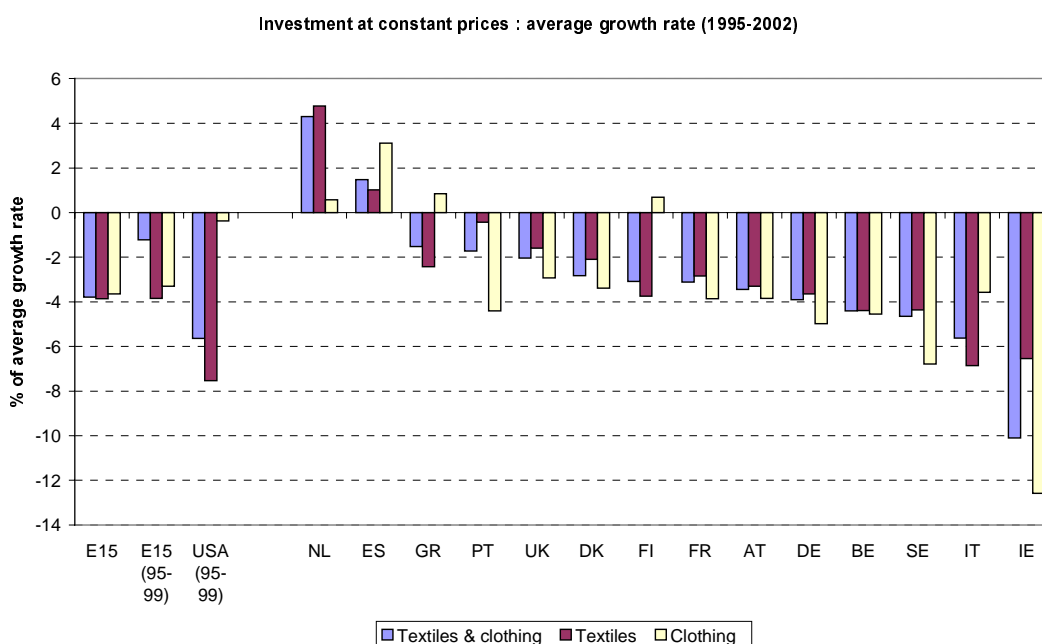


3.2. Investment

- After analysing the development of EU price competitiveness, this section looks at changes in investment patterns in order to obtain an overview of the development of the capital base of the T/C industry.
- One can note from Graph 25, which shows the growth rate of investment, that investment in constant prices has declined since the end of the Uruguay Round. It is an indicator of a gradual de-industrialisation that is taking place throughout the EU, though with different intensity across Member States. This evolution is associated with the relocation of production to neighbouring countries where production costs are lower. Especially labour-intensive operations that are of less added value were outsourced to the Acceding and Candidate countries and countries of the Mediterranean Rim.
- The de-industrialisation in the US was even much more pronounced than in the EU, partly due to a similar relocation of production towards the Central American and Caribbean Countries, being low cost locations for industry exporting to the US. While during the period 1995-2000 investment declined on average 1.2% per year in Europe, it declined by 5.6% per year in the US.

- Although care is required when interpreting the data and comparing different regions, it appears that the restructuring process was less destructive in the EU than in the US. Value added in Europe grew (slightly) while in the US it declined. Falls in employment were much sharper in the US and investment grew less strongly. This may indicate that in the European Union industry has adapted in a more timely manner and has been better able to diversify production and expand towards new areas, whereas in the US the impact of liberalisation was felt harder in the second half of the 1990s and adaptation has been more focused on reduction of capacities.
- Looking back at Graph 19 on import penetration, this hypothesis seems to be supported by the fact that the US industry is much less able to respond to the needs articulated by the consumers on their home market. Whether this is caused by the higher retail concentration or whether the higher import penetration is the result of a lower competitiveness in US industry, taking together all elements discussed so far, it appears that the European T/C industry shows a higher competitiveness. The next section confirms these considerations by comparing some core data, which shows that the EU industry is better able to compete on third markets as well. Before this, however, the developments in Europe should be analysed at Member State level.
- The comparison of the periods 1995-2000 and 1995-2002 shows that the bad economic situation of the T/C industry led to a massive decline in confidence as indicated by the sudden drop in investment as manifested in the drop of growth rates. This shows the challenge for European policy makers to set framework conditions in the area of trade and industrial policy that will allow the T/C industry to regain its confidence as fast as possible.

Graph 25:

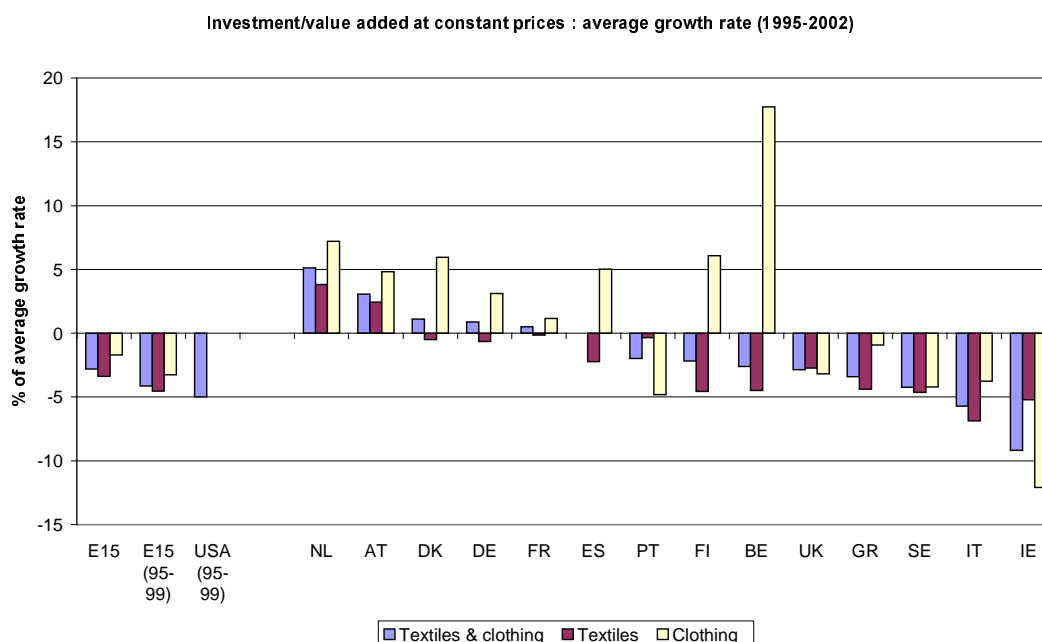


- As to the situation in different Member States, due to the bad years 2001-2002 they all show a decline in investments – more or less pronounced and with few exceptions. Some particular investment in the textile sector in 1996 and 1997

resulted in overall positive growth rates for the Netherlands. Concerning the developments in Spain, it must be noted that the expansionist path that was described as regards employment has been coupled with a growth in investment.

- Looking at the development of the investment share in value added in Graph 26, it is interesting at first sight to see a growth of this ratio in several Member States, in particular in clothing (the Netherlands, Austria Denmark, Germany, France, Spain, Finland, Belgium) and to a lesser extent in textiles (the Netherlands and Austria). As all those countries, however, had a negative growth in value added during those years (cf. Graph 21), the graph only shows that investment fell to a relatively lesser extent during that period.
- While this might simply be due to the existence of investment cycles that are not easily interrupted or adapted, it may also show that the decline in value added was perceived as being cyclical whereas investment decisions were based on a more medium or long term perspective. The latter interpretation would imply that the entrepreneurs also count on a brighter future for the clothing sub-sector, possibly based on further productivity gains, leaving the challenge to the policy maker to assure framework conditions under which EU-based industry can freely compete on world markets.
- Also, it is important to notice that these growth rates are not always associated with a high level of this share, as the comparison with Graph 13 shows for instance for the UK.

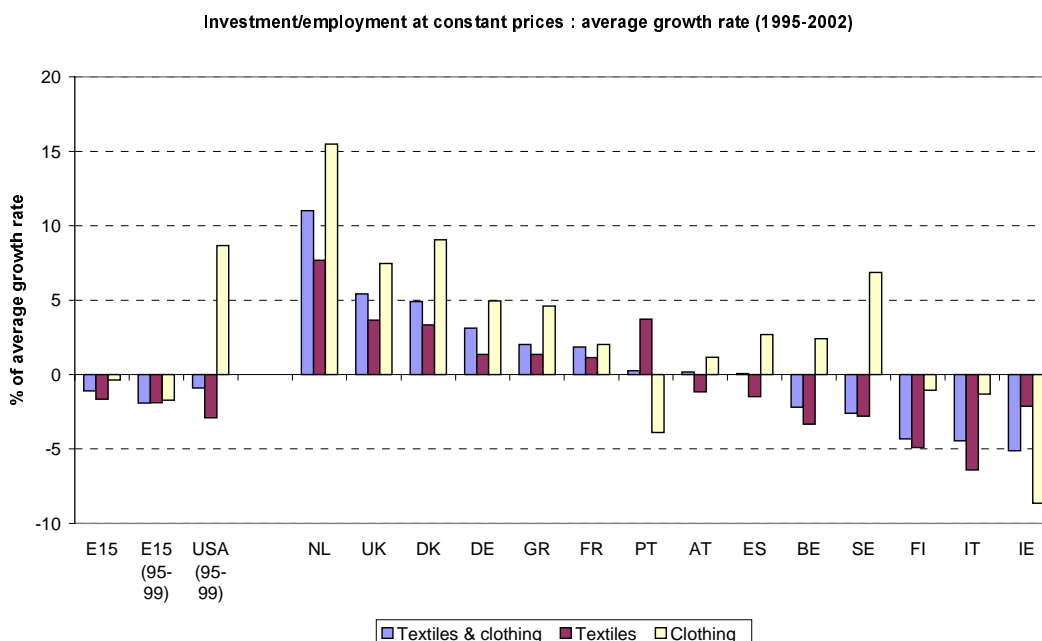
Graph 26



- The analysis has shown so far that investment following the signature of the ATC has mainly been modernisation investment, possibly aimed at increasing productivity. Although investment has declined, a trend which was aggravated by negative developments in 2001 and 2002, the industry has devoted considerable resources to maintain or even improve competitiveness.

- Graph 27 shows that when investment is corrected by declining employment figures, a positive trend can be noted. Clearly, the trend towards productivity enhancement that was described above is supported by a process of capital deepening, i.e. improving the capital base per employee in most Member States with a significant T/C capacity. Examples of concern are producer countries like Italy and Spain where a de-capitalisation in the textile sector took place, as is shown by Graph n 27 in combination with Graph n 14.

Graph 27

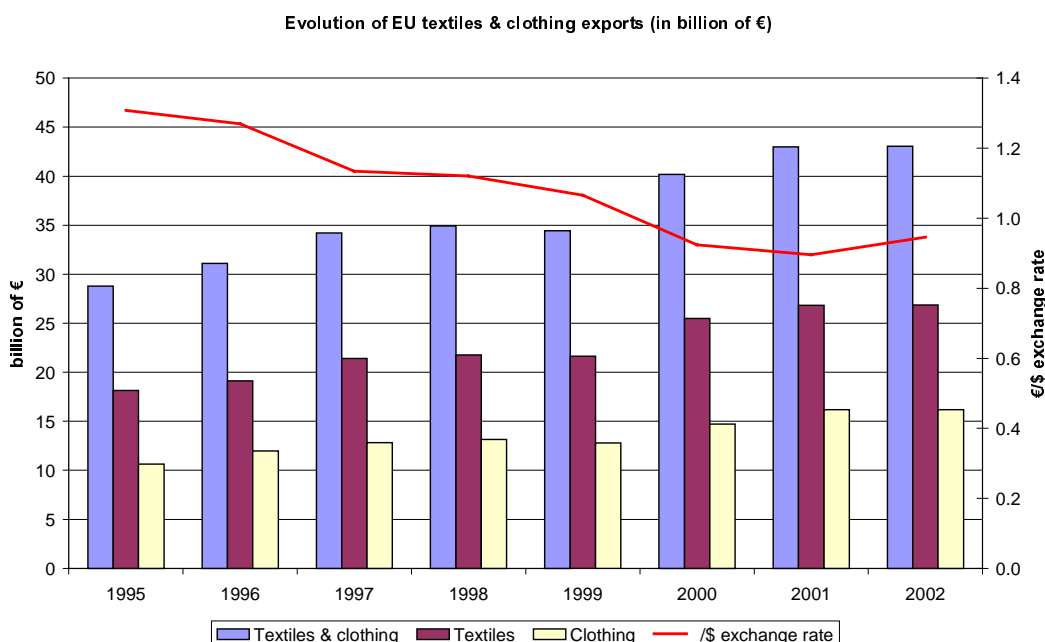


3.3. International Trade

- Any analysis of the development of the EU industry's competitiveness on the international market has to take into consideration the dramatic evolutions in the EU trade regime during the last decade. The traditional position of the EU T/C industry as a protected sector has been considerably eroded since the beginning of the nineties with a growing liberalisation of trade that will culminate in 2005 with the end of the quota regime. The major changes in the EU trade regime in the last decades have included:
 - the completion of the Internal Market and the accession to the EU of two T/C oriented and (relatively) low labour cost countries, i.e. Portugal and Spain;
 - the total liberalisation of trade with the CEECs, with Turkey and other countries from the Mediterranean rim meaning that several countries with a highly competitive T/C production capacity have enjoyed duty and quota free access to the EU market;
 - the improved access for developing countries through the General System of Preferences (GSP) regime has led to a significant reduction of applied tariffs for major T/C producers (and even tariff elimination in specific cases such as clothing from Pakistan);

- tariff and quota free access for Least Developed Countries including strong T/C producers such as Bangladesh;
- substantial relaxation of quantitative restraints through elimination of quotas as part of the staged dismantling foreseen in the ATC and, above all, through significant quota increases as a result of the application of generous annual quota growth rates and the use of exceptional flexibilities¹¹;
- the Accession of China to the WTO, creating a significant opening of the EU market for the world's largest and most competitive T/C producer.
- Apart from the liberalisation of the Pan-Euro-Mediterranean zone, which has greatly benefited the EU industry, the above EU market opening has not yet been matched by equivalent breakthroughs in market access conditions for EU T/C exporters. The Free Trade Agreement with Mexico led to substantial increase of EU T/C exports but they still remain relatively small as compared to the EU total trade volumes. China's WTO-related tariff concessions have created an interesting export potential to this huge market, however it has not yet materialised into major increases in exports both because commitments have not yet been totally phased in and because of the prevalence of NTBs. For the rest, tariffs remain prohibitively high in most developing countries' markets including those where the T/C industry has reached a high level of development. Even in the US, T/C market access is still hampered by several tariff peaks.

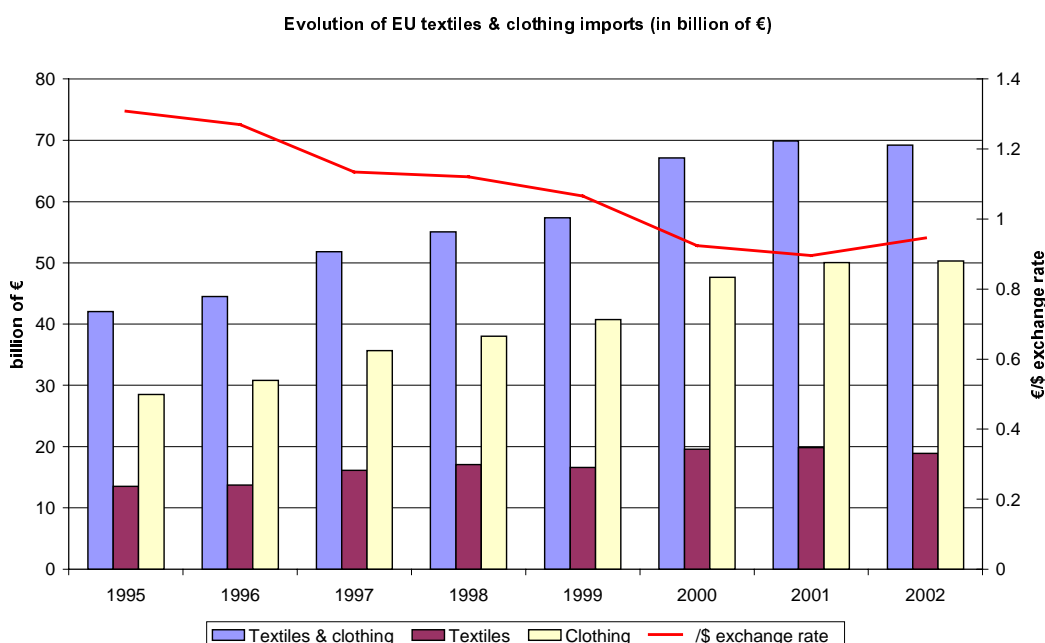
Graph 28



11 Quotas for India, Pakistan and Vietnam for example have been multiplied (in volume) by 2 to 3 between 1995 and 2002

- Graph 28, which presents the recent trend of EU exports, shows that despite the difficult market access conditions the EU industry has been performing very well on external markets, with a growth rate of extra-EU exports of around 35% since 1995. In absolute terms, the textile sub-sector has obviously led most of this growth. Interestingly enough, however, in relative terms the clothing sector has performed even better, with growth of 50%.
- The positive evolution in exports partially derives from the adjustment that the industry has undergone over the last decade in order to face the dramatic change in the competitive situation. It reflects the progressive re-location of clothing production. The surge of textile exports is indeed the result of increased outsourcing arrangements for clothing production with lower labour cost countries in particular the Pan-Euro-Mediterranean countries: textile trade with this zone has grown by close to 70% during the period. The growth of exports of technical and home textiles has been less substantial than the exports of textiles for apparel. In the area of clothing, the good industry performance is mainly due to the excellent position of “Made in the EU”-products in the US, Swiss and to a lesser extent Japanese markets.
- The graph also indicates the apparent strong correlation between the €/ \$ exchange rate and export performance. Exporters have benefited from the progressive depreciation of the € (or European currencies) since 1995. The current appreciation of the € since 2002 is therefore a source of concern. In addition, imports have been much less sensitive to exchange rate fluctuations, as can be seen on Graph 29 presenting the evolution of imports.

Graph 29

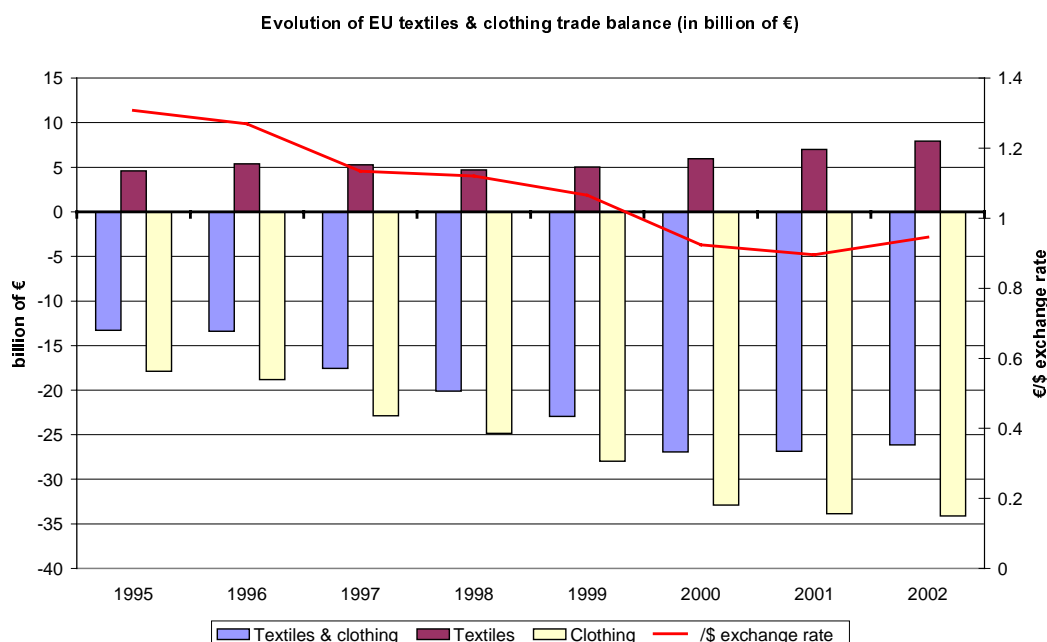


- In contrast to the evolution on the export side, the substantial growth of imports is mainly due to the clothing sub-sector (both in absolute and relative terms). It is actually the other side of the coin of the re-location process. Textiles sent for processing to the Pan-Euro-Mediterranean zone come back in the form of

garments and contribute heavily to the growth in imports. Imports of clothing from this zone have grown by close to 90% since 1995.

- De-localisation, however, does not completely explain the spectacular growth of imports in the last decade. As a result of the liberalisation process described above, imports from Asia have also grown at similarly high rates of around 90%. China, India, Pakistan, Indonesia, Bangladesh and, to a lesser extent, Sri Lanka, Vietnam and Cambodia have been the main winners of the EU market opening. The accession of China to the WTO at the end of 2001, has, however, significantly modified the market trend as all the above countries, except Pakistan, have since then experienced a drop in or sudden stagnation of their T/C exports. This evolution most likely anticipates the post-2005 increased concentration of EU imports in the hands of Chinese exporters, which are today both the most competitive and the most constrained in accessing the EU market.¹²
- Of note is the fact that the economic downturn of the past two years has also negatively affected imports and, despite the gradual appreciation of the €, has put a – probably temporary – halt to the dramatic increases of the nineties
- Graph 30 presents the trade balance, which significantly deteriorated in the nineties to reach a record level of more than -25 billion € at the beginning of the millennium as a result of the huge trade deficit in the clothing sector. The textiles sector taken separately shows in contrast a growing positive trade balance.

Graph 30



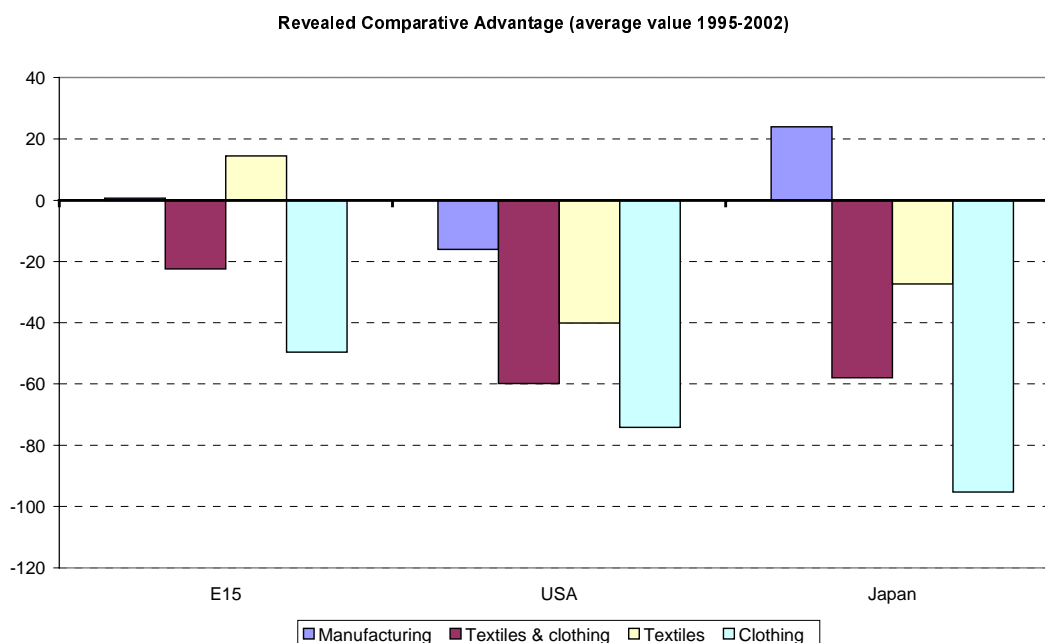
12 In 2002, China had 21 fully used quotas compared to 10 for India and 6 for Pakistan. In addition, Indian quotas are much bigger (between 2 to 10 times more!) in absolute terms than Chinese quotas, obviously irrespectively of their respective export capacity.

- While the EU trade surplus with the NAFTA area, in both textiles and clothing, has more than doubled since 1995, the trade deficit with the Pan-Euro-Mediterranean area has more than tripled in the same period while the deficit with China has doubled.
- The trade balance figures clearly reveal the impact of the adjustment process and the growing importance of Pan-Euro-Mediterranean integration, as well as the capacity of low labour cost exporters to take full advantage of the progressive liberalisation of the EU market.
- Graph 31 provides an additional trade-related indicator of the EU's competitiveness in comparison to Japan and the US. While the trade balance analysis set out above is suitable for investigating the development of trade performance over time, it is of limited use, however, for an international comparison or a comparison between different sectors, as in both cases the value for the trade balance needs to be put in relation to the trade volume.
- If, for instance, in one country the trade balance in the sector is 100 because exports amount to 1,000 and imports are 900, one can argue that this figure reveals a higher competitiveness of the sector than it would in another country where the trade balance might also be 100 but as the result of the difference of exports that are 10,000 and imports that are 9,900.
- In the indicator “Revealed Comparative Advantage” (RCA) this size effect of the sector is eliminated by calculating the trade balance (exports in value minus imports in value) as a percentage share of the total trade volume in the sector (exports in value plus imports in value). With X denoting exports and M imports, it is, thus, written as

$$RCA = (X-M)/(X+M)*100$$

- It should be noted that if the trade balance is negative, the RCA is also negative. In that case, if in a comparison one sector has an RCA that is less negative than another, one could say that it has a relative comparative advantage.

Graph 31

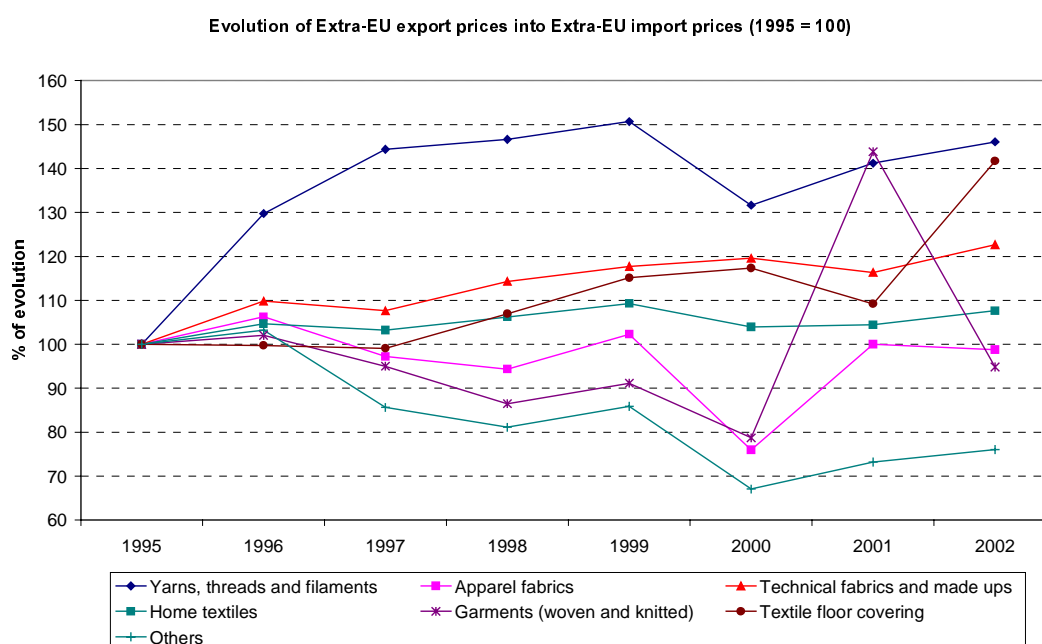


- Graph 31 shows clearly that in T/C, the EU has more RCA than the US or Japan. This is due to two reasons. Firstly, in textiles the EU has a positive trade balance while the US and Japan both have a negative trade balance, which confirms, once again, the high competitiveness of the EU textile industry as already described above. Secondly, while all developed countries import much more clothing than they export, it is revealed that the European RCA in the clothing sector is much less negative. This might lead to the conclusion that the EU clothing industry is more able to compete on world markets, at least in some segments of total clothing.
- In a comparison between the US and Japan, one can note the relatively low RCA of Japan. This might be caused by the fact that the Japanese industry is much less protected than its US-based competitors, as there are neither quotas nor high tariffs in Japan, while the US still has very restrictive quotas and a series of tariff peaks.
- It is worth noting that when working under similar economic and trade environments, as is the case with the US, the EU industry has shown a better capacity to compete in the global market.

3.4. Trends in quality competitiveness

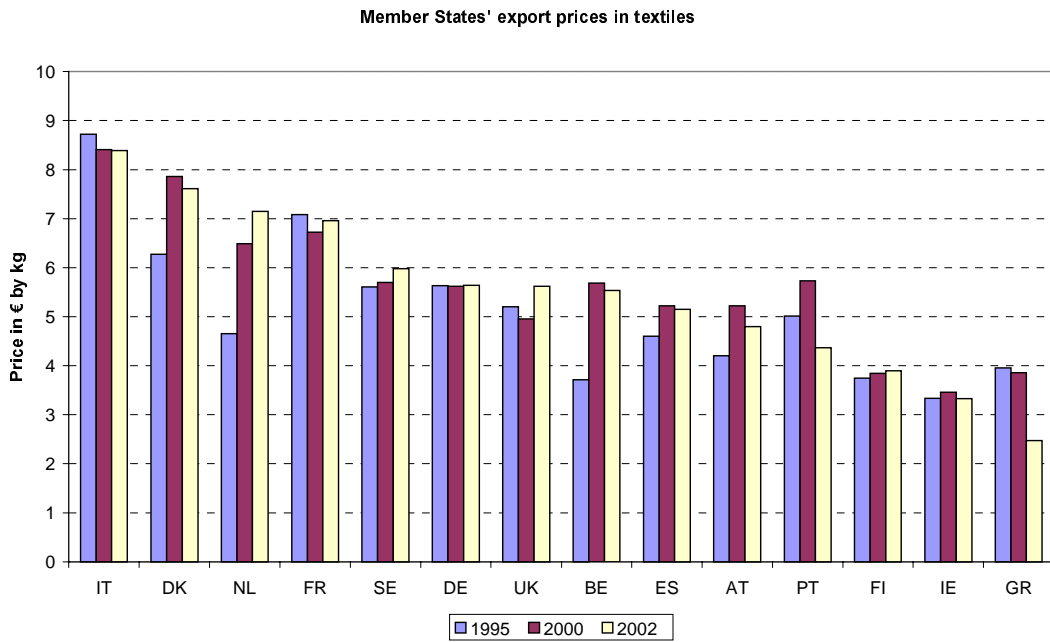
- In order to measure the evolution of the positioning of the EU industry in terms of quality, Graph 32 presents the evolution of the relative unit values for the 7 product groups identified under the section on quality competitiveness. The ratio unit value of export/unit value of imports for 1995 has been used as the reference. The growth of the indices indicates that the EU has improved its quality position (as described in the section on quality competitiveness), while a decrease indicates the contrary.

Graph 32



- Yarns, floor coverings and technical fabrics and made ups have significantly upgraded their quality positioning as compared to imports. This is an indication of the EU's leading position in what are nevertheless small (or niche) export markets. Garments, a category which covers a wider range of products, has also improved its positioning though to a much lesser extent, indicating that some of the EU competitors are gradually able to compete in higher quality markets. Moreover, EU producers are world leaders in markets for technical/industrial textiles and non-wovens (for example industrial filters, geotextiles, hygiene products, or products for the automotive industry or the medical sector).
- The quality positioning of the EU has not improved in the case of apparel fabrics and has even deteriorated in the case of home textiles, which indicates an intensification of competition. One should not lose sight, however, of the absolute values as illustrated in Graph 20, demonstrating that the EU industry still retains a comfortable margin in terms of quality positioning.
- Graph 33 and Graph 34 present a comparison of unit values for different Member States, allowing a comparison of their respective quality positioning. The integration of different time series permits the observation of the evolution of positioning over time. For the purpose of this graph, the exports of one country to the 14 other Member States have been included in order to broaden the product sample. It is to be noted that data for Greece and the Netherlands (clothing only) could not be included because of statistical inconsistencies.

Graph 33



Graph 34



- Another remarkable feature of this graph is the quality upgrading that has taken place in many countries since 1995. The most spectacular being by the Portuguese clothing industry, which has doubled the unit value of its production in 7 years to take a surprising leadership in the EU, coming from the lower end of the quality spectrum in the mid-nineties. Denmark, the Netherlands, Austria and Belgium have also upgraded substantially their textile production thanks to their strategy of specialising in niche markets. The UK and Spain's gradual improvement both in textiles and clothing is also noteworthy.

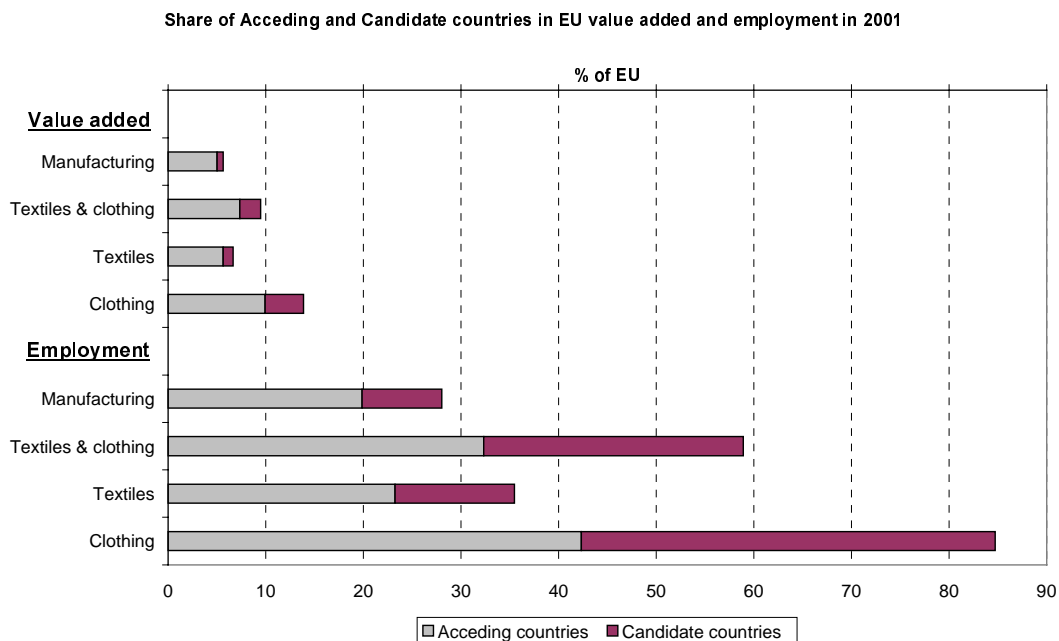
- France and Germany have managed to keep constant their unit value at a relatively high level but one can observe that they have to face increasing competition from other Member States.

4. THE NEW DIMENSION OF THE T&C INDUSTRY IN THE ENLARGED EUROPE

4.1. The relative T&C weight of the future Members

- In the Acceding and Candidate countries, textiles and clothing have traditionally been a major sector in manufacturing industry. Graph 35 gives a snapshot of the importance of the sector in these countries in comparison to the EU15. The aggregate considered here is C12, which is composed of the 10 countries acceding to the European Union on 1 May 2004, plus Romania and Bulgaria. The graph thus gives an idea of the impact that enlargement will have on the sector, and the challenges which are emerging for industrial policy.

Graph 35



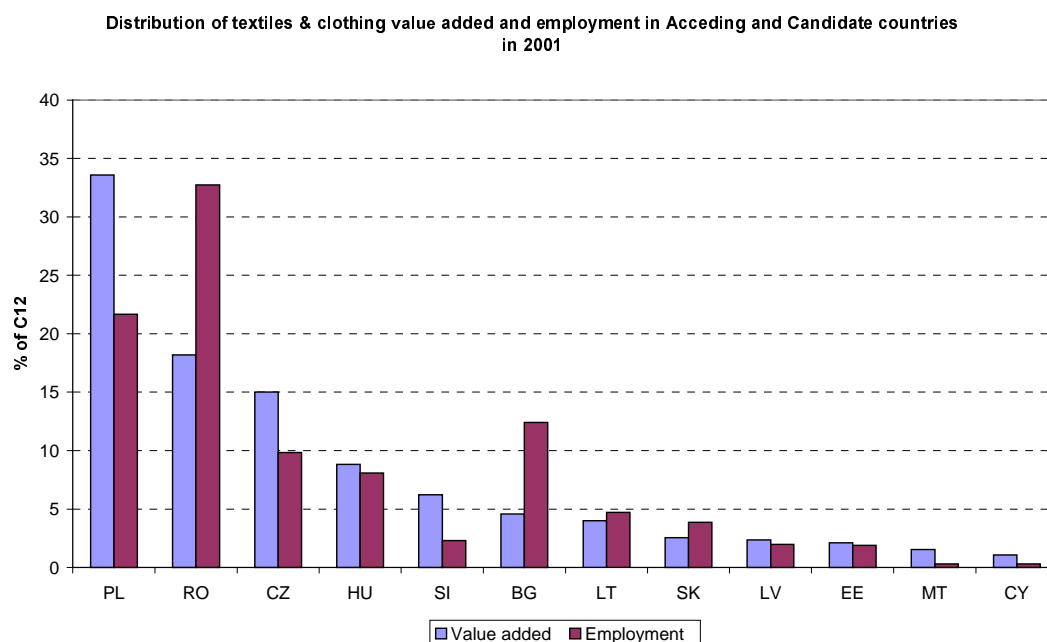
- With a population slightly above 100 million, amounting to almost 30% of the population of the EU15, in an enlarged European Union these countries will be strongly underrepresented in terms of their value added. With 5.6% of the EU15 level, this is particularly true for manufacturing as a whole but to a lesser extent also for T/C, where these countries produce less than 10% of the EU15 value added, as can be seen in the upper half of Graph 35. As to the relationship between the two sub-sectors, textiles and clothing, relatively less of the capital-intensive textile production is located in Acceding and Candidate countries, whereas clothing amounts to roughly 14%.
- This relation between new and old Member States changes completely when employment figures are considered, as is done in the second half of Graph 35. In terms of employment, the T/C sector plays a particularly important role and the figure for the clothing sub-sector is especially striking. In the Acceding and Candidate countries, employment in 2001 amounted to approximately 85% of clothing employment in the EU15. Roughly half of this employment is located in Bulgaria and Romania alone.

- The rather low relation in value added and an extremely high relation in employment compared to the EU15 gives a first idea of the huge productivity gap in the sector that prevails in the future Member States. This productivity gap will be discussed in more detail below.

4.2. Location and specialisation

- Within these 12 countries, roughly three quarters of T/C production is located in the large countries Poland, Romania, the Czech Republic and Hungary. Clearly, Poland – being the biggest country with a population of close to 40 million people – is also the most important new location for production in the enlarged Europe.
- Graph 36 also shows the major challenge ahead in a second round of enlargement when Romania and Bulgaria join. Those two countries alone contribute to roughly half of the T/C employment in the C12. Lithuania and Slovakia also contribute proportionately more to employment than to value added.

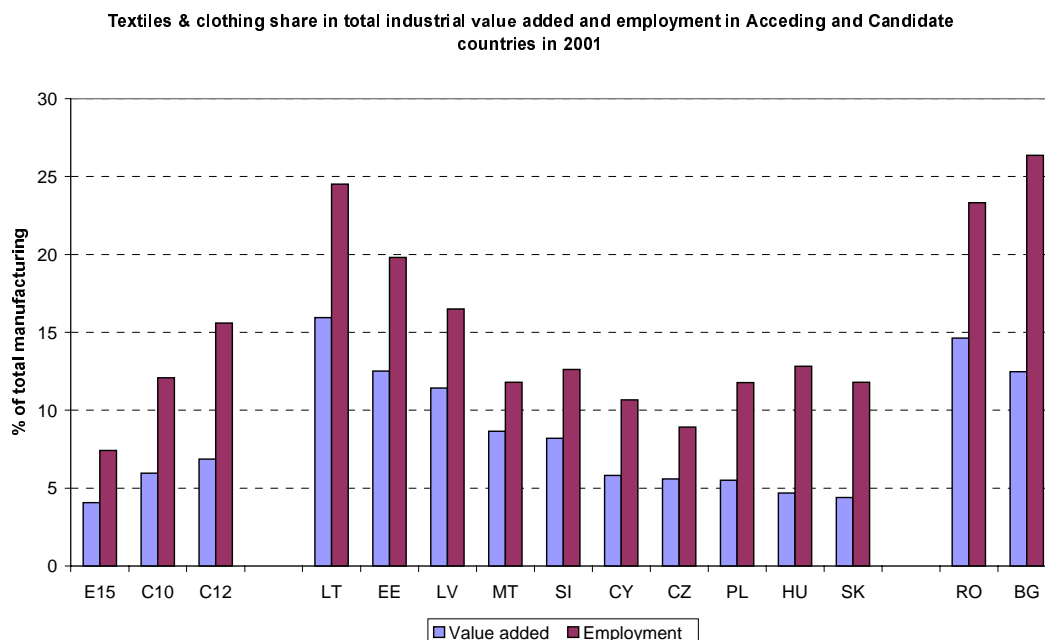
Graph 36



- In terms of specialisation in T/C in relation to total manufacturing within each country, Graph 37 shows that in all Accessing and Candidate countries the T/C industry is more important than in the EU15 on average. This is true in terms of value added but in particular in terms of employment.
- In the group of C10, the three Baltic States (Estonia, Latvia and Lithuania) are most specialised in T/C. In relation to present Member States, they are comparable with Portugal, where this share is roughly 13%. The Accessing countries that are least dependent on T/C are Cyprus, the Czech Republic, Poland, Hungary and Slovakia. They would compare with Spain and Belgium (around 4-5%).

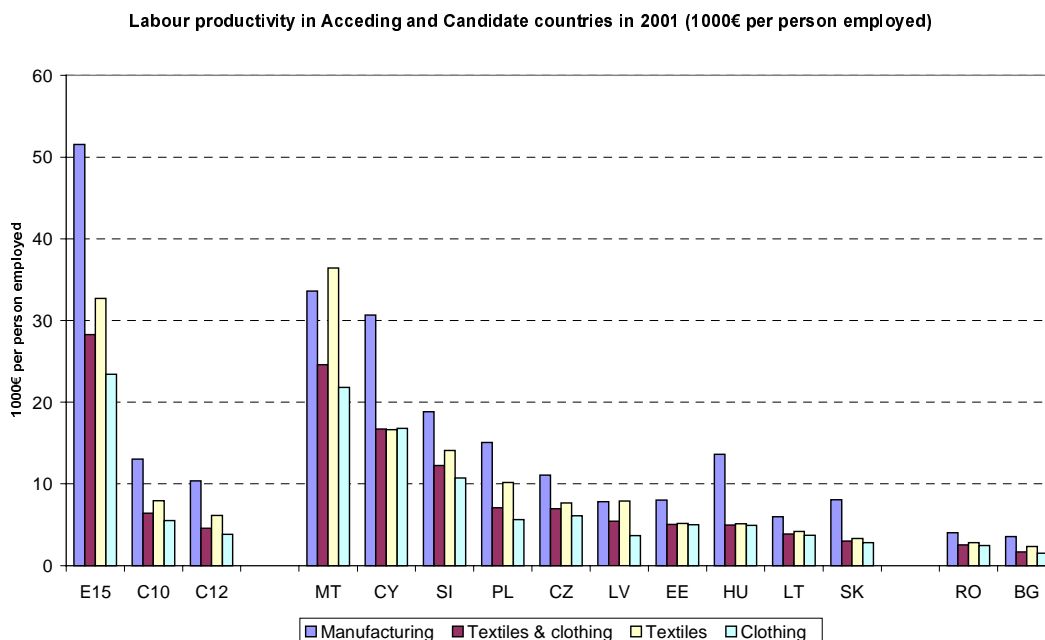
- A similar picture is obtained when employment is considered. Again Lithuania has a dependence on T/C comparable with Portugal, where for this indicator the ratio of T/C to total manufacturing also amounts to almost 25%.

Graph 37



4.3. Productivity

Graph 38

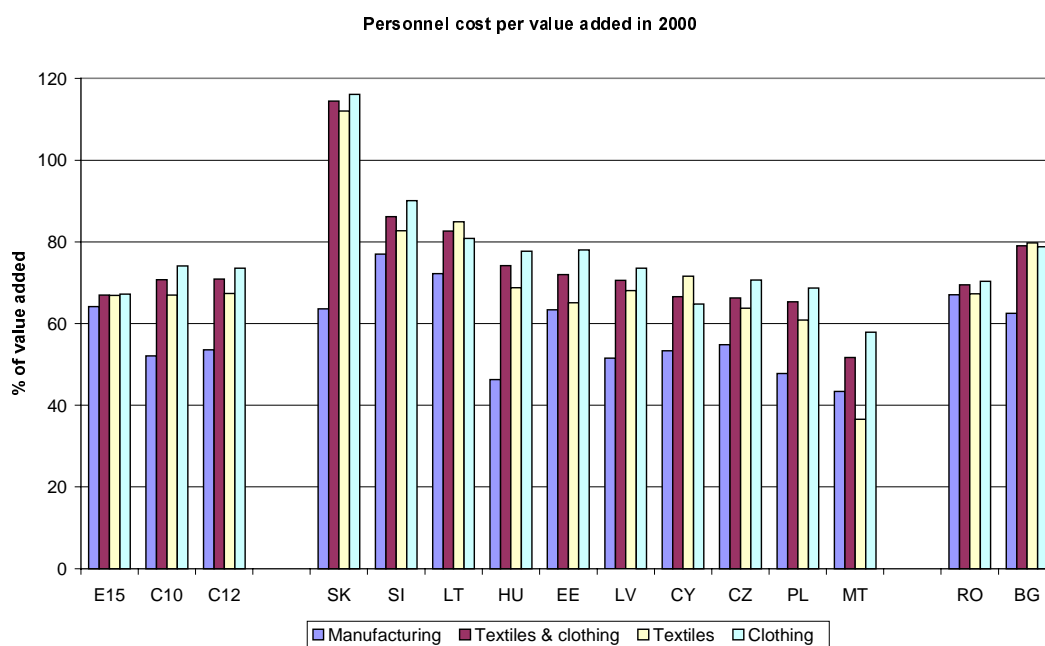


- The above figures for value added and employment have already given an impression of the productivity gap in the sector that exists between EU15 on the one hand and the Acceding plus Candidate countries on the other. Graph 38 shows this challenge clearly. Only the Maltese labour productivity is

comparable to average EU15 labour productivity, all others rank very much below this reference value¹³. Cyprus and Slovenia, among the most productive in the C12, have a labour productivity only slightly higher than Portugal, which ranks last in the EU15 (with eleven thousand € per person employed). At the bottom end, there are Romania and Bulgaria.

- This productivity gap will form a major challenge to industrial policy in the European Union in the medium term. It must be noted, however, that until now the industry in the Acceding and Candidate countries was at least partially able to compensate for its low productivity with relatively low labour costs, as can be deduced from Graph 39.
- This graph shows that in 2000 the personnel costs per unit of output were, on average, slightly higher in the C12 than in the EU15. This core indicator for price competitiveness gives a relatively favourable cost situation for Malta, whereas Poland, the Czech Republic and Cyprus approximately meet the EU15 average.

Graph 39



- Following a sharp decline in value added in 1998, T/C producers in Slovakia have run negative profits (personnel costs are higher than value added, the relationship is thus above 100%), indicating a major medium-term structural problem. Either it will be possible for Slovakia to make better use of the human resources available in the sector leading to higher production and value added or – assuming limitations to the extent that wages can adjust downward – employment will fall and major lay-offs in the sector can be expected. Also, in

¹³ Malta has a very small industrial basis and data has to be interpreted with care.

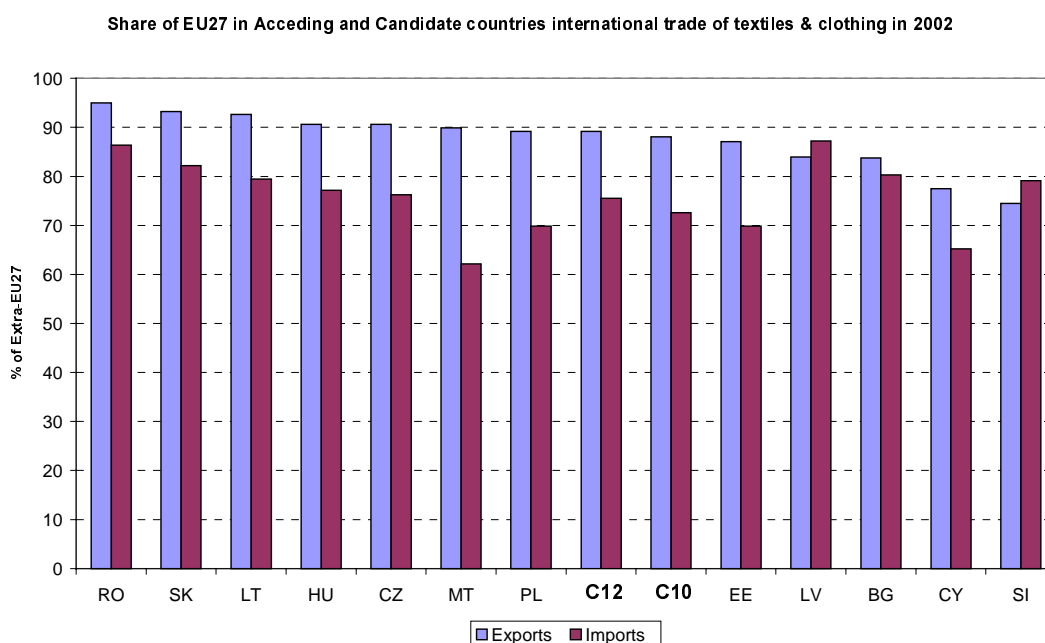
Slovenia, Lithuania, Hungary, Estonia and Latvia personnel costs per unit produced are relatively low – as well as in Bulgaria and Romania¹⁴.

- Overall, these figures indicate a major challenge for the European policy maker. In a situation where – despite the relatively low wage level – the relative cost situation in the Accessing and Candidate countries is already not particularly favourable due to low labour productivity, one can expect a substantial aggravation of this situation, as wages will have the tendency to rise due to the integration of these countries into the Internal Market.
- Unless fundamental measures are taken to reduce the productivity gap in the new Member States, a series of layoffs in the sector can be expected. While to some extent this is true for total manufacturing, it is important to notice that the productivity gap is particularly pronounced in T/C. The European policy maker therefore needs to focus on supporting the T/C industry in its efforts to improve productivity and on providing support to its structural adjustments, e.g. by supporting textile regions in their efforts to implement structural changes and/or by helping those affected by structural adjustment to cope with it.

4.4. International trade structure

- Graph 40 shows the high economic integration of the Accessing and Candidate countries with the European Union in the T/C sector. Almost 90% of extra-C12 exports in T/C stay within the EU27 and more than 75% of total C12 imports come from the EU27.

Graph 40



¹⁴

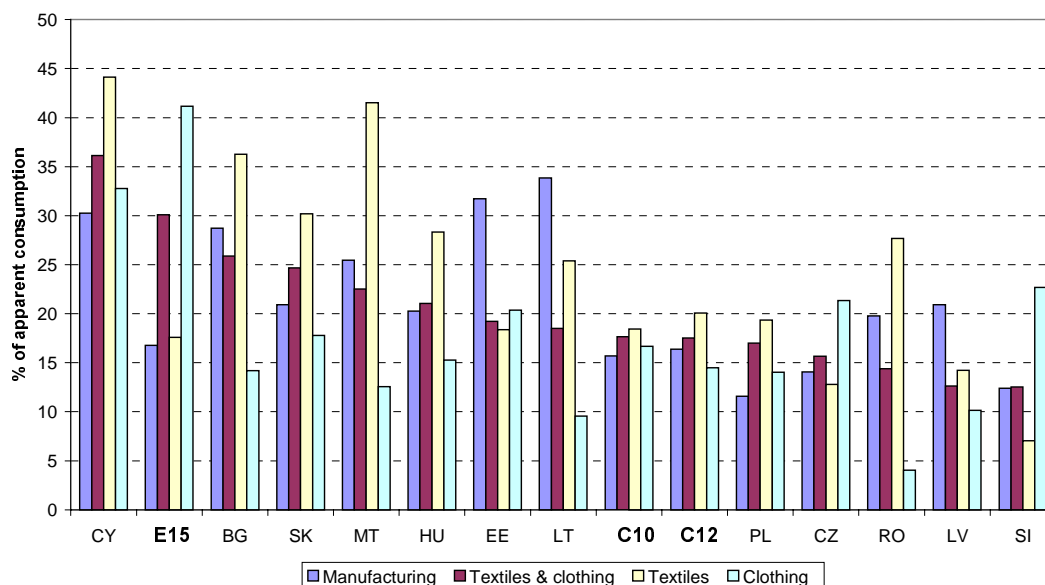
As all data is expressed in euros, the international comparison has to be considered with care due to the importance of the exchange rate between the euro and the other national currency.

- While this high level of integration shows that businesses have already anticipated enlargement in their business strategies, it also indicates the high vulnerability of these economies to the changes ahead in the international trade regime, i. e. the dismantling of the quotas in 2005.
- Strong competitive pressure can be expected on those C12 exports to the EU market which fall under quotas that are still to be liberalised. Here, a more detailed analysis looking at individual Categories for C10 shows in fact that in 2002 exports in Categories 1-9, 12-13, 15-16, 20, 26, 29, 31, 78, 83 and 163 accounted for more than 50% of total Extra-C10 exports¹⁵. To the extent that these exports will be crowded out by products from Asia and other strong competitors, this is likely to lead to structural problems in the C12 economies. Again, *ceteris paribus* this will negatively influence value added, and productivity will decrease further.
- In addition, when looking at the competitive position of the Acceding and Candidate countries from the import perspective, vulnerability to the changes ahead can be detected. In that context, Graph 41 gives an overview of import penetration from extra-EU27 in Acceding and Candidate countries. With around 20%, import penetration for C12 is rather low compared with the average value for the EU.
- Several reasons might be behind this fact: First, the distribution sector in C12 might be less concentrated than in the EU15 while import penetration correlates positively with concentration of distribution. The EU has seen an immense concentration in the distribution sector in the late 90s, which may only partially have taken place in the Acceding and Candidate countries until now. Secondly, banking on their lower labour costs, the Acceding and Candidate countries have until now competed to a larger extent with cheap imports in the lower quality segment of the market. This is underlined by the fact that in the labour-intensive and low value-added clothing sub-sector import penetration is lower than in textiles. Notable exceptions in that context are Estonia, the Czech Republic and Slovenia, where import penetration has been higher than in the capital-intensive textile sector. Thirdly, while low tariffs do not shelter the EU market from international competition and quotas have been phased out progressively since 1995, the relatively comfortable protection by tariffs has so far remained principally unchanged in the Acceding and Candidate countries.

15 All those Categories are highly utilised by China.

Graph 41

Import penetration from Extra-27 in Acceding and Candidate countries in 2002



- No matter which of the three explanations is the most important shaping factor, the data on import penetration shows clearly the extent to which integration into the Internal Market will hit the T/C industry in the Acceding and Candidate countries. Whether it is the additional competition stemming from the growing importance of sourcing decisions by a highly concentrated multinational distribution sector, or the fact that labour cost advantages will be eroded in the medium term following enlargement, or the fact that after acceding to the European Union and after 2005 the new Member States will have neither tariff nor quota protection, the T/C sector in those countries will face major structural challenges as already described above in the context of the productivity gap.

Annex 1: Methodological notes

- The present analysis has reviewed the competitiveness performance of the European textile and clothing industry, including an analysis of the major changes ahead due to the enlargement of the European Union in May 2004 and the abolition of the remaining import quotas on 1 January 2005 as agreed in the WTO-Agreement on Textiles and Clothing (ATC).
- During the elaboration of this analysis, serious data constraints were encountered. At this point in time, no single source provides all the statistical information necessary for such an exercise. When choosing which data sets to use, we tried not only to ensure that data is reliable but also that compatibility between the different sources is assured as much as possible. Against this background we decided to rely on public, standardised data as much as this was possible. As the industry classification used by Eurostat and the OECD are harmonised, we chose to base the analysis on these data sets to the extent that they were made available to us.
- In concrete terms, this means that data for the EU15, and the Acceding and Candidate countries were in principal taken from Eurostat Structural Business Statistics (SBS) which includes all enterprises. There, total manufacturing is defined as NACE Rev.1 Section D, textiles as NACE Rev.1 Division 17 and clothing as NACE Rev.1 Division 18. Clothing therefore includes leather and fur clothing items.
- In this context, we would like to emphasise the particular support that we have received from the Eurostat SBS unit during this exercise. They provided estimates for the missing SBS data points between 1995 to 2000, combined this data set with 2001 SBS preliminary data and estimated values for 2002 on the basis of values from Eurostat Short Term Statistics (STS). A reliability warning has therefore to be issued at this stage, as the possible limitations associated with such estimations have to be kept in mind while looking at figures for 2002.
- Furthermore, two exceptions need to be mentioned:
 - First, missing data points for investment were not estimated by Eurostat because investments were considered to be too volatile. We decided, consequently, to include investment data for the EU provided by the industry federation Euratex. Their industry classification is roughly compatible with NACE Rev.1 as described above. However, exact quantitative values especially for combined indicators, e.g. the investment share in value added need to be considered with some caution.
 - Secondly, all trade data has been extracted from the Eurostat Comext database. It is important to notice that the trade data relates to products and does thus not follow the sectoral classification of industry. In the trade context, textiles and clothing is Chapters 50-63 (without Category 154 - raw materials) of the Combined Nomenclature (CN), textiles is defined as Chapters 50-60 plus 63 and clothing is Chapters 61 and 62. Total Manufacturing is defined as CN Chapter 25-99 of the Combined Nomenclature.

- This mix of product statistics and industry statistics may in some cases be problematic because of secondary activities of enterprises that are included in industry statistics. This problem is, however, only of particular importance when industry statistics are considered at a highly disaggregated level. Again, it should be noted that especially combined indicators, e.g. export share in turnover, need to be considered with some caution.
- As regards the industry statistics for US and Japan, they have been taken from the OECD database STAN. It was not possible to also take the data for Member States, Acceding and Candidate countries from the OECD database because only a very few of these countries are available there. However, as the industry classification is fully compatible with NACE Rev.1, the data should be compatible and comparable with the Eurostat data from a statistical point of view. At the moment when this analysis was carried out, the data provided by the OECD went up to the year 2000. The comparison of developments between the EU and the US were consequently made up to this year only.
- Trade statistics for the US and other partners were available up to 2002 from the United Nations' COMTRADE database. In analogy to the Eurostat database COMEXT, these product statistics are based on the Combined Nomenclature and the definitions and descriptions set out above apply for the US as well.
- Whenever value added in constant prices is calculated, the Domestic Output Price Index available for the EU, the US and Japan in the Eurostat STS statistics has been used (Eurostat receives this data for US and Japan from the OECD). The only exception is the Domestic Output Price Index for Total Manufacturing in the US, which has been taken from the US Bureau of Labor Statistics in US, www.bls.gov. Investment in constant prices has been deflated using the Price Deflator for Gross Fixed Capital Formation available in the AMECO database in DG Economic and Financial Affairs.

Annex 2: Product groups and corresponding ATC categories

Yarns, threads and filaments	1,22,23,41,42,47,48,56,62,115,125A,127,129,130,A,B,131,133,148A,B
Apparel fabrics	2,3,32,35,36,37,43,49,50,53,61,62,63,65,117,123,135,136,137
Technical fabrics and Finished items	33,34,67 A,76,90,91,93,94,95,96,97,98,99,100,101,109,110,111,114,121,122,134,139,140,145,146, A B C,153,163
Home textiles	9,19,20,38 A B,39,40,66,67,112,113,118,120,141,160
Woven garments	6,7,8,14,15,16,17,21,26,27,29,31,68,72,78,77,84,85,87,88,159,161
Knitted garments	4,5,10,12,13,18,24,28,69,70,73,74,75,83,86,156,157
Textile floor coverings	58,59
Others	60,61,125 B,127 B,132,138,142,144,149,150,151 A B,152