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COMPETITIVE ANALYSIS

MANUFACTURING SURVEY

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COMPETITIVE ANALYSIS MANUFACTURING SURVEY

1. Romania's sectoral comparative advantages

1.1 Overview of Romanian manufacturing sectors

Manufacturing holds an important place in the Romanian economy. Its share as of 1999 in GDP was of over 20%, and it employed as of May 31, 2000 approx. 1573 thou persons, or around 35% of total employees. The share of manufacturing in industrial production was of 80.6% in 1999, its share in total employees in industrial sectors was of 83.1%, and it accounted for 73.9% of investments in industry.

The main sub-sectors within manufacturing are (share in total industry as of 1999):

- Food products and beverages 18.4%
- Road transport means 10.3%
- Metallurgy 8.3%
- Oil processing, coal coking and treatment of nuclear fuels 6.8%
- Textiles and textile products, ready-made, leather articles and footwear 6.5%
- Chemical, synthetic and man-made yarns 5.6%
- Wood processing, furniture and thereof 5.6%
- Machinery and equipment 4.5%

Manufacturing accounts for most of the exports (USD 8004 million in 1998 as against USD 8302 million total exports); here the highest export volumes are registered by *Textiles, fur and leather wearing apparel* (USD 1786 million in 1998) and *Metallurgy* (USD 1423 million)[1]. If broken up in more detail, the top ranking sectors at export (as of 1999) were *textile clothing (NACE 182 and 174)*[2], followed by *furniture (NACE 361), raw processing of wood (NACE 201)* and *footwear (NACE 193)*. Around 20% of companies in these fields exported in 1999[3]. This aspect of Romania's foreign trade, that it has started to export products with a lower degree of processing, while reducing its complex exports, is due mainly to the lack of medium and long term financing capacity on the Romanian market.

[1] See Annex 4

[2] NACE is a statistics classification code used by EU for economic activities. This code was also adopted by Romania and it is compatible with Romania's classification code CAEN.

The dramatic fall in industrial production that took place in the first decade of transition was true also for manufacturing. Thus, the level of industrial GDP of 1990 was never attained again, the peak being in 1996 with 88.7% of the 1990 level. In 1998, the level was of only 79% of the 1990 level.

Privatisation was rather slow. However, as of 1999, the private sector achieved 54.4% of GDP, 67.5% of exports and 71.9% of imports. The privatisation process is practically completed in the following branches: clothing; leather goods and footwear; furniture; cement industry; fertilisers; tyres industry; varnishes and paints manufacturing. Sectors with an advanced degree of privatisation are: wood processing; metal constructions and metal products; medical, optical and precision instruments and apparatus; car industry. At present, the biggest privatisation projects under way envisage the privatisation of large industrial companies from: Metallurgy (SIDEX Galati), crude oil industry etc.

The private sector's share in exports increased also constantly, the most dynamic sectors from this point of view being: *Vegetal oils and fats*, *Paper and articles thereof*, *Common metals and articles thereof*, *Textiles and articles thereof*, *Transport means*. However, as regards the importance in the volume of exports, the group that stands out as having an important share of total exports of the private sector is *textiles and articles thereof* (over a quarter of exports). This sector is followed by *Common metals and metal products*.

The investment indices (1990=100) show an increase of investments in manufacturing, after a fall during the first transition years, increase higher than per total economy (see Annex 2). Here, the highest increases were recorded at *Publishing, printing and reproduction of recorded media* (11.1 times in 1998 as against 1990), *Tobacco industry* (645.2 in 1998 as against 1990), and *Means of road transport* (523.8 respectively). Alarming investment levels were at *Machines and equipment* (39 in 1998 as against the 1990 level), *Other means of transport* (53.7 respectively), *Radio, TV and communications equipment and apparatus* (62.4) and *Electric machinery and appliances* (66.3).

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[3] see Annex 6

The productivity indices per employee (see Annex 3) in manufacturing and total economy knew an increase in 1996 as against 1995, followed by a steady drop in 1997 and 1998, the latter level being under the 1995 level. However, differences among sectors were high. Thus, sectors like *Means of road transport, Tobacco industry, Electric machinery and appliances* recorded important increases in labour productivity, while significant drops were registered at *Metallic constructions and metal products, Chemistry and synthetic and man-made fibres, Rubber and plastics processing.* A surprising evolution can be found here at *Textile, fur and leather wearing apparel,* were increasing productivity indices in 1996 and 1997 were followed by a dramatic fall in 1998 (79.5 of the 1995 level).

During 1990-1999, foreign direct investments in Romania reached a level of USD 4.36 billion (plus another USD 2 billion invested in privatisation), level far from the economy's real potential, as well as from the performances of other CEECs: Poland (USD 39 billion), Hungary (USD 21.5 billion), Czech Republic (USD 12.5 billion).

The explanation for the relatively low level of foreign investment in Romania can be found in the later start and slower pace of privatisation in comparison to other countries in the region. Large banks, public utilities, large companies started to be offered on sale only during 1997-1998.

Analysing the evolution of FDI in Romania, we can observe that:

- Up to 1996, Romania had a stable, even attractive legal framework as regards FDI, but the privatisation offer was very low, practically excluding public utilities or banks. As a result, there was a high number of foreign investors (over 50,000), the highest in Eastern Europe, but these were small investors, most of them natural persons
- During 1997-1999 we see the reverse of the situation, i.e. the legal and institutional framework becomes extremely unstable, although the privatisation offer increases tremendously. The effect of this combination however was overall negative, the level of FDI reaching during 1998-1999 the lowest levels of the entire analysed period.

The main limit to the FDI promotion activity was the lack of an industrial policy. The entire activity of attracting foreign direct investments was aimed mainly at general promotion measures, consultancy services and the promotion of some micro-economic projects. The repeated down-ratings of Romania by the main rating agencies have also had a negative impact.

A feature of foreign direct investments in Romania is the polarisation based on the size of capital. Thus, around 1% of legal entities with foreign capital holds over 80% of the invested capital, while 95% of their number hold 11.66% of invested capital. Over 80% of total FDI are represented by investments over USD 500 thousand. This polarisation can be explained by the imperfect functioning of the market mechanisms and institutions. Large investors can play on such a market because they can afford long-term strategies involving losses during the first years, and they also have access to the Government. On the other hand, small firms and individual investors have a minimum inertia, are not involved in important investments and can quickly act according to conjecture. In this context, the increase of the share of medium-sized firms within foreign investors would indicate a more normal functioning of the Romanian economy.

FDI has already had an important impact on several industrial branches:

- ***Car industry***: the two largest car factories in Romania were privatised, being bought by DAEWOO (S. Korea) and RENAULT (France). Other investors followed in the component industry: pumps, suspension systems, electrical components. The tyre industry also attracted CONTINENTAL, the fourth largest tyre producer.
- ***Machine building industry***: Daewoo Heavy Industries (shipyards), Koyo (Japan) – ball bearings, Timken (USA) – heavy ball bearings, ABB Asea Brown Boveri – power equipment;
- ***Chemical and petrochemical sector***: Lukoil (Russia), Shell, Elf-Aquitaine (France) – oil industry; Unilever – detergents;
- ***Cement industry***: Lafarge Group etc

- ***Food industry***: Danone – dairy products, Kraft Jacobs Suchard – chocolate, soft drinks, Parmalat – dairy products, soft drinks, Coca-Cola, Pepsi-Cola – soft drinks;
- ***Clothing*** – Stefanel, Steilmann and many others.

Table 1.1.1 Dynamics of FDI in Romania during 1990-January 2000

Year	*Registration of companies with foreign capital*		*Value of subscribed social capital*		*Of which: social capital in foreign currencies*	
	Number	*%*	*ROL million*	*%*	*Thou. USD*	*%*
Total	**72052**	**100**	**48953167**	**100**	**4435041.9**	**100**
1991	6281	8.7	11962460	24.4	699696.2	15.8
1992	12213	17	1630266.5	3.3	361845.9	8.1
1993	10812	15	2929244.8	6	411699.4	9.3
1994	11557	16	5308632.3	10.8	900995.3	20.3
1995	3778	5.2	2344924.9	4.8	315592.3	7.1
1996	4023	5.6	7174432.7	14.7	703450.1	15.9
1997	5768	8	6496990.8	13.3	504899.6	11.4
1998	9162	12.7	4595170.2	9.4	237370.4	5.3
1999	7902	11	6013116.7	12.3	282461.4	6.4
2000*	556	0.8	497928	1	17031.4	0.4

Source: National Office of Trade Register, Statistical Synthesis no. 23
* data only for January

One can note that the highest volume of FDIs was attracted during 1994 and 1996, with a low in 1998. As regards the number of investors, the highest number was recorded in 1992 and 1994, and the lowest in 1995. We can see that 1994 was the best year as regards foreign investments, both in terms of volume and number of investors.

Table 1.1.2 Structure by activities of FDI during Dec.1990-March 2000

No.	*Field of activity*	*Weight by number of companies with foreign capital %*	*Weight of subscribed capital in hard currency %*
1	Industry: extractive, manufacturing, machine building, machines and equipment	8.6	27.3
2	Light industry	2.9	3.6
3	Food industry	4.7	14.2
4	Agriculture	2.7	2.8
5	Constructions	2.3	2.1
6	Retail trade	24.4	8.4

7	Whole sale trade	41.2	16.0
8	Tourism	3.4	2.1
9	Transport	1.0	0.9
10	Professional services	8.8	22.6

Source: Foreign investment in Romania. Statistical synthesis no. 26, National Office of the Trade Register

Heavy industry received the highest share of subscribed capital, while most firms with foreign capital were recorded in trade activities. Another important sector as regards subscribed capital is that of professional services. As regards manufacturing, the heavy industry sector is followed by the food industry sector, and then by the light industry one.

Table 1.1.3 Main manufacturing sectors as regards FDI as of 1999

Thou ROL

	NACE code	Field	Total FDI 99
1	159	Manufacture of beverages	199832199
2	158	Manufacture of other food products	167210097
3	182	Manufacture of other wearing apparel and accessories	55358136
4	174	Manufacture of made-up articles, except apparel	34890824
5	268	Manufacture of other non-metallic mineral products	30417600
6	201	Saw milling and planning of wood, impregnation of wood	29355341
7	151	Production, processing and preserving of meat	21736290
8	156	Manufacture of grain mill products, starches and starch products	16012375
9	361	Manufacture of furniture	9540845
10	154	Manufacture of vegetable and animal oils and fats	8075178

Source: NCS

One can note that the main FDI flows went towards the food and beverages industry, followed by clothing and wood industries.

Table1.1.4 Main manufacturing sectors as regards FDI in the private sector as of 1999

Thou ROL

	NACE code	Field	Total FDI 99
1	159	Manufacture of beverages	199832199
2	158	Manufacture of other food products	167210097
3	155	Manufacture of dairy products	72983537
4	252	Manufacture of plastic products	62548518
5	202	Manufacture of stratified wood products	58787860
6	182	Manufacture of other wearing apparel and accessories	55358136
7	245	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	52954342
8	265	Manufacture of cement, lime and plaster	48857735
9	160	Manufacture of tobacco products	39490071
10	212	Manufacture of articles of paper and paperboard	36368196
11	174	Manufacture of made-up articles, except apparel	34890824
12	268	Manufacture of other non-metallic mineral products	30417600
13	201	Saw milling and planning of wood, impregnation of wood	29355341
14	322	Manufacture of TV and radio transmitters and apparatus for line telephony and line telegraphy	27560614
15	287	Manufacture of other fabricated metal products	22158149

Source: National Council for SMEs

We can note that major FDI flows in private enterprises in 1999 went to the agri-food industry, followed by the plastic products' sector, stratified wood manufacturing and manufacturing of wearing apparel. The agri-food sector also occupies first places as regards total turnover, but is less important as regards exports. Still, it is probable that in the near future we could see a significant increase in the export share of this sector. The manufacture of stratified wood requires higher technology and is a high value-

added sector, so as investments in this sub-sector increases, we will probably see also an increase of its share of exports.

Figure 1.1.1

Structure of joint ventures by field of activity; Dec 1990-Dec.1999 (by number of companies)

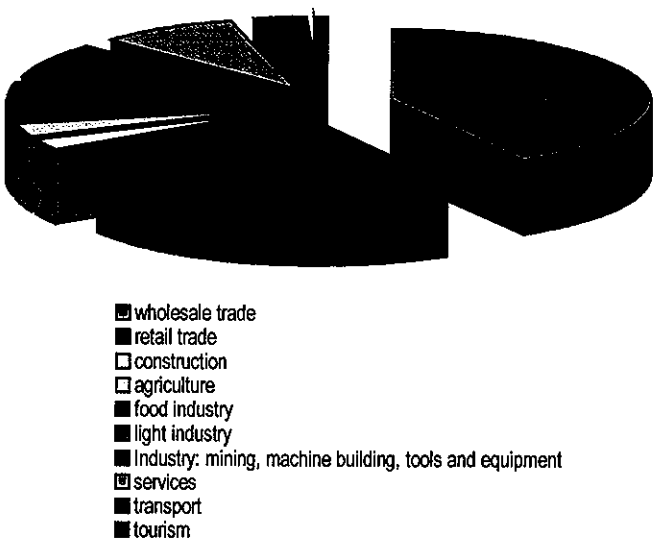
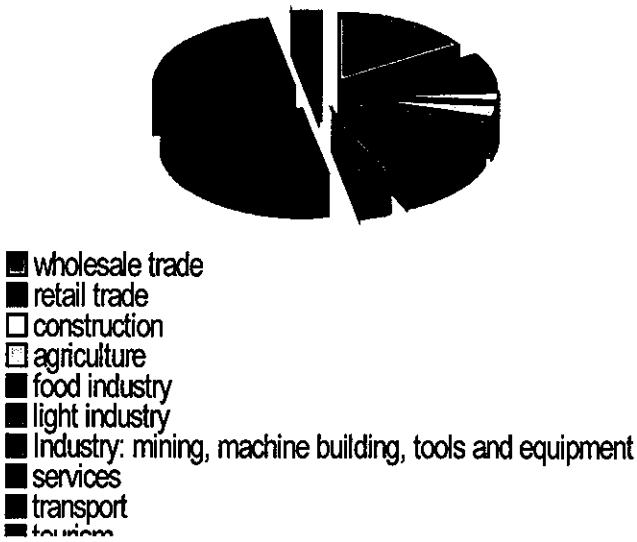


Figure 1.1.2

Structure of joint ventures by field of activity and by capital invested, Dec.1990-Dec.1999



One can note that while most of the companies with foreign capital were in trade and services, as regards the capital invested, first places were held by services and heavy

industry, followed by wholesale trade and the food industry. A probable explanation is that investment requirements are higher in such sectors, and as a consequence they attracted bigger investors.

Table 1.1.5 First ten manufacturing sectors after 1999 total turnover in the private sector

thou. ROL

	NACE	Field	Total no. of firms 98	Total no. of firms 99	Total turnover 98	Total turnover 99
1	159	Manufacture of beverages	885	929	9201330245	15535632694
2	158	Manufacture of other food products	2829	2935	6814376661	10767376441
3	156	Manufacture of grain mill products, starches and starch products	3364	3557	5791379244	7449933572
4	151	Production, processing and preserving of meat and meat products	1282	1230	5892445471	7442861115
5	182	Manufacture of other wearing apparel and accessories	2638	2891	3276217839	6553336422
6	201	Saw-milling and planning of wood, impregnation of wood	2655	3095	2948605702	5982895220
7	361	Manufacture of furniture	1315	1526	2730520694	5720245056
8	174	Manufacture of made-up textile articles, except apparel	1372	1311	3386424380	5204735753
9	154	Manufacture of vegetable and animal oils and fats	430	412	3173350603	4874506423
10	268	Manufacture of other non-metallic mineral products	130	127	725794519	1455507023

Source: National Council for SMEs

The highest turnover was registered in sectors of the food industry (NACE 151, 156, 158, 159), followed by wearing apparel, furniture and wood processing. Analysing the evolution of total turnover and gross profits during 1999/1998, one can see that the highest relative increases were at NACE 361 (*furniture*), 201(*wood processing*) with increases of over 100% at both turnover and gross profits, followed by NACE 182 (*textile wearing apparel*). As regards the relative evolution in 1999 as against 1998 of average turnover and gross profits in manufacturing, the highest increases were registered by NACE 353 (*Manufacture of aircraft*), 355 (*Manufacture of other transport equipment*) and 272 (*Manufacture of tubes*)[4].

As regards the SME sector in Romania, it is defined in line with EU legislation, according to three criteria:

- Number of employees (micro-enterprises: up to 9 employees; small enterprises: 10-49 employees; medium-sized enterprises: 50-249 employees)

[4] see Annexes 13 and 14

- Annual turnover (max. 8 million USD)
- Independence relative to large companies (companies that do not have as shareholders or associates legal entities having more than 250 employees and holding more than 25% of the share capital).

From the total number of companies that lodge their balance sheets (393,253 firms), the SME sector represents 99.4% (393,796). The figure does not include self-employed people and family associations.

Table 1.1.6 Distribution of enterprises by size and sector in 1998

	Total number of enterprises		*Percent distribution by sector*				*Percent distribution by size*				*Total*
	Number	*%*	*0-9*	*10-49*	*50-249*	*>249*	*0-9*	*10-49*	*50-249*	*>249*	*%*
Industry	42,388	10.6	8.6	30.2	36.3	60.5	74.7	16.6	5.2	3.5	100.0
Agriculture	6,541	1.7	1.2	5.0	12.6	6.0	68.2	18.0	11.6	2.2	100.0
Construction	9,741	2.5	1.8	9.2	14.8	11.0	66.2	21.9	9.1	2.8	100.0
Trade	267,727	67.6	70.6	39.5	17.1	11.3	96.1	3.4	0.4	0.1	100.0
Tourism	1,698	0.4	0.4	0.9	1.8	0.9	79.9	12.2	6.5	1.4	100.0
Transport	10,911	2.8	2.7	2.7	6.7	3.6	89.8	5.7	3.7	0.8	100.0
Services	57,247	14.4	14.7	12.5	10.7	6.7	93.5	5.1	1.1	0.3	100.0
TOTAL	396,253	100.0	100.0	100.0	100.0	100.0	92.0	5.9	1.5	0.6	100.0

Source: National Trade Registry Office, 1998

Table 1.1.7 Enterprise turnover and employment

	Percent turnover					**Percent number of employees**				
	0-9	**10-49**	**50-249**	**>249**	**Total**	**0-9**	**10-49**	**50-249**	**>249**	**Total**
Industry	7.7	21.2	33.1	65.1	41.7	13.3	32.4	37.0	57.0	47.1
Agriculture	1.0	1.9	7.1	2.6	2.7	1.9	5.6	12.9	3.0	4.6
Construction	1.6	5.1	13.5	6.0	5.8	2.8	10.2	15.2	14.0	12.6
Trade	80.7	61.4	31.6	17.1	39.8	65.3	35.4	15.7	9.9	19.1
Tourism	0.5	0.7	1.3	0.5	0.6	0.5	1.0	1.9	0.4	0.7
Transport	1.8	2.3	5.1	3.2	3.0	2.7	3.0	7.1	6.4	5.7
Services	6.5	7.5	8.3	5.5	6.4	13.5	12.4	10.2	9.3	10.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Trade Registry Office, 1998

We can note that the number of SMEs in industry accounts for 96.5% of the total number of active firms. As regards distribution by sector, industry accounts for 36.3%

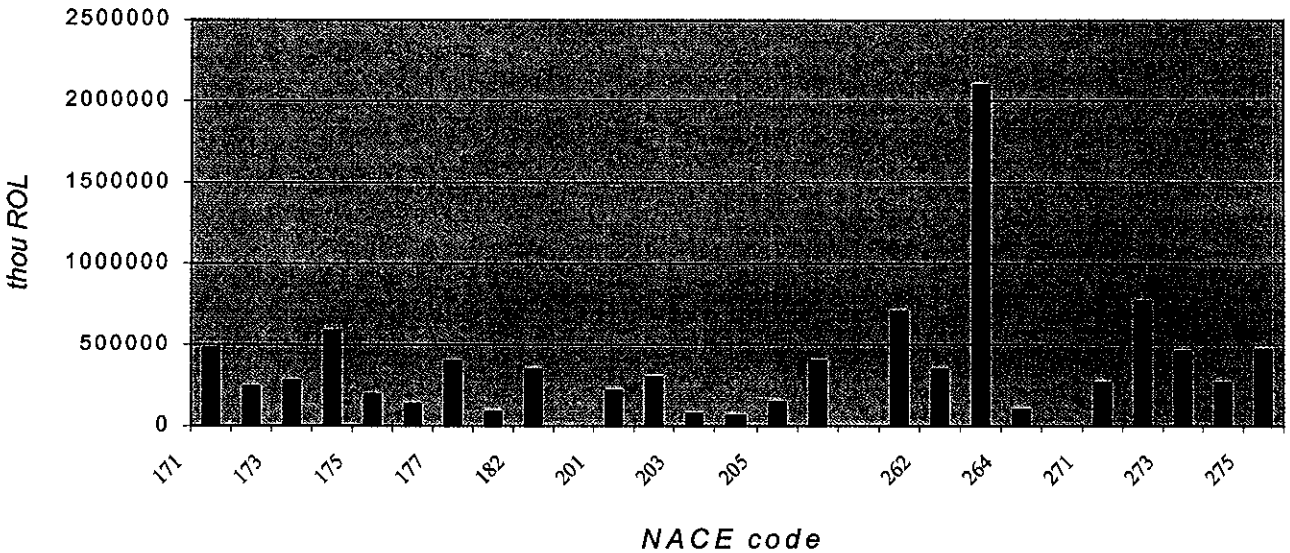
of medium-sized firms, for 30.2% of small firms and for only 8.6% of micro-enterprises. The same ranking holds true for turnover, industry accounting for 33.1% of the medium-sized enterprises' turnover, for 21.2% of the small firms' turnover and for just 7.7% of the micro-firms' turnover. As regards this under-representation of industry within the SME sector, this may be explained, *inter alia*, by the reduced access opf SMEs to medium and long term finance for investment. An analysis of enterprise credit extended by banks in 1998 indicates that SMEs were granted 33.2% of short term credit, but only 19.9% of the overall credit with a maturity of over five years.

Table 1.1.8 First ten manufacturing sectors as regards number of SMEs in 1999

NACE	FIELD	Total number of firms
156	Manufacture of grain mill products, starches and starch products	3557
201	Saw milling and planning of wood, wood impregnation	3095
158	Manufacture of other food products	2935
182	Manufacture of other wearing apparel and accessories	2891
203	Manufacture of builders' carpentry and joinery	1607
361	Manufacture of furniture	1526
281	Manufacture of structural metal products	1515
205	Manufacture of other products of wood, cork, straw and plaiting materials	1426
252	Manufacture of plastic products	1332
174	Manufacture of made-up textile articles, except apparel	1311

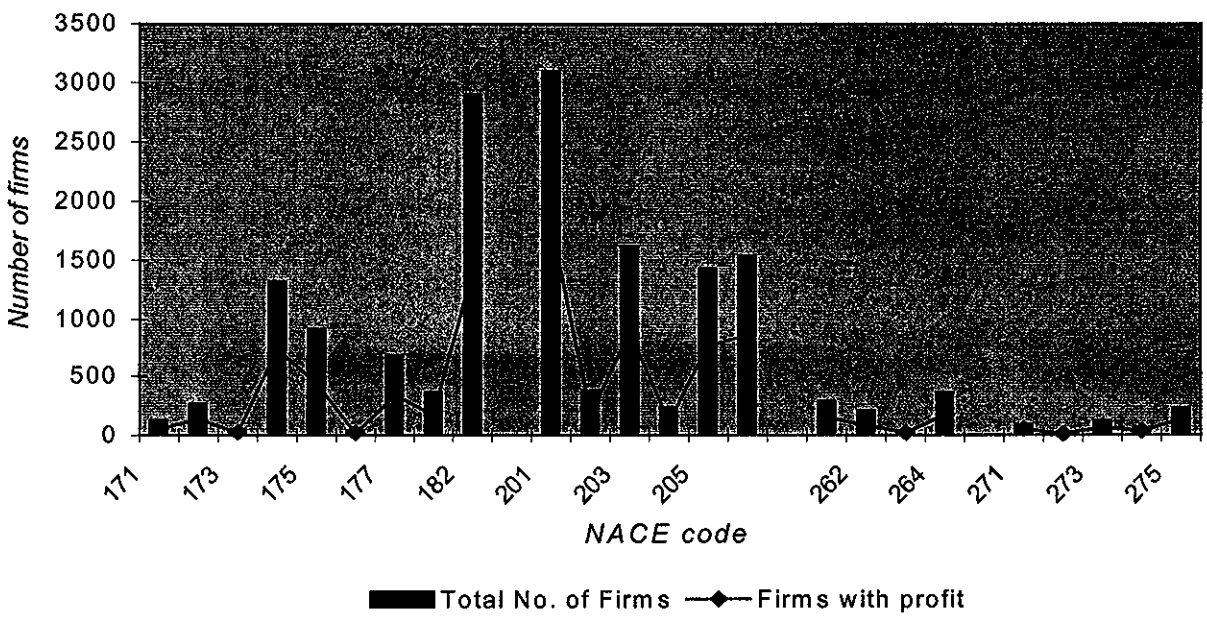
The above analysis has highlighted a number of manufacturing sectors with high exports, rapid privatisation and good potential. As follows, we will try to analyse them, first together, than sector by sector.

Fig.1.1.3 Average gross profit in 1999 in selected industries



One can note that the highest **average gross profit** was registered in 1999 by NACE 264 (*Bricks, tiles and construction products*), followed at a distance by NACE 272 (*Manufacture of tubes*), NACE 261 (*Glass and glass products*) and NACE 174 (*Made-up textile articles, except apparel*).

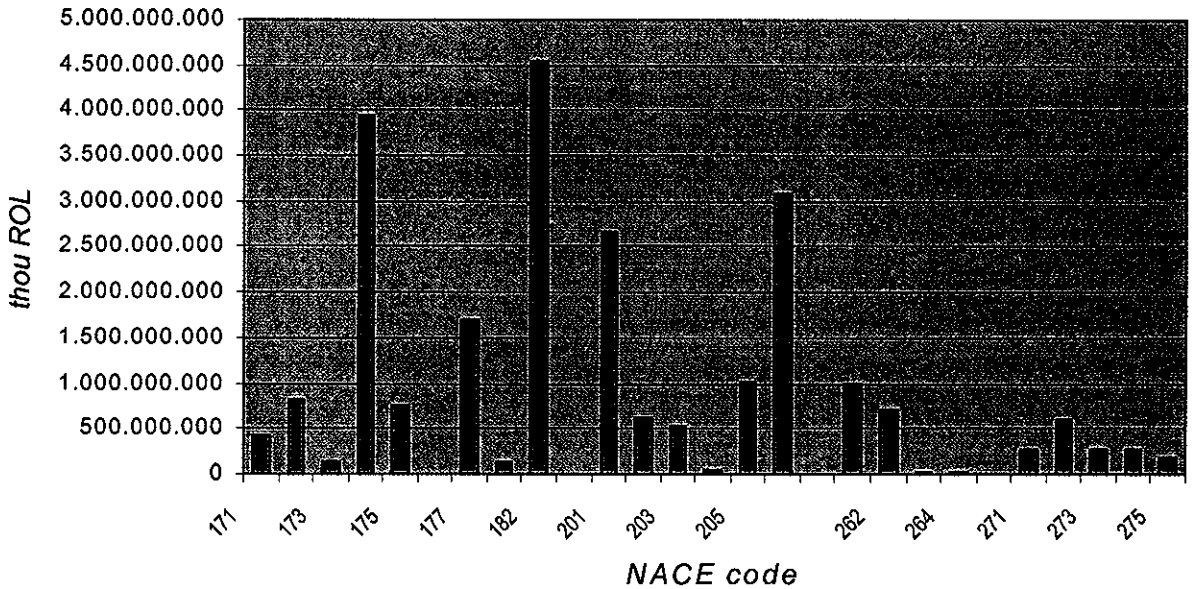
Fig. 1.1.4 Number of firms in selected sectors in 1999



The sectors with the highest **number of firms** in 1999 were NACE 201 (*Saw-milling and planning of wood, impregnation of wood*) and NACE 182 (*Manufacture of other wearing apparel and accessories*), followed by NACE 203 (*Builders' carpentry and joinery*), 361 (*Furniture*), 205 (*Other wood products*) and 174 (*Made-up textile articles, except apparel*).

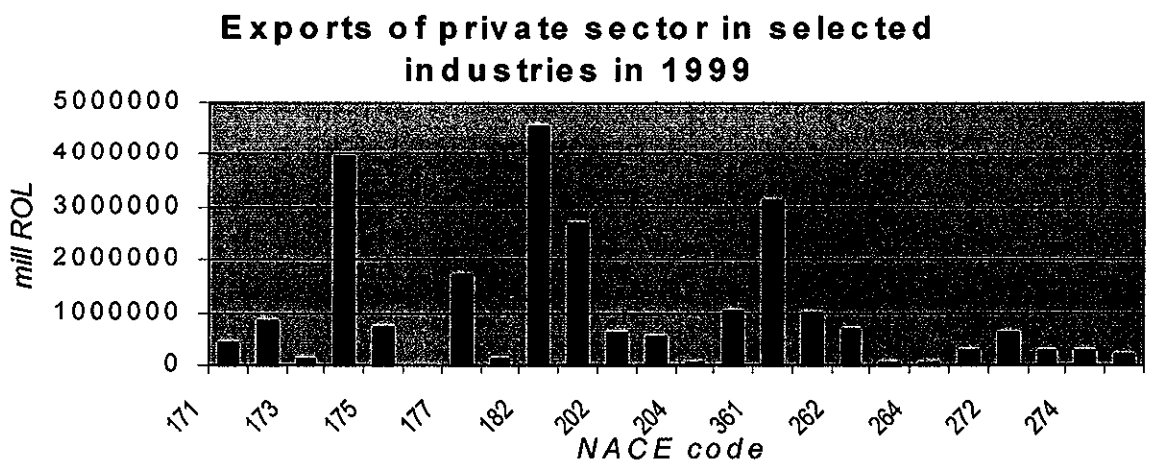
NACE 263 (*Ceramic flags and tiles*) shows the highest **percentage of firms with profit** in 1999 (65%), while NACE 262 (*Non-refractory ceramic goods other than for construction purposes; refractory ceramic goods*) with 40% and NACE 173 (*Finishing of textiles*) with 41% have the lowest percentage.

Fig. 1.1.5 Exports of selected sectors in 1999



The highest **exports** were registered by NACE 182 (*Other wearing apparel and accessories*), 174 (*Made-up textile articles, except apparel*), 361 (*furniture*) and 201 (*Saw milling and planning of wood, impregnation of wood*).

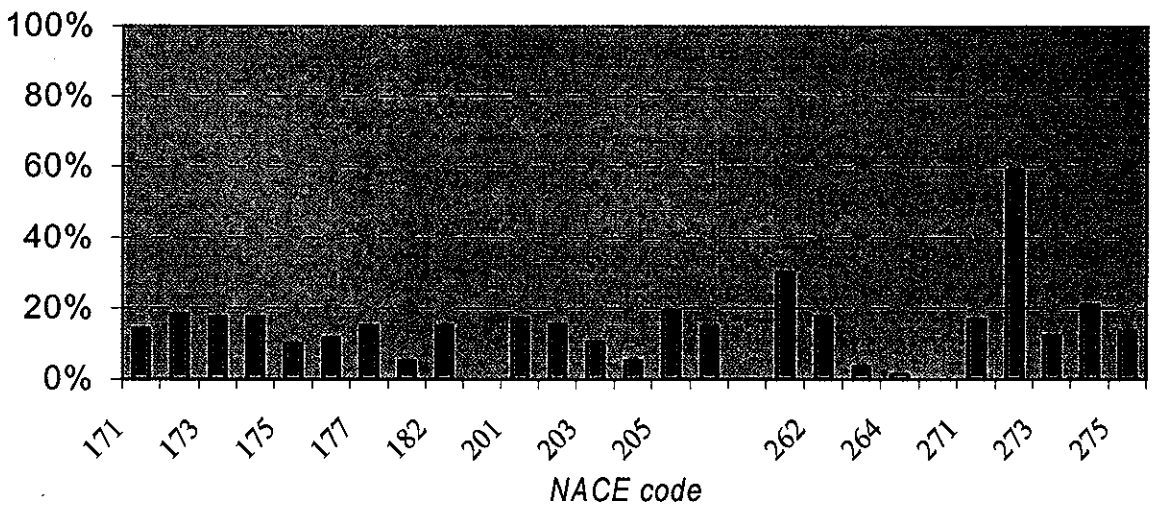
Fig. 1.1.6



The highest exports of the private sector within the selected industries were registered by NACE 182 (*Other wearing apparel and accessories*), followed by 174 (*Made-up textile articles, except apparel*), 361 (*furniture*) and 201 (*Saw milling and planning of*

wood, impregnation of wood), i.e. exactly the overall trend, explicable also because these sectors are almost totally privately owned. The lowest exports were registered by NACE 176 (Manufacture of knitted and crocheted fabrics), 264 (Manufacture of bricks, tiles and other construction products, in baked clay) and 263 (Manufacture of ceramic tiles and flags).

Fig. 1.1.7 Percentage of firms that exported in 1999 of total firms in selected sectors



The highest percentage (60%) was registered by NACE 272 (*Manufacture of tubes*), value due to the small number of total firms (5). A more significant result is of NACE 261 (*Glass and glass products*), with 31% out of 276 firms exporting.

1.2 Textiles & Clothing (T&C) industry

The industry was insignificant before the IInd WW. A big expansion of the industry took place after the introduction of central planning and the creation of COMECON. The existence of raw materials for the textile industry - flax, hemp and wool - joint to economic policies essentially centred on autarky at the national or regional level, soon gave a considerable bust to the textile and clothing industry. The development strategy for the industry, aimed at ensuring the filling up of domestic demand - in the case of clothing, the spread of cheap garments - and at achieving specified export targets, was based until the end of the 1960s on state property, labour intensive techniques (mostly unskilled and semiskilled workers and low technology) and minimum investment expenditures. As a consequence, the industry became a supplier

of the Soviet market, building up capacities well in excess of domestic needs, which were almost entirely satisfied by local production.

Although as from the 1970s new technologies were progressively introduced and in the 1980s the first signs of internal reform started appearing and clothing items began to be increasingly exported toward Western markets, this "soviet" model meant that by the end of the 1980s the T&C industry was still plagued by excessive shares of the industry in terms of employment; over consumption of energy and raw materials; excessive environmental pollution; oversized productive units and scarce presence of SMEs; inadequate management; lack of real calculation of profitability; low technical level of equipment (often renewed only through imports from Comecon or through domestic production); low productivity due to both obsolete equipment and over-manning; relative isolation from world technical standards; finally low flexibility and adaptability to fashion trends, especially in the clothing sector, enhanced by the destination of most of the sales either to the Comecon (mainly Soviet) market, or to the domestic one, both scarcely sophisticated in terms of fashion trends and quality standards.

During transition, the index of textile production has a continuous downward trend, with two big slumps in 1991 and 1992, ending up at 41% of the 1990 level in 1998. The clothing sector shows an opposite picture. Its production index has a marked downward trend until 1993, with big losses concentrated in 1991-92, after which it starts picking up abruptly with a final gain (+31%) on the 1990 level. Here too both sectors lose as a share of total industrial production: from 6.8% to 3.3% in textiles, from 3.6% to 2.4% in clothing.

As we have seen, the textile sector suffered relatively more than the clothing one. It almost invariably lost positions both in output and in employment, while clothing ended up by gaining in output and employment shares. There was even a net job creation in the latter sector, especially in the more recent period. Often the clothing sector shows a profit, the reverse being true for the textile one; or else, more textile firms incur losses than the clothing ones.

These data do not have by themselves a unique explanation. They could even suggest that restructuring and downsizing has occurred more in the textile sector than in the clothing one. Moreover, large firms are generally the main origin of job destruction, possibly indicating that there is a process of splitting up of the previous industrial mammoths and/or downsizing of the still existing ones.

Certainly, some of the problems shown above may have weighed more heavily on the textile sector. Capital intensity being higher in it than in the clothing sector, high interest rates must have hit in a more pronounced way the textile producers in their search to renew obsolete equipment. Moreover, adapting to new market conditions requires much greater investment than in the other sector. Lastly, relatively more textile firms are still in the hands of the state, and these are relatively larger and loss making[5], while the clothing sector knew a boom in SMEs, making it more dynamic and adaptable.

An additional, and powerful, explanation could be that the textile sector suffered a more negative impact from recession because it lacked the external safety valve that the clothing sector could utilise, namely the export outlet.

First of all, the textile producers had a worse knowledge of the advanced countries and less extensive contacts with them. They were also less able to compete on quality with some developing countries that were offering goods at much lower prices.

But, above all, OPT[6] played a role of paramount importance in clothing exports to the EU. Roughly 90% of them were due to OPT. So, the clothing sector could transform itself faster than the textile one not only because it requires less financial resources, but also because OPT avoids recourse to financial resources tout court, since these are taken care of by the foreign partner.

[5] Concentration in the textile sector is higher than that in the clothing sector (with the highest concentration ratios in NACE 173 and 176), while very high import penetration ratios are at NACE 176, 172 and 175, showing that the production of these sectors is still carried out in a few non-competitive firms.

[6] OPT: outward processing trade, known in Romanian as "lohn"

On the other hand, the OPT regime has also had a perverse side effect upon the textile sector. By requiring (until 1998) that the textile materials be of EU origin it has prevented the local textile sector from developing accordingly, nay may even have induced its decline, since more and more clothing firms that once used local materials were now making recourse to OPT operations.

T&C remains a sector with high potential within the Romanian economy. However, it needs to improve some of the factors of its *competitive diamond* in order to become more than a way of turning into good account the availability of cheap labour. It has to increase its value added, especially through upgrading its export markets and incorporating Romanian design into its products. It also has to develop the textile industry (production of yarns, fabrics) and strengthen its emerging clusters of SMEs. One can see such a process has already begun, especially as regards SMEs[7] that address the domestic market and that have started to differentiate their products, improve their marketing skills and learn to respond to market requirements. In our opinion, these are the companies that eventually will make it on world markets, whilst those that rely almost exclusively on OPT will find their profit margins erode gradually until they will be driven out of the market.

Table 1.2.1 Global indicators of textile industry in the private sector in 1999

Thou ROL

NACE	FIELD	*Total no. of firms 99*	*Total turnover 99*	*Total Gross Profit 99*	*Total exports 99*	*Total FDI 99*
171	Preparation and spinning of textile fibers	126	1,337,338,907	60,383,172	411,163,714	13,338,691
172	Textile weaving	262	1,836,398,311	63,416,364	823,497,553	173,650
173	Finishing of textiles	49	190,708,962	13,265,347	126,931,534	938,214
174	Textile articles, except apparel	1311	5,204,735,753	767,374,855	3,945,603,697	34,890,824
175	Other textiles	905	1,482,862,901	172,492,024	738,296,222	15,001,192
176	Knitted and crocheted fabrics	32	50,905,888	4,368,005	7,679,974	165,678
177	Knitted or crocheted articles	669	2,416,259,812	260,494,104	1,698,458,565	10,693,444
181	Manufacture of leather clothes	352	246,968,670	31,147,765	128,439,479	2,574,2
182	Other wearing apparel and accessories	2891	6,553,336,422	1,001,277,121	4,543,774,654	55,358,136

Source: National Council for SMEs

[7] Such opinions are based on ICESs extensive database of SMEs in the T&C industry – see attachments

Table 1.2.2 Exports of T&C during the first quarter of 2000

NC Code	Sections, chapters and items from NC	1.I-30.IV.2000		Export structure %	
		Exports FOB Mill. USD	In % against 1.I-30.IV. 1999	1.I-30.IV. 1999	1.I-30.IV. 2000
XI	**Textiles and articles thereof**	**777.2**	**120.6**	**26.0**	**24.3**
52	Cotton, cotton yarns and cloth	5.5	132.7	0.2	0.2
54	Synthetic and man-made fibres	10.7	128.0	0.3	0.3
5402	- yarns from synthetic fibres	8.5	143.5	0.2	0.3
55	Discontinuous synthetic and man-made fibres	13.0	113.0	0.5	0.4
5509	- yarns from discontinuous synthetic fibres	7.6	136.8	0.2	0.2
57	Carpets and other floor covers from textile materials	4.4	130.2	0.1	0.1
61	Clothing items and accessories, knitted or crocheted	162.5	131.2	5.0	5.1
6109	- Body shirts, knitted or crocheted	34.0	127.0	1.1	1.1
6110	- Jerseys, pullovers, jackets, vests and articles thereof, knitted or crocheted	40.4	126.3	1.3	1.3
6115	- Panty hose, stockings, socks	22.7	114.6	0.8	0.7
62	Clothing items and accessories, other than knitted or crocheted	552.2	118.9	18.8	17.3
6203	- Men suits, sets, jackets, trousers	173.5	116.7	6.0	5.4
6204	- Women suits, sets, jackets, dresses, skirts	189.6	121.4	6.3	5.9
6205	- Men shirts	56.0	130.2	1.7	1.8
6206	- Women blouses and shirts	51.4	126.1	1.6	1.6
63	Other non-knitted textile items	20.3	103.5	0.8	0.6

Source: NCS

One can note that *Clothing, other than knitted or crocheted*, account for the highest exports, followed at a distance by *Knitted or crocheted clothing*[8].

A first conclusion is that while the clothing industry has a great potential, support should be given to the development of support industries for the branch (equipment, design, as well as the upstream textile industry), in order for the branch to increase its value added and reduce its dependency on OPT exports.

The Ministry of Industry and Trade has initiated a program through the Romanian Center for Foreign Trade (CRCE) for the support of the T&C industry, as well as for the furniture industry. This program comprises four modules, covered by a total financing of one million USD, coming from the UNDP and the Swiss Government. The modules are aimed at 1) increasing the role of design institutes (in this case the Bucharest Fashion Institute) in offering assistance to SMEs in the field; 2) direct assistance to 6 companies from the two branches; 3) support to CRCE to develop

[8] for more details on T&C, see Annex 18

trade information services for SMEs; and 4) assistance to the Romanian government for developing export promotion strategies for SMEs.

1.3 Wood Industry

In 1998 the Romanian wood and furniture industry comprised 8,245 companies, employing about 81,000 persons in the wood industry and 124,000 persons in furniture and other non-classified activities. Most of these companies are exporting 80-90% of their production, the share held by this industry in total export in 1997 reaching 7%. Most of the companies are in NACE 201 and 361. As regards SMEs, they form the majority of companies in the field (for indicators see Annex 19).

The sector holds an increasing percentage in the total export of Romania. While in 1991 the export of *wood and products of wood and cork, except furniture (NACE 20)* was of 112.4 million dollars, in 1998 it increased to 398 million dollars. The same trend can be found in the *furniture (NACE 361)* export, which increased from 165 million dollars in 1991 to 433.5 million dollars in 1998. The main export markets are Western Europe (Italy, Spain, Germany) and North African and Arab countries (Tunisia, Marocco, Egypt, Saudi Arabia, Indonesia, Singapore). Exports consist mostly of beech and fir timber of prime quality.

Another phenomenon that characterises the industry is the restructuring process of big state owned companies that exploited and processed wood, which led to their atomisation and in some cases their extinction, at the same time with a fast development of the private sector, which proved to be much more dynamic and flexible to market demands. Some big producers remained in the manufacture of furniture, but even they trimmed down their work force.

The wood industry has naturally clustered around resource-rich areas, where it was followed by equipment producers. Equipment is generally Romanian, with some equipment from Germany and Italy, two world-wide leaders in wood equipment.

Table no. 1.3.1 Global indicators of the private wood sector in 1999

Thou ROL

NACE	FIELD	*Total no. of firms 99*	*Total turnover 99*	*Total Gross Profit 99*	*Total exports 99*	*Total FDI 99*

201	Crude processing of wood and wood impregnation	3095	5,982,895,220	665,624,246	2,671,823,157	29,355,341
202	Stratified wood products	363	1,181,044,747	107,192,168	623,853,151	58,787,860
203	Manufacture of builders' carpentry and joinery	1607	1,230,842,353	109,043,416	531,068,912	8,016,724
204	Manufacture of wooden containers	228	167,222,048	14,157,433	52,964,343	621,488
205	Other items of wood, cork, wicker	1426	1,832,544,196	200,979,079	1,019,084,284	10,533,376
361	Furniture	1526	5,720,245,056	603,578,629	3,093,279,449	9,540,845

Source: National Council for SMEs

One can see that the highest foreign direct investments went to *stratified wood products*, while total exports were more significant at *Crude processing of wood and wood impregnation*. Concentration is higher in 202 - *Stratified wood products* and lowest in 203 – *Builders' carpentry and joinery* (see annex 9), directly related to the level of investments needed for the production of such. The import/export ratio (see annex 10) is highest in 202, which are products with a higher level of technology and higher value-added.

The level of technology of exported products is low in the sector of wood processing (NACE 20) and average for NACE 36 (furniture)[9].

Table no. 1.3.2 Exports of wood industry and furniture during the first quarter of 2000

NC Code	Sections, chapters and items from NC	1.I-30.IV.2000		Export structure %	
		Exports FOB Mill. USD	In % against 1.I-30.IV. 1999	1.I-30.IV. 1999	1.I-30.IV. 2000
IX	**Wood products (excluding furniture); wicker products**	177.4	124.9	5.7	5.6
44	Wood, wood coal and wood items	175.7	125.1	5.7	5.5
4403	- Uncut wood, peeled, processed crudely or even carved	18.2	153.6	0.5	0.6
4407	- longitudinally cut or carved wood, split or peeled (timber)	110.1	125.4	3.5	3.5
4409	- Processed wood	4.5	86.9	0.2	0.1
4412	- Plywood, veneered wood and similar stratified wood	6.4	122.9	0.2	0.2
4418	- Scaffoldings for constructions and parts of constr. frameworks	14.2	117.6	0.5	0.4
4421	- Other wood items	11.0	137.1	0.3	0.3
XX	**Miscellaneous**	180.5	108.2	6.7	5.7
94	Furniture; lighting devices and thereof;	163.7	105.0	6.3	5.1

[9] see Annex 5

	prefabricated constructions				
9401	- Chairs	18.0	111.7	0.7	0.6
9403	- Other furniture and parts	134.2	104.5	5.2	4.2

Romania is endowed with great natural resources, skilled labour and several cluster cores that can make this branch into an important export sector. However, these clusters of small firms must be encouraged to update their technologies, and shift their production and exports towards products with more value-added.

The Ministry of Industry and Trade has started a project called "Strengthening Romania's export capacity", financed by UNDP and the Swiss government, aimed at granting assistance for the development of export production and diversification of export markets for the T&C and furniture industries. Support will be given to the Bucharest Fashion Institute, to the National Wood Institute and to the Association of Furniture Producers from Romania to improve their capacities to offer technical assistance to small furniture producers in Romania. The program aims at increasing the design capacity at the SME level, diversifying the product range and penetrating on new markets.

1.4 Metallurgy

- Romania has been the 15th largest producer of iron and steel in 1989, while in 1994 it occupied the 21st place
- the sector's largest industries are steel and aluminium. Both are dependent on imports of raw materials and are highly energy-intensive. Value added is very low
- technology is obsolete, lagging behind Western technologies by 10-15 years
- plants are spread-out over the country, leading to increased movement of semi-finites between plants

The industry has a low level of productivity. It is reported that for every one million tons of steel produced, 15,000 employees are used. In western countries the labour input, for the same output level, would not exceed 1,000 people. Social pressures have deprived the sector from restructuring, especially in areas where a large part of the population is dependent on a particular metallurgic plant. Concentration in the industry is high, especially in NACE 272 and 271.

In the iron and steel industry, 21 companies out of 33 have been privatised. Other 6 companies are included in the PSAL programme and for 3 companies the privatisation contracts are being negotiated. However, taking into consideration that the big iron and steel works have still to be privatised, one can conclude that privatisation is still far from finished. In the non-ferrous metallurgical industry, the privatisation process is practically finished, with the exception of AMPELUM – Zlatna, NEFERAL – Bucharest and ROMPLUMB – Baia Mare companies. The companies from the aluminium industry, ALRO SA – Slatina and ALPROM SA – Slatina are also offered for privatisation.

Romanian metallurgy exported in 1998 products in total amount of USD 1423 million (over 17% of total exports). The export prices of Romania range between US$280-300 for heavy rolled metals and US$ 450-550 for steel tubes, which are two main exported products. These prices are much below international and particularly EU prices. Romania's share in the production of steel in Europe is 3 percent. Across all steel companies one observes at lack of downsizing, low capacity utilisation, a lack of

private ownership, traditional products and poor export growth. This reflects a sector that has not restructured in what is still a protected environment from international competition. The technological level of products is a low one.

In the perspective of EU accession, Romania has to drastically restructure its steel industry. The European Commission is putting pressure on EU associated CEE countries to improve the state of their steel industries. The EU is requesting a reduction in capacities and deep restructuring in order to raise competitiveness of the steel industry on world markets. The Commission is not willing to finance the entire process of recovery and modernisation of the steel industries in the candidate states.

Table 1.4.1 *Global indicators for private sector in metallurgy in 1999*

Thou ROL

NACE code	*Field*	*Total no. of firms 99*	*Total turnover 99*	*Total Gross Profit 99*	*Total exports 99*	*Total FDI 99*
271	Production of ferrous metals under prim. forms or semi-fabs	79	1,162,140,227	20,875,385	273,763,796	4,182,767
272	Manufacture of tubes	5	1,115,100,133	3,794,242	596,415,671	0
273	Other metallurgical activities	122	1,379,082,706	54,535,180	263,981,652	1,311,060
275	Casting of metals	224	927,602,718	103,963,870	183,150,579	5,111,090

Source: National Council for SMEs

1.5 Machine building industry (metallic constructions and metal products, machines and equipment, transport means)

An important industrial sector in Romania is the machine building industry. This industry comprises a wide range of sub-sectors, of which one, machines and equipment, is essential for the proper development of other branches.

Table no. 1.5.1 Situation of machine building industry in 1999

NACE		*No. of companies*	*Registered capital Bill. ROL*	*Employees - Thou -*
28	Metallic constructions and metal products	4738	1740.8	83.3
29	Machines and equipment	1743	7018.5	234.4
34	Road transport means	381	2433.4	83.2
35	Other transport means	168	2225.8	75.0
	TOTAL	***7030***	***13418.5***	***475.9***

Source: Ministry of Industry and Trade

Out of the 7030 companies, a number of 6800 are either private or with a majority stake of shares privately owned.

The sector was severely affected by transition, as well as by the negative impact of events like the break-up of the COMECON, the Gulf war and the war in ex-Yugoslavia. Presently, the companies are concerned with meeting EU norms and regulation, with a view to Romania's accession to the European Union.

The sector is an important part of Romanian industry, contributing to almost 14% of the total industrial production in 1998 (see Annex 1). Most of the products currently manufactured are based on Romanian designs, but there are also license-based products. The sector benefits from R&D carried out in around 40 research institutes (4 of them National Institutes), with over 11,000 employees of which 6,000 engineers. These institutes are an important source of spin-outs of high tech entrepreneurs. However, such spin outs need to be more effectively structured and managed, with particular attention to be paid to the role and nature of their financial and equity structure and the need for external, experienced management. Experience shows (see case studies) that entrepreneurs coming from such research institute are a source of innovative products and technologies, but however they lack access to financing in

order to promote their patents and they also lack to a certain extent managerial skills. Focus should be put on the creation of a more entrepreneurial environment to nurture new enterprises, as well as more pro-active support mechanisms to encourage and assist spin-outs.

Metallic constructions and metal products had a volume of exports in 1998 of USD 184 million. However, both its investment indices, as well as its labour productivity indices have been low. Thus, in 1998 the investment level was of only 61.3% of the 1990 level, and the productivity of the same branch in 1998 was of 58.1% as against 1995 (see Annexes).

Table 1.5.2 Global indicators of SMEs in the fabricated metal products' branch in 1999

Thou ROL

NACE	Field	No. of firms	No. of employees	Average turnover	Average export revenue	Average net profit	Productivity
281	Manufacture of structural metal products	1555	22295	2234233.38	171378.2	232801.4	155830.14
282	Manufacture of tanks, reservoirs and containers of metal, manufacture of central heating radiators and boilers	98	2311	4044480.11	557895.4	483425.5	171509.76
283	Manufacture of steam generators, except central heating hot water boilers	11	371	9437157.64	3045509	1134309	279807.91
284	Forging, pressing, stamping and roll forming of metal; powder metallurgy	73	1383	3513257.95	352087.3	492770	185443.12
285	Treatment and coating of metals; general mechanical engineering	61	666	1718623.2	108515.5	176042.1	157411.43
286	Manufacture of cutlery, tools and general hardware	107	1842	2266670.55	421436.7	247646.2	131668.7
287	Manufacture of other fabricated metal products	1249	14072	1755353.38	303358.6	216066.6	155801.33

Source: NCS

Machines and equipment account for 4.4% of total industrial production in 1998, with an export volume of USD 511 million, making it a relatively important export branch. Although its investment index in 1998 is of only 39 as against 1990 (the lowest within manufacturing), its productivity level has increased as against 1995, indicating some restructuring in the sector. This can be due to the shedding of excess labour.

Important sub-sectors are ball bearings, tractors and other agricultural equipment, machine-tools, etc. There are six *bearings* producers in Romania, with about 18, 000 employees, able to produce a wide range (around 9640) sorto-typo-dimensions (STD). The dimensions range from very small sizes (min 18 mm) to heavy ones up to 2500 mm diameter. The production in 1998 was of 78 million pieces, plus 16 thousand pieces heavy bearings. The most important producer is Rulmentul Brasov, followed by the Bârlad and Ploiesti factories, that account together for over 81% of the produced STDs. The Romanian bearings feature a high technical and quality level, comparable to Swedish, German, American and Japanese producers, being situated among the first 4 European and 12 world producers, with a competitive level of 2.7-3 on the technical Porter scale (over average).

Being such a performant sector, two factories are already privatised (Rulmentul Ploiesti with Timken USA, and Rulmentul Alexandria with Koyo Japan), the others being offered for privatisation.

1.5.3 Global indicators of SMEs in the machinery and equipment branch in 1999

Thou ROL

NACE	Field	No. of firms	No. of employees	Average turnover	Average export revenue	Average net profit	Productivity
291	Manufacture of machinery for the production and use of mechanical power, except aircraft, vehicle and cycle engines	51	1466	5657086.1	969743	549266.5	196801.77
292	Manufacture of other general purpose machinery	76	1180	3097772.91	206420.6	321059.3	199517.58
293	Manufacture of agricultural and forestry machinery	41	1999	4972947.02	861269.9	441120	101996.41
294	Manufacture of machine-tools	54	979	4079159.15	1921869	188815.8	224999.59
295	Manufacture of other special purpose machinery	140	2790	2753724.64	446440	316670.6	138179.73
296	Manufacture of weapons and ammunition	3	1	4438031.33	0	662522	13314094
297	Manufacture of domestic appliances n.e.c.	44	656	1632044.55	135255.4	109299.9	109466.4

Source: NCS

As regards SMEs, we can note that there are a significant number of such firms in this branch, sub-contracting for big producers. The highest number is registered at NACE 295 (see table above).

Road transport means accounts for 3.9% of total industrial production, and has an export volume of USDF 140 million (1998 data). We can note a high investment index for 1995, 1997 and 1998, followed also by major increases in the labour productivity index per employee, indicating important re-furbishments and restructuring in the branch. In fact, the two main car producers were purchased by strategic investors. First, the South-Korean concern DAEWOO bought the Craiova plant, and more recently the biggest Romanian car producer, SC AUTOMOBILE DACIA SA Pitesti was purchased by the French concern RENAULT. Other car producer is SC ARO SA Câmpulung-Muscel, producer of 4x4 vehicles. Its production however has been declining.

Table 1.5.4 Global indicators for SMEs in the manufacture of motor vehicles, trailers and semi-trailers

Thou ROL

NACE	Field	No. of firms	No. of employees	Average turnover	Average export revenue	Average net profit	Productivity
341	Manufacture of motor vehicles	6	113	991311.33	52117.83	60.5	52636
342	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers	29	658	4202235	87392.34	300294.1	185204.89
343	Manufacture of parts and accessories for motor vehicles and their engines	241	3757	3061275.9	717276.5	364302.5	196371.44

Source: NCS

Most of the SMEs are very small (micro-firms), surviving on small sub-contracting orders. Most of them are in NACE 343, acting mainly as sub-contractors to DACIA Pitesti.

Other means of transport branch comprises NACE groups 351 – *shipbuilding and ship repairs*, 352 – *construction and repair of rolling stock* and other sub-sectors.

1.5.5 Global indicators for SMEs in the manufacture of other transport equipment

Thou ROL

NACE	Field	No. of firms	No. of employees	Average turnover	Average export revenue	Average net profit	Productivity
351	Building and repairing of ships and boats	108	1899	2867373.21	851362.5	569165.4	163073.36
352	Manufacture of railway and tramway locomotives and rolling stock	47	1095	4315973.17	227960.6	837443	185251.82
353	Manufacture of aircraft and spacecraft	8	9	158009.13	0	584.88	140452.56
354	Manufacture of motorcycles and bicycles	11	271	1822073.64	0	177765	73958.71
355	Manufacture of other transport equipment n.e.c.	15	220	2375186.67	161112.9	617009.4	161944.55

Source: NCS

Shipbuilding

The shipbuilding industry is located around the main Romanian ports, some of them on the Danube river (Galati, Oltenita) and other on the Black Sea coast (Constanta, Mangalia). The bulk of the shipbuilding industry lies in the county of Constanta.

Overall, there are 12 shipyards in Romania, of which 5 are in Constanta county (Santierul Naval Constanta, SN "2 Mai" Mangalia, SN "Marea Neagra" Midia, FCN Agigea – Constanta, SORENA SA Constanta). SN Constanta is the second biggest shipyard in Romania as regards number of employees, after the Galati shipyard.

Currently 70-80% of output is for export, main destinations being the European Union, China, South Africa and Norway. The privatisation process is under way, two of the main shipyards (Mangalia and Galati) having already been bought by foreign investors (DAEWOO and DAMEN respectively).

The shipyards are surrounded by a network of small companies to which they sub-contract, as is also the case with the producers of rolling stock.

Railroad industry has a tradition of over 100 years, the first cars being produced in the Arad plant in 1891. At present, there are four major companies with 7,700 employees that produce freight cars, passenger coaches and metro carriages, both for the domestic market and for export.

Freight cars are produced at SC ASTRA Vagoane SA Arad, SC ASTRA Vagoane Calatori SA Arad, MEVA Drobeta Turnu Severin, SC ROMVAG SA Caracal. Recently, SC ASTRA Vagoane SA Arad was privatised with an American company, and will undergo a special modernisation program.

Romania also has tradition in the production of locomotives. For over a quarter of a century, it has been producing Diesel hydraulic and electric locomotives with a power range from 100 to 2400 HP, Diesel motorailers and railway building, maintenance and repairing equipment. The main producer is SC FAUR SA Bucharest, with a production capacity of 15,800 locomotives and over 200 motorailers.

The SME sector in the above industries is still in its infancy and caters to the need of the main producers. Any improvement in the competitiveness of such producers

would also require improvements in the competitiveness of their network of small suppliers.

1.6 Ceramics and glassware

Another important export sector is that of ceramics and glassware. The sub-sector that attracted most foreign direct investments was *Ceramic tiles and flags*, but the highest exports were registered by *glass and glass products*.

Table no. 1.6.1 Global indicators of the private sector in the ceramic industry in 1999

Thou ROL

NACE code	*Field*	*Total no. of firms 99*	*Total turnover 99*	*Total Gross Profit 99*	*Total exports 99*	*Total FDI 99*
261	Glass and glass products	276	1,725,891,692	194,637,840	985,946,557	1,555,810
262	Refract. and non-refract. ceramic products	203	1,150,153,139	69,363,004	699,786,002	1,483,631
263	Ceramic tiles and flags	23	425,733,436	48,127,969	22,556,525	15,000,000
264	Bricks, tiles, other construction items	350	501,049,427	34,465,611	19,623,251	3,951,915

Source: NCS

The highest concentration is in *ceramic plates and flags*, and the lowest in *glass and glass products*, while import penetration was highest in *ceramic plates and flags*.

2. Competitive advantages and barriers to development

2.1. Foreign Trade Analysis

Structurally, the external trade is characterised by both labour-intensive and capital-intensive activities. Cheap labour existing in the Romanian economy has created a certain comparative advantage for domestically produced commodities, especially in light industry, wood processing, and footwear. Capital-intensive activities are the result of the industrial structure of the Romanian socialist economy, with a considerable weight on iron and steel plants and petrochemical conglomerates. A general characteristic of all goods produced is the relatively high intensity of energy incorporated in the production of commodities.

Romanian exports are highly concentrated: apparel, clothing, iron and steel account for more than one quarter of total exports. On the other hand, machinery, equipment and raw materials represent the main items of imported goods--more than 40% of total imports. Both imports and exports have been significantly influenced by a relatively inflexible exchange rate policy that increased the anti-export bias of the trade regime. Cyclical overvaluation and under-devaluation of domestic currency has induced a corresponding evolution of imports and exports. The overall structure of economic activities has been constantly reflected in the structure of foreign trade.

Since the highest proportion of imports is represented by technology and the major part of exports relies on light industry, iron and steel, it follows that the degree of competitiveness is relatively low in the economy. Exported goods belonging to light industry mean a low level of incorporated labour and, at the same time, a reduced level of physical capital incorporated in the production process. Iron and steel industries, although highly intensive in capital, are characterised by a low degree of processing. In general, these commodities represent intermediate goods. The above particularities are more evident when analysing the coverage of imports by exports.

Romania continues to be highly dependent on imports--more energy and raw materials during the first 6 years of transition and more equipment at present--but the economy cannot transform the imported commodities into exports at a sufficiently high scale.

An analysis of the level of technology incorporated into exported and imported manufactured goods shows that sectors where Romania registers high export levels (T&C, wood, footwear, metallic products, metallurgy) have a low technological level in a very high degree[10]. Manufacturing as a whole has only a percentage of 18.47 of products with a high technological level. Detailed into export and import products, only 9.95% of exported manufactured products have a high technological level, as opposed to 26.17% of imported products. A high technological level of Romanian manufactured export products is recorded only at *Machinery and equipment* (68.9%), *Computers and office means* (100%), *Radio, TV and communications equipment and apparatus* (99.8%), *Medical, precision, optical, watch making instruments* (99.9%) and *Other transport means* (79%). Together, these branches make up for 8.1% of Romanian industrial production and for 10.31% of total exports in 1998.

2.2 Revealed Comparative Advantage (RCA) analysis[11]

Method:

The indicator of the revealed comparative advantage is based on the following basic principles:

1. The mirror principle – the exports of a country are reflected in the imports of partner countries and instead of using the exporter's data it uses the data from the importers that declare their purchases from the respective country
2. The homogeneity of declaring countries principle – the declaring countries must be part of the same category (developed countries, developing countries or transition countries);
3. Market dynamicity principle – all indicators must be dynamically interpreted. function of the trends of the world market and the export trends of the respective country

These trends are computed through the method of the smallest squares, using dynamic series for the last five years. The final result is a diagram where each product is reported on the horizontal axis to the export trend of the country and on the vertical axis to the import trends of the declaring countries.

[10] see Annex 5

[11] Approach developed by International Trade Centre (ITC) in Geneva (an UNCTAD/WTO Centre)

The revealed comparative advantage is computed for each product / product group using Balassa's formula for the similarity index:

$$IS = (\chi_y/\chi_i) \div (\chi_{j,sp}/\chi_{sp})$$

where:

IS = export similarity index

i = country code

j = product code

sp = market segment code

χij = volume of exports of product "j" by country "i"

$\chi_i = \Sigma_j \chi_{ij}$ $\chi_{sp} = \Sigma_j \chi_{j,sp}$

The indicator measures the competitive pressure of a country on the product's world market.

The diagram is drawn reporting each product to two axes:

- a horizontal one on which the growth (+) and decrease (-) speeds of exports are measured within the (-100, +100) interval.
- a vertical one, on which the growth (+) and decrease (-) speeds of total imports are measured within the same interval.

The products are then placed on the diagram by a point, which becomes the centre of a circle with a radius equal to the value of exports for the respective product.

First quadrant forms the group of "***champion***" products. These are products with a high market demand and with a significant supply from the analysed country. These are products that are sold well without great promotion efforts.

Second quarter forms the group of "***counter-performing***" countries, in the sense that the country exports products required on the world market, but that are made in the country with too high an effort

Third quadrant comprises the "***declining***" group of products, in the sense that products are exported for which foreign demand is declining, and they are supplied with too high an effort. For such products the country should decrease its supply.

Fourth quadrant represents the group of "***resistant***" products for which the supply of the exporting country is still high, but international demand is in decline. Here, special promotion policies are required, but only on short-term, as on long term their supply should be cut back.

Analysis of Romanian exports in 1998 using the RCA method

Stability of Romanian export trend

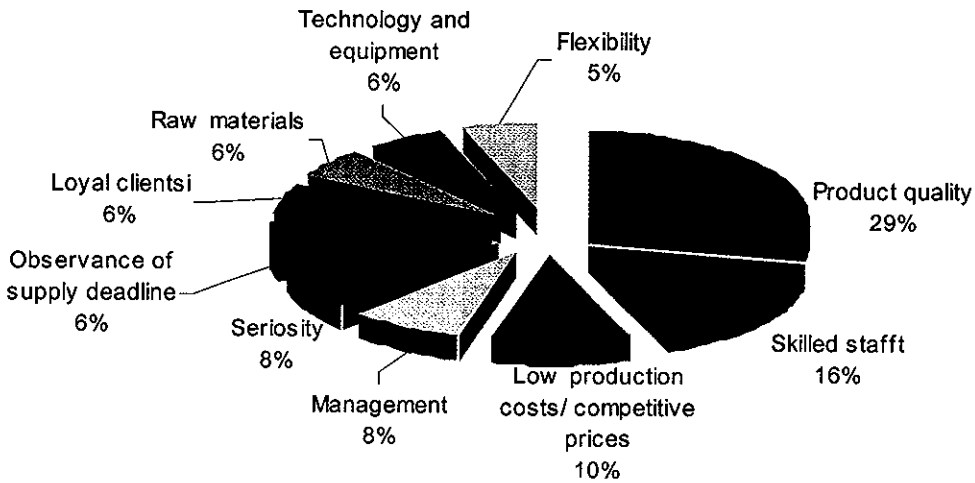
High stability at export for: men clothing, women clothing, shoe-wear, PVC, steel pipes, pumps, oil products etc
Average stability: cement, fat steel rolls, etc.
Low export stability: sports footwear, furniture, vessels, etc

The market share for main export items indicated positive variations between 1994 and 1998 and ranged from 0.5% to 9.8% in the case of garments and footwear, it was 2.5% for furniture and between 2.0 and 6.1% for steel products.
Romania's first three markets are:
- for garments: Germany, France, Belgium, UK, Italy, Netherlands.
- for footwear: Italy, Netherlands, Germany.
- for furniture: Germany, France, Netherlands.
- for steel products: USA, Canada, Italy, Germany, Mexico, Venezuela, Kuwait, Israel, Yugoslavia.

The **revealed comparative advantage (RCA)** was **high** at those products that are exported in relatively large quantities: garments, leather goods, wood products.
An **average** RCA was at transportation equipment, food products, electronic parts.
A **low** RCA was at: non-electrical machineries, chemical products, electronics products, textiles.

Fig. 2.4.3

Company strengths with positive impact on exports



Source: Research report regarding the opinions of exporting firms' managers

2.4. Competitive advantages and barriers

The competitiveness of a nation depends on its capacity to innovate and adapt, capacity developed due to pressure and challenge from changing domestic and international demand. Competitiveness is generated at the microeconomic level of the firm and is maintained also due to factors external to the firm as a favourable business environment.

Thus, the Institute for Development and Management from Lausanne analyses competitiveness based on the following criteria grouped in eight categories:

1. ***Strength of the national economy***, comprising productivity, capital formation, economic performances, market competition etc.
2. ***Openness of economy*** increases the economic performances of a country; its success on world markets indicates the competitiveness of the national economy, and economic growth is in many cases export-driven;

PREVIOUS PAGES BLANK pp 42,43

3. ***Government*** – its economic policies should be flexible and adapt to changing world conditions. The Government should minimise its intervention in the economy towards the creation of a competitive and stable environment in which firms can prosper;
4. ***Finances*** – a well developed financial sector is vital to economic growth and competitiveness, as it supports firms to grow and adapt through offering access to financing;
5. ***Infrastructure*** – a well developed infrastructure, including the availability of natural resources and a functional business environment aids economic activity;
6. ***Management*** – efficiency in economic activities and the capacity to adapt to changes in a competitive environment are essential managerial attributes;
7. ***Science and technology*** – no long term increase in competitiveness can be done without investing in R&D; competitive advantages often arise from breakthroughs made in research;
8. ***People*** – the availability and level of skills of the labour force, as well as the work ethics of this labour force are important factors contributing to competitiveness. Investments in education pay off over the long term.

In analysing Romania's competitive advantages and barriers, one should take into consideration all those factors. Thus, by highlighting the weaknesses of the Romanian economy, one can see where action should be taken to improve its competitiveness.

1. ***Strength of the national economy.*** Productivity in the Romanian industry is still low, due mainly to obsolete technologies and equipment. In their turn, these technologies and equipment cannot be updated without more available capital. Market competition varies from one sector to another, but overall it is still weak, as Romania is not yet a functioning market economy;
2. ***Openness of economy.*** Romania has opened its economy and is in a process of integrating into the world economy; however, this is counter-balanced by the remanent inflexibility in its inherited industrial structures;
3. ***Government*** – its economic policies should be flexible and adapt to changing world conditions. The Government should minimise its intervention in the economy towards the creation of a competitive and stable environment in which firms can prosper. However, Romania's record here is a sad one, with the

succeeding Government's changing laws and rules from one month to the other; heavily taxing profitable firms in order to maintain the huge loss-making state enterprises; and not offering enough information and predictability on macroeconomic and social conditions to enable businesses to plan ahead;

4. ***Finances*** – Romania needs a solid banking system and a developed capital market in order to finance healthy companies to grow and compete on world markets;
5. ***Infrastructure*** – Romania has a decent infrastructure and is further developing it. However, it should focus more on a functional business environment to aid economic activity;
6. ***Management*** – management skills have been developing in the past ten years, but much is still to be achieved;
7. ***Science and technology*** – no long term increase in competitiveness can be done without investing in R&D; Romania should make better use of its R&D endowment and should encourage private R&D;
8. ***People*** – Romania's present competitive advantage is in its cheap skilled labour. However, it should focus its efforts in developing higher skills and of maintaining a good standard in education.

The government's role is to support industry by providing policies to enable them to competitiveness in world markets. Ultimately, nations succeed in particular industries because their home environment is forward-looking, dynamic and challenging. Scarcity of available financial means in supporting the development of competitive industries highlights the necessity of focusing available resources towards potentially competitive industries. Decision factors have become more open to the possible useful role that decentralised supply-side policies and clusters of small and medium-sized enterprises can play in this direction.

The opinion of the business sector, that was revealed through two questionnaires (see Annexes) administered one to a sample of 37 BSOs and the other of 100 of their members, was that firms needed in order to develop their exports:

- cheaper and more accessible credit, as well as access to other types of financing,
- export promotion support and access to information on business opportunities and government support measures, market studies etc,
- purchase of new technologies, machinery, equipment,

- joint-ventures, strategic partnerships,
- training, business development assistance.

The **risk factors** that threaten exports as seen by the business community are first of all an increase in fiscality and an increase in prices of utilities and raw materials, followed by politic and economic instability, the instability of the legal framework and the situation of the banking system.

The **weaknesses** of companies were their technology and equipment, limited production capacity, as well as the lack of access to affordable financing (high cost of bank credit plus lack of other financing sources). This latter point is corroborated by the fact that 68% of respondent companies financed their export through their own sources, followed by 25% through bank credits, and only 7% through other sources.

The **strengths** of the Romanian companies are seen to be the labour force, low production costs, high quality of products, natural resources and raw materials etc. Both business associations and company managers see exports as having a continuous upward trend in the following years, with the best placed sectors being apparel and furniture.

The clothing and furniture sectors seem to be the ones where Romania has comparative advantages. However, in order to turn them into long-term competitive advantages, the sectors need to improve their design capacity and diversify their product range, inclusively by moving up-market. It should penetrate new markets, especially up-market ones, where more accent should fall on quality and design and originality. To this end, the sectors must be supported by better-developed related industries, especially those upstream. They would need better access to capital to be able to grow and take advantage of windows of opportunity. They will also need quick access to reliable and relevant market information. The state should support the development of industrial clusters in these sectors that can promote competitiveness, innovation and growth.

Romania should assume an active industrial policy aimed mostly towards the organisation of the industrial sector and the correction of market failures, and by

minimising structural industrial policies. The government's role is to support industry by providing policies to enable them to competitiveness in world markets. Ultimately, nations succeed in particular industries because their home environment is forward-looking, dynamic and challenging. We need a new approach to economic development in general in Romania. Government policy can play an important role in shaping competitive advantage. National economic priorities have to aim at appropriate goals, such as providing the right incentives, which can activate the true determinants of national competitive advantage.

3. Directions for action

At present, Romania's competitiveness is low, due to:

- Lack of a clear analysis of the sectoral situation of the export capacity and competitiveness of Romania's export branches;
- Low aggressiveness of Romanian exporters on world markets, due to the mentality inherited from the centralised export system, and to a reduced experience in world marketing, as well as to the lack of concern of Romania's governments for the promotion of branches with economic potential;
- While the role of domestic investors is essential, the economic climate was far from attractive. This lack of opportunities is the most dangerous syndrome showed by our economy: fiscal policies did not encourage investments and job creation. Neither did monetary policies stimulate the development of credits, or the establishment of a fair and credible business environment.

There is a value, qualitative and structural imbalance between the Romanian demand and supply of goods. At present, the dominant characteristic is the low level of aggregate demand. This imbalance was due to two major phenomena, i.e. the rigidity of supply as against demand and the fall in and restricting of demand respectively.

The trade balance cannot improve as long as government borrowings from abroad are misused, altering the credibility and impeding the penetration of foreign investment in the economy. The exchange rate policy must stimulate the exports but this is possible only if appreciation and/or depreciation are fully determined by the economic performance of enterprises.

The composition of imports should reflect the potential of the economy to a higher extent: a resource-oriented regime of trade is beneficial only if those resources are not directed to loss-making state companies (SIDEX Galati, for instance) or to less efficient activities. The state must reduce and eliminate its intervention in the economy through input provisions at quasi-subsidised prices, therefore allowing competition within the economy.

Focus should be on *developing skills-based industries*, and within resource-based industries like the wood industry, on the development of these sub-sectors that use higher skilled workers and have higher value-added. To this end, the state must encourage the development and introduction of new technologies and the production of high quality, high value-added products, inclusively through spin-outs from research. Support should be given to education and R&D as pre-requisites of competitiveness.

Domestic competition (mainly between public and private firms) will improve the overall competitiveness of the country on the world markets. Exports cannot be directly influenced by the state, but an efficient set of measures aimed to promote this activity is imperiously necessary--special credits or credits at lower interest rates, preferential exchange rates, tax reductions and exemptions, fiscal facilities, etc. The business environment must be stable and friendly, and the state must ensure a framework within which companies can grow and prosper.

Foreign direct investment represents a major determinant of foreign trade improvement. Romania records the lowest level of FDI's per capita among other Central and East European transition countries. Without a significant inflow of capital coming from foreign investors, economic development is too slow, negatively influencing foreign trade capacity and, consequently, the further development possibilities of the country. The existing legislative, institutional and political framework does not provide enough incentives for a radical improvement of the situation in this respect. Again, a stable and friendly business environment, together with low corporate tax rates can help attract the much needed foreign capital. Foreign companies are attracted by cheap skilled labour, decent infrastructure and a good business environment, without which they will look elsewhere.

Exports can constitute the most rapid source of economic growth. They can represent the chance of obtaining much needed hard currency and of updating obsolete equipment. To this end, trade policy should be focused on:

- identifying priorities as regards products and services, as well as markets, which would allow Romanian exports to integrate faster in the globalisation process (based on comparative advantages and the creation of competitive advantages);

- developing and implementing a coherent system of mechanisms and facilities for the promotion of exports and creating for Romanian exporters competitiveness conditions equal to those of their foreign competitors;
- Further promotion of strategic alliances (national and international);
- promoting business partnerships both between the public and the private sector as between the domestic and foreign ones;
- updating/renegotiating, concluding preferential trade agreements that can redress exports towards areas identified as interesting;
- development of free zones
- stimulating especially exports of high processed and high value-added goods, through market instruments;
- better access of domestic producers to information on foreign markets and export opportunities;
- defining a stimulating, stable legal framework for Romanian exporters, compatible with international legislation in the field.

Industrial policies should be focused on:

1. Policies regarding industrial organisation:
   - Protection of competition;
   - Stimulation of small and medium sized enterprises;
   - Development of infrastructure;
   - Promotion of certain industrial locations;
   - Provision of consultancy services in the case of major industrial reorganisations.
2. Policies regarding the correction of market failures:
   - Promotion of technological development;
   - Stimulation of investments in human capital;
   - Dissemination of information regarding business opportunities
   - Environmental protection and fighting pollution.

Besides this, in order to stimulate investments and growth, the following are required:

- Development of the capital market and increasing its capacity to finance companies;
- Facilities for the purchase of modern equipment and technologies and for the introduction of new products based on proprietary patents;
- Stable and friendly legal framework
- Political and macroeconomic stability
- Corruption-free and transparent business environment

Without a stable business environment, a restructured banking system, investment incentives and moderate taxation, the Romanian economy would not be able to grow and prosper, and the aims of competitiveness would never be reached. The development of a favourable business climate is a *sine qua non* of further economic growth. The Government should also analyse the existing competitiveness and develop adequate industrial policies to foster such competitiveness. The proper role of government is to push the industries to innovate and upgrade, not so much to rescue or offer help.

Annex 1 Structure of industrial production by activities

%

	1993	1994	1995	1996	1997	1998
Total	**100**	**100**	**100**	**100**	**100**	**100**
Manufacturing	***84.6***	***79.6***	***80.5***	***81.9***	***78.9***	***78.7***
Food and beverages	19.4	15.9	16.3	17.1	16.1	18.2
Tobacco industry	0.6	0.5	0.5	0.7	1.1	1.5
Textiles and textile products	4.3	3.5	3.7	3.3	2.6	2.4
Textile, fur and leather wearing apparel	2.6	2.2	2.1	2.4	2.4	3.2
Leather goods and footwear	1.6	1.2	1.5	1.4	1.2	1.4
Wood processing (excluding furniture)	1.8	1.8	1.9	1.9	1.8	2
Pulp, paper and cardboard	1	0.9	1.2	1.2	1	1
Publishing, printing and reproduction of recorded media	1.5	1.1	1.1	1.3	1.1	1.5
Manufacture of coke, refined petroleum products and nuclear fuel	8.6	7.7	7.7	6.4	8.3	6.3
Chemistry and synthetic and man-made fibres	7.4	7.5	8.7	7.8	7.2	5.8
Manufacture of rubber and plastic products	2.3	1.6	2.1	2.1	1.7	1.7
Other non-metallic mineral products	2.9	3.7	3.8	3.9	4.2	3.8
Metallurgy	8.8	9.5	10.4	10.4	11.6	9.7
Metallic construction and metal products	2.5	4.4	2.8	3	2.5	3.1
Machinery and equipment	6.2	5.4	5.8	5.6	4.6	4.4
Computers and office means	0.3	0.1	0.2	0.4	0.4	0.4
Electric machinery and appliances	1.7	1.8	2	2.3	2.1	2.3
Radio, TV and communications equipment and apparatus	4.1	3.2	0.9	1.2	1	0.9
Medical, precision, optical, watch-making instruments and apparatus	0.3	0.3	0.4	0.5	0.4	0.3
Means of road transport	2.7	2.9	3	4.2	3.3	3.9
Other means of transport	1.5	1.3	1.5	1.7	1.7	2.1
Furniture and other non-classified activities	2.2	2.8	2.6	2.7	2.4	2.5

Source: Statistical Yearbook 1999

Annex 2 Indices of investments in manufacturing, by activities

1990=100

	1993	1994	1995	1996	1997	1998
Total	***91.6***	***89.6***	***112.4***	***121.5***	***114.6***	***112.1***
Manufacturing	*87.1*	*80.8*	*130.4*	*165.2*	*160.2*	*156.4*
Food and beverages	159.9	138.6	327.7	352.6	252.8	290.3
Tobacco industry	122.9	98.2	58.8	477	693.6	645.2
Textiles and textile products	93.9	89.8	103	172.5	83.3	66.8
Textile, fur and leather wearing apparel	158.5	253.3	276.9	343.1	258.7	275.2
Leather goods and footwear	75	50.5	54.9	120.2	120.6	148.4
Wood processing (excluding furniture)	308	363.1	395.4	656.8	386.9	408.1
Pulp, paper and cardboard	78.1	138.5	209.6	372.2	142.2	136.5
Publishing, printing and reproduction of recorded media	653.9	563.7	680.9	745.6	615.1	11.1 times
Manufacture of coke, refined petroleum products and nuclear fuel	105.5	117	184.9	137	124.8	194.3
Chemistry and synthetic and man made fibres	86.6	92.2	140.9	291.7	224	88.2
Rubber and plastics processing	55.9	76.8	116.4	129.8	90	72
Other nonmetallic mineral products	68.3	75.4	75.1	119.6	117.8	144.9
Metallurgy	50.7	68.1	107	141.6	129.7	153.2
Metallic construction and metal products	43.8	55.5	41.1	52.2	26.1	61.3
Machines and equipment	32.3	34.1	34.6	61.2	30.4	39
Computers and office means	36	13.6	67.7	114.8	45.1	78.3
Electric machinery and appliances	25.7	33.6	49.7	71.9	67.7	66.3
Radio, TV and communications equipment and apparatus	620	52.7	42.6	98.7	57.8	62.4
Medical, precision and optical instruments, watches and clocks	107.7	28.9	93.8	74	138.6	243.7
Means of road transport	43.8	20.8	208.3	76.2	631.7	523.8
Manufacture of other transport equipment	43.4	51.9	46.7	44.6	57.7	53.7
Furniture and other non-classified activities	155.6	142.4	136.3	178.8	147	121

Source: Statistical Yearbook 1999

Annex 3 Labor productivity indices per employee in manufacturing

1995=100

	1996	1997	1998
Total	***107.5***	***105.6***	***97.8***
Manufacturing of which:	*110.1*	*108.5*	*99.5*
Food and beverages	107.6	92.6	90.9
Tobacco industry	149.2	152.3	151.6
Textiles and textile products	93.7	97.6	106.2
Textile, fur and leather wearing apparel	116.8	144	79.5
Leather goods and footwear	103.2	101.3	94.6
Wood processing (excluding furniture)	128.1	110	83.9
Pulp, paper and cardboard	100.9	90.1	94.4
Manufacture of coke, refined petroleum products and nuclear fuel	93	82.6	116.2
Chemistry and synthetic and man made fibers	87.6	63.8	70.5
Rubber and plastics processing	101.8	87.1	79.9
Other nonmetallic mineral products	114.3	109.3	108.4
Metallurgy	91	94	105.1
Metallic construction and metal products	69.4	97.3	58.1
Machinery and equipment	137.5	139.3	112.9
Electric machinery and appliances	119.3	144	150.5
Radio, TV and communications equipment and apparatus	160.4	146.4	132.3
Medical, precision and optical instruments, watches and clocks	136.4	125.5	94.3
Means of road transport	169.9	172	213.6
Other means of transport	93.5	107.2	134.9
Furniture and other non-classified activities	136.2	150.7	116.7

Source: Statistical Yearbook 1999

Annex 4 Romania's exports by main manufacturing activities

Million USD

Name of activity	Exports FOB		*1998 as against 1997 %*
	1997	*1998*	
EXPORTS - total	**8431**	**8302**	**98.5**
Manufacturing	***8132***	***8004***	***98.4***
Food and beverages	353	198	56.2
Tobacco industry	*	1	12.1 times
Textiles and textile products	303	358	118.1
Textile, fur and leather wearing apparel	1602	1786	111.5
Leather goods and footwear	572	636	111.3
Wood processing (excluding furniture)	356	398	111.8
Pulp, paper and paperboard	61	44	71
Publishing, printing and reproduction of recorded media	3	8	268.8
Manufacture of coke, refined petroleum products and nuclear fuel	504	382	75.7
Chemistry and synthetic and man-made fibres	721	480	66.6
Rubber and plastics processing	71	74	103.9
Other non-metallic mineral products	250	251	100.4
Metallurgy	1433	1423	99.3
Metallic construction and metal products (excluding machinery, equipment and tools)	171	184	107.4
Machinery and equipment	533	511	95.9
Computers and office means	3	9	350
Electric machinery and appliances	223	290	130.3
Radio, TV and communications equipment and apparatus	11	30	274.2
Medical, precision and optical instruments, watches and clocks	19	31	162.7
Means of road transport	218	140	64.3
Other means of transport	215	275	128
Furniture and other non-classified activities	510	495	97.1

Source: Statistical Yearbook 1999

Annex 5 FOREIGN TRADE WITH HIGH, AVERAGE AND LOW TECHNOLOGY MANUFACTURED PRODUCTS

AT THE END OF DECEMBER 1999

%

NACE	NAME	*High technological level*			*Average technological level*			*Standard (low) technological level*		
		Total	Export	Import	Total	Export	Import	Total	Export	Import
0	1	2	3	4	5	6	7	8	9	10
	TOTAL ECONOMY	17.64	9.62	24.21	28.82	23.79	32.92	53.54	66.59	42.87
	TOTAL INDUSTRY	17.26	9.82	23.36	30.30	24.89	34.73	52.44	65.29	41.91
	MANUFACTURING	18.47	9.95	26.17	26.84	24.30	29.15	54.69	65.75	44.68
15	Food products and beverages	-	-	-	2.43	6.09	1.33	97.57	93.91	98.67
16	Tobacco products	-	-	-	-	-	-	100.00	100.00	100.00
17	Manufacture of textiles	-	-	-	0.02	0.1	-	99.98	99.9	100.00
18	Manufacturing of wearing apparel; dressing and dyeing of fur	-	-	-	-	-	-	100.00	100.00	100.00
19	Leather and footwear	-	-	-	25.63	2.50	60.36	74.37	97.5	39.64
20	Manufacture of wood and of products of wood and cork, except furniture	-	-	-	-	-	-	100.00	100.00	100.00
21	Pulp, paper and paper products	-	-	-	99.86	100.00	99.85	0.14	-	0.15
22	Publishing, printing and reproduction of recorded media	6.85	4.18	7.02	91.31	94.92	91.08	1.84	0.9	1.9
23	Manufacture of coke, refined petroleum products and nuclear fuel	-	-	-	100.00	100.00	100.00	-	-	-
24	Manufacture of chemicals and	20.86	4.16	27.52	74.44	90.78	69.77	4.7	5.06	6.9

	chemical products									
25	Manufacture of rubber and plastic products	-	-	-	59.18	74.77	55.64	40.82	25.23	44.36
26	Other non-metallic mineral products	-	-	-	4.55	2.14	7.55	95.45	97.86	92.45
27	Manufacture of basic metals	-	-	-	2.55	1.10	6.32	97.45	98.90	93.68
28	Manufacture of fabricated metal products, except machinery and equipment	0.30	0.19	0.37	4.94	4.73	5.06	94.76	95.08	94.57
29	Machinery and equipment n.e.c.	80.01	68.89	84.41	18.69	28.02	15.00	1.3	3.09	0.59
30	Office machinery and computers	100.00	100.00	100.00	-	-	-	-	-	-
31	Electrical machinery and apparatus	29.88	15.54	39.29	66.97	83.11	56.38	3.15	1.35	4.33
32	Radio, TV and communications equipment and apparatus	97.60	99.81	97.42	2.40	0.19	2.58	-	-	-
33	Medical, precision and optical instruments, watches and clocks	98.68	99.88	98.55	1.32	0.12	1.45	-	-	-
34	Means of road transport	4.58	0.06	7.70	95.42	99.94	92.30	-	-	-
35	Manufacture of other transport equipment	74.96	79.05	59.42	25.04	20.95	40.58	-	-	-
36	Furniture and other non-classified activities	1.29	1.59	-	68.71	83.61	-	30.00	14.8	-

Source: computed by I. Haiduc based on custom declarations

Annex 6 Evolution of foreign trade structure function of the products' technological level

%

	Year	High technology			Average technology			Low (standard) technology		
		Total	Export	Import	Total	Export	Import	Total	Export	Import
0	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
TOTAL Economy	1994	15.38	6.74	22.78	33.78	26.80	39.74	50.84	66.56	37.48
	1995	14.79	7.50	20.59	34.40	25.84	41.24	50.80	66.66	38.17
	1996	15.18	7.62	20.97	33.68	24.34	41.25	51.14	68.04	37.78
	1997	13.93	7.55	18.70	31.78	20.68	40.08	54.29	71.77	41.22
	1998	15.18	8.00	20.22	26.14	16.89	32.64	58.68	75.12	47.14
	1999	17.64	9.62	24.21	28.82	23.79	32.92	53.54	66.59	42.87
Total industry	1994	16.14	7.18	23.58	35.42	28.54	41.14	48.44	64.28	35.28
	1995	15.49	6.02	21.23	36.05	27.63	42.53	48.46	64.35	36.24
	1996	16.08	8.34	21.68	35.69	26.64	43.23	48.23	65.02	36.09
	1997	15.72	8.94	20.38	35.86	24.49	43.69	32.70	66.57	35.93
	1998	15.04	7.89	20.19	27.51	17.32	34.85	57.44	74.79	44.96
	1999	17.26	9.82	23.36	30.30	24.89	34.73	52.44	65.29	41.91
Manufacturing	1994	18.74	7.21	31.47	27.14	28.65	25.47	54.12	64.14	43.06
	1995	17.72	8.05	27.19	28.81	27.62	29.97	54.47	64.33	42.84
	1996	18.24	8.36	27.17	28.82	26.71	30.91	52.84	64.93	41.92
	1997	17.67	8.99	24.96	29.65	24.43	34.02	52.68	66.58	41.02
	1998	16.28	7.98	23.13	23.15	17.26	27.99	60.57	74.81	48.88
	1999	18.47	9.95	26.17	26.84	24.30	29.15	54.69	65.75	44.68

Source: From custom declarations/ General Customs Division, Ministry of Finance

Annex 7 First 30 manufacturing sectors after the exports of the private sector, as of 1999

	NACE	Field	No. Firms that exported	Total no. of firms in the field	Export -ROL-	Percentage of firms that exported
1	182	Manufacture of other wearing apparel and accessories	464	2891	4543774654	16%
2	174	Manufacture of made-up textile articles, except apparel	241	1311	3945603697	18%
3	361	Manufacture of furniture	241	1526	3093279449	16%
4	201	Saw milling and planning of wood, impregnation of wood	566	3095	2671823157	18%
5	193	Manufacture of footwear	216	996	2429918781	22%
6	177	Manufacture of knitted or crocheted articles	107	669	1698458565	16%
7	343	Manufacture of parts and accessories for motor vehicles and their engines	37	256	1354743876	14%
8	205	Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials	290	1426	1019084284	20%
9	261	Manufacture of glass and glass products	86	276	985946557	31%
10	154	Vegetal and animal oils and fats	22	412	920761511	5%
11	172	Textile weaving	50	262	823497553	19%
12	351	Building and repairing of ships and boats	13	107	823396134	12%
13	287	Manufacture of other fabricated metal products	138	1219	753161662	11%
14	175	Manufacture of other textiles	97	905	738296222	11%
15	262	Refract. and non-refract. ceramic products	38	203	699786002	19%
16	265	Cement, lime and plaster	7	50	689385019	14%
17	241	Basic chemicals	11	213	655697633	5%
18	251	Rubber items	19	623	633601589	3%
19	202	Stratified wood products	60	363	623853151	17%
20	322	Manufacture of TV and radio transmitters and apparatus for line telephony and line telegraphy	10	55	599784535	18%
21	272	Manufacture of tubes	3	5	596415671	60%
22	297	Manufacture of domestic appliances n.e.c.	7	47	585197304	15%

23	311	Manufacture of electric motors, generators and transformers	8	85	573859733	9%
24	281	Manufacture of structural metal products	110	1515	539708065	7%
25	203	Manufacture of builders' carpentry and joinery	185	1607	531068912	12%
26	171	Preparation and spinning of textile fibres	19	126	411163714	15%
27	247	Manufacture of man-made fibres	4	29	374872436	14%
28	316	Manufacture of other electrical equipment n.e.c.	31	335	369180907	9%
29	232	Manufacture of refined petroleum products	6	18	311312315	33%
30	252	Manufacture of plastic products	87	1332	308966284	7%

Source: National Council for SMEs

Annex 8 Concentration of enterprises in selected industries

NACE	1993		1994		1995		1996		1997		1998	
	First 5	First 20	First 5	First 20	First 5	First 20	First 5	First 20	First 5	First 20	First 5	First 20
171	17.31	77.83	14.82	66.64	18.62	55.54	13.90	49.32	13.13	65.14	19.28	75.64
172	21.21	53.44	20.53	51.72	18.94	49.16	19.92	50.22	21.75	54.21	22.22	55.46
173	86.62	99.17	73.09	99.12	56.64	87.02	53.03	69.39	60.42	96.73	80.51	90.38
174	29.89	52.16	32.19	47.79	10.37	34.63	19.32	38.09	16.56	33.35	13.47	32.11
175	47.36	85.42	43.12	77.96	45.88	78.48	41.82	79.68	32.24	70.17	26.10	63.49
176	69.91	100.00	42.26	83.52	89.77	96.97	11.02	48.96	57.53	86.70	45.87	86.27
177	23.46	58.72	21.69	54.30	23.62	58.68	21.79	52.50	26.29	66.11	24.53	58.89
181	72.91	85.03	48.79	69.20	60.67	76.85	63.12	78.87	48.10	64.72	48.33	59.05
182	8.40	28.43	6.09	23.68	9.48	26.38	7.89	24.29	5.67	18.34	5.49	20.31
201	14.26	34.77	26.68	57.68	37.62	70.78	24.77	51.50	23.28	47.23	11.82	29.33
202	70.02	99.11	69.51	98.43	65.81	89.72	68.50	96.94	65.00	91.30	50.08	87.16
203	36.27	54.46	25.47	39.60	14.29	25.09	18.54	37.44	18.43	28.77	14.68	26.01
204	31.23	63.73	18.79	64.01	20.80	66.07	18.48	49.59	24.18	48.81	20.30	44.57
205	20.09	34.83	33.28	58.33	44.16	54.08	53.49	60.82	30.97	48.15	16.66	32.99

361	15.98	45.63	14.52	39.40	14.81	40.34	14.32	39.55	13.97	38.08	12.11	32.49

261	40.60	85.84	39.97	84.52	37.04	83.90	41.44	79.90	35.96	77.23	30.72	72.61
262	46.26	91.73	45.43	90.09	45.69	93.96	43.72	90.50	37.75	85.52	39.04	90.62
263	97.79	100.00	97.43	100.00	98.57	100.00	96.78	100.00	94.24	99.69	95.39	99.65
264	59.43	93.47	51.69	90.23	39.35	81.07	52.69	86.70	40.10	81.44	43.46	75.85

271	83.86	99.98	81.80	99.99	83.64	99.93	83.68	99.91	83.98	99.90	83.79	99.87
272	92.21	100.00	90.97	100.00	88.52	100.00	88.70	100.00	90.88	100.00	88.26	100.00
273	94.54	100.00	93.44	100.00	92.97	99.99	88.93	100.00	86.12	100.00	78.64	99.42
274	75.44	99.78	74.93	99.64	68.49	99.56	70.49	99.29	75.22	99.21	76.75	98.88
275	50.12	85.37	46.20	78.82	52.87	75.11	43.52	73.33	38.42	71.99	31.02	54.76

Source: NCS

Annex 9 Import penetration ratio

NACE	SECTOR	PROC93	PROC94	PROC95	PROC96	PROC97	PROC98
171	Preparation and spinning of textile fibres	21.57	28.67	31.99	37.16	47.78	72.72
172	Textile weaving	116.81	146.70	187.59	212.00	302.68	450.03
174	Manufacture of made-up textile articles, except apparel	8.23	10.73	13.71	18.86	21.75	26.71
175	Manufacture of other textiles	57.23	87.47	115.85	164.78	237.41	257.73
176	Knitted and crocheted fabrics	25.63	130.32	139.82	413.71	509.21	648.43
177	Knitted and crocheted articles	9.07	11.28	10.03	10.36	6.87	11.05
181	Manufacture of leather clothes	7.28	24.76	26.98	3.81	3.77	6.05
182	Manufacture of other wearing apparel and accessories	14.06	14.76	19.48	21.25	30.27	28.04

201	Saw-milling and planning of wood, impregnation of wood	3.56	0.52	0.75	0.43	0.80	0.65
202	Stratified wood products	16.22	20.29	42.11	35.39	33.39	46.57
203	Manufacture of builders' carpentry and joinery	7.34	3.26	3.38	4.44	5.82	5.37
204	Manufacture of wooden containers	13.18	24.63	12.10	9.77	33.71	17.62
205	Other wood, cork, wicker items	4.33	4.19	3.97	4.23	7.99	10.06
361	Manufacture of furniture	2.33	3.15	6.02	7.64	7.90	8.05
261	Glass and glass products	10.91	9.84	14.02	18.31	16.29	23.79
262	Refracting and non-refract. ceramic products	23.25	14.80	20.16	20.03	23.85	19.00
263	Ceramic tiles and flags	21.48	24.05	30.37	45.39	54.20	70.26
264	Bricks, tiles and construction products, in baked clay	10.60	1.05	1.49	3.59	3.40	7.58
271	Manufacture of basic iron and steel and of ferro-alloys (ECSC)	10.04	10.27	14.98	18.19	14.16	18.68
272	Manufacture of tubes	9.86	12.89	8.34	12.99	7.00	14.90
273	Other first processing of iron and steel and production of non-ESCS ferro-alloys	8.46	9.55	9.27	10.67	13.13	19.88
274	Manufacture of basic precious and non-ferrous metals	16.89	14.61	18.62	27.48	18.30	25.38

Source: NCS

ANNEX 10 Production price indices for selected sectors in % as against previous year

NACE	93_92	94_93	95_94	96_95	97_96	98_97	99_98
171	271.54	250.83	146.42	146.61	231.91	124.66	144.72
172	256.89	247.80	155.69	158.30	214.60	146.41	139.41
174	263.61	235.74	148.53	167.31	194.44	157.95	123.87
175	238.85	229.04	153.34	145.55	196.78	134.20	138.47
176	247.39	206.56	98.97	159.52	184.19	119.52	117.51
177	233.52	196.29	127.79	138.04	206.44	137.35	132.59
181	287.28	200.67	146.79	155.65	161.21	137.71	144.00
182	253.42	158.23	115.32	125.26	178.06	198.71	150.01
201	254.45	274.97	131.33	151.23	213.36	175.50	156.67
202	256.20	262.63	132.85	141.69	238.07	141.00	128.58
203	325.35	244.32	113.75	138.95	195.26	140.65	151.65
204	235.31	283.34	150.78	137.82	220.95	166.43	162.37
361	284.44	220.24	127.80	143.76	199.73	135.01	136.17
252	255.16	232.04	153.58	151.13	243.43	124.64	140.18
261	264.47	322.46	124.03	149.56	241.22	131.44	128.00
262	223.17	240.76	134.80	142.92	226.63	153.51	142.01
263	258.15	207.28	125.36	166.83	202.87	118.36	160.23
264	263.53	211.78	129.62	154.50	256.46	137.98	133.97

271	226.92	231.50	128.71	153.63	222.22	132.24	142.23
272	247.45	254.29	137.94	154.33	235.39	126.07	135.33
273	218.88	225.94	123.57	148.47	223.00	128.96	144.14
274	236.32	240.72	150.78	143.73	264.32	112.49	163.19
275	160.50	190.74	102.94	108.33	227.42	140.57	134.44

Source: NCS

ANNEX 11 Trade structure of the Romanian economy in 1996

Cod SITC	Main comparative advantages	RCAą 1990	RCAą 1993	RCAą 1996	Export share¸	Cod SITC	Main comparative disadvantages	RCAą 1990	RCAą 1993	RCAą 1996	Import share¸
84	Wearing apparel	7,1	11,4	17,6	19,3	65	Textile yarns, fabrics and similar	1,7	-4,8	-7,1	9,2
67	Iron and steel	7,5	12,5	7,5	10,8	33	Crude oil and oil products	-7,5	-5,5	-5,5	12,6
82	Furniture	6,2	7,6	5,5	6,0	34	Gas, natural and manufactured	-5,3	-6,3	-5,4	5,4
85	Footwear	2,1	2,5	5,1	6,2	72	Specialised machinery	1,5	-2,9	-4,7	6,1
56	Fertilisers	1,6	3,4	4,3	4,4	74	Industrial machinery and equipment	1,5	-0,3	-2,6	5,4
04	Grains and their preparation	-2,2	-6,1	3,3	3,8	32	Coal, coke and other	-4,4	-3,2	-2,6	2,8
24	Wood and cork	1,0	2,0	2,6	2,7	77	Electric equipment, machinery and apparatus	-0,5	-1,9	-2,3	4,5
79	Other means of transport	3,8	0,8	2,4	2,9	76	Telecommunication and sound recording equipment	-1,3	-2,5	-2,2	2,4
68	Non-ferrous metals	1,9	1,9	2,0	2,9	28	Metal ores and scrap iron	-2,6	-1,6	-2,1	2,1
66	Processing of non-metallic minerals	1,2	2,1	1,3	2,6	61	Leather and fur and articles thereof	0,0	-1,1	-1,9	2,1
52	Non-organic chemicals	0,7	0,5	0,9	1,5	59	Chemical products	-2,1	-1,5	-1,8	2,0
00	Live animals	-0,3	1,1	0,8	0,9	75	Office equipment	-0,6	-1,6	-1,8	1,8
42	Vegetal oils and fats	-0,3	1,1	0,7	0,8	89	Miscellaneous	0,2	-0,4	-1,6	3,1
01	Meat and meat products	-2,4	1,6	0,6	0,8	06	Sugar, sugar products and honey	-1,1	-1,1	-1,4	1,5
57	Plastic materials	1,1	0,3	0,6	1,3	87	Measurement, control and professional apparatus	-0,6	-0,9	-1,3	1,5
11	Beverages	0,0	-0,2	0,6	0,7	54	Medical and pharmaceutical products	-1,1	-1,3	-1,2	1,7
63	Wood and cork products, except furniture	1,1	0,9	0,4	0,8	55	Essential oils, perfumes and toilet preparations	-0,4	-0,6	-1,2	1,3
83	Travel articles, bags and similar	0,0	0,2	0,1	0,2	53	Dyes and pigments	-0,4	-0,9	-1,0	1,1
71	Power equipment	0,3	0,7	0,1	1,3	93	Special non-classified transactions	0,0	0,0	-1,0	1,0
62	Rubber products	0,2	-0,4	0,1	0,7	64	Pulp, paper, paperboard, paper products	0,3	-0,4	-1,0	1,6

ąRCA: revealed comparative advantage index (Xi/X – Mi/M)
¸as percentage of total exports or imports in 1996
Source: NCS

Annex 12 First ten manufacturing sectors after percentage of firms with profit in 1999

NACE	Field	No. firms with profit 98	No. firms with profit 99	Total no. firms 98	Total no. firms 99	Percentage firms with profit/total 98	Percentage firms with profit/total 99
287	Manufacture of other fabricated metal products	770	763	1145	1219	67%	63%
322	TV and radio transmitters and apparatus for line telephony	27	34	48	55	56%	62%
193	Footwear	575	590	923	996	62%	59%
201	Saw milling and planning of wood, wood impregnation	1638	1806	2655	3095	62%	58%
361	Furniture	809	853	1315	1526	62%	56%
252	Plastic products	787	743	1255	1332	63%	56%
174	Made-up textile articles, except apparel	796	730	1372	1311	58%	56%
281	Manufacture of structural metal products	818	842	1282	1515	64%	56%
182	Other wearing apparel and accessories	1443	1448	2638	2891	55%	50%
156	Grain mill products, starches and starch products	1837	1670	3364	3557	55%	47%

Source: NCS

Annex 13 First ten manufacturing sectors after 1999 total gross profits of private sector

thou ROL

	NACE	*Field*	*No. firms with profit 98*	*No. firms with profit 99*	*Total no. firms 98*	*Total no. firms 99*	*Total gross profit 98*	*Total gross profit 99*	*Share firms with profit/ total 98*	*Share firms with profit /total 99*
1	182	Other wearing apparel and accessories	1443	1448	2638	2891	507611134	1001277121	55%	50%
2	159	Beverages	388	354	885	929	758481678	964629060	44%	38%
3	174	Made-up textile articles, except apparel	796	730	1372	1311	502586329	767374855	58%	56%

4	158	Other food products	1433	1216	2829	2935	529808282	736082190	51%	41%
5	201	Saw milling and planning of wood, impregnation of wood	1638	1806	2655	3095	322432913	665624246	62%	58%
6	361	Furniture	809	853	1315	1526	288322550	603578629	62%	56%
7	193	Footwear	575	590	923	996	326866155	525585161	62%	59%
8	281	Manufacture of structural metal products	818	842	1282	1515	341155087	420287131	64%	56%
9	322	TV and radio transmitters and apparatus for line telephony and telegraphy	27	34	48	55	114546816	414840421	56%	62%
10	252	Manufacture of plastic products	787	743	1255	1332	284249880	396069270	63%	56%

Source: National Council for SMEs

Annex 14 First ten manufacturing sectors as regards relative evolution of gross profit in 1999/98 in the private sector

Relative evolution 99/98

NACE	**Field**	*No. of firms 99-98*	*Turnover 99-98*	*Gross profit (G P) 99-98*	*Export 99-98*	*FDI 99-98*	*Average turnover 99-98*	*Average GP 99-98*
353	Manufacture of aircraft	233%	57709%	181472%	11944%	100%	17243%	54372%
355	Manufacture of other transport equipment	15%	-62%	18475%	100%	-91%	-67%	15999%
272	Manufacture of tubes	-17%	112%	933%	146%	100%	154%	1139%
247	Manufacture of synthetic and man-made fibers	-24%	568%	503%	825%	-54%	775%	691%
274	Manufacture of basic precious and non-ferrous metals	28%	48%	721%	16%	375%	15%	541%
351	Building and repairing of ships and boats	30%	360%	566%	689%	19%	252%	410%
364	Manufacture of sports goods	9%	116%	389%	282%	11%	99%	350%
352	Manufacture of railway and tramway locomotives and rolling stock	46%	1296%	478%	841344%	21109%	858%	297%
231	Manufacture of coke oven products	0%	121%	276%	354%	-100%	121%	276%
211	Manufacture of pulp, paper and paperboard	3%	43%	277%	56%	-1%	39%	268%

Relative evolution is computed as absolute evolution/1998 value
Source: National Council for SMEs

Annex 15 Share of private sector in overall volume of Romania's exports during 1991-1997

%

Sector	1991	1992	1993	1994	1995	1996	1997
TOTAL EXPORTS Of which:	***15.9***	***27.5***	***27.9***	***40.3***	***41.2***	***51.4***	***54.8***
Animals and animal products	66.5	76.2	52.5	53.2	61.8	66.0	63.9
Vegetal produce	48.0	52.4	50.8	61.5	44.9	54.8	76.1
Fats and oils	10.1	22.7	34.6	44.1	57.9	72.3	83.6
Food, beverages, tobacco	27.0	41.1	42.4	60.5	70.7	59.4	60.1
Mineral products	2.1	7.0	8.3	10.2	12.3	10.1	12.0
Chemicals and chemical products	20.0	30.5	20.1	23.8	31.6	48.7	46.6
Plastic and rubber products	36.2	43.7	30.1	12.7	12.5	27.3	35.4
Hides, leather, fur and articles thereof	21.4	75.0	57.0	69.0	53.8	66.6	68.1
Wood, cork and plaited products	27.7	38.7	58.5	67.3	65.3	73.4	70.1
Paper and articles thereof	4.2	14.8	9.9	21.5	54.5	59.3	52.9
Textiles and textile articles	24.4	45.8	34.6	47.6	49.6	64.9	65.1
Footwear, hats, umbrellas and similar	44.6	64.7	50.1	59.4	50.9	69.3	67.2
Stone, cement, ceramic, glass products	43.9	66.2	59.4	64.7	58.4	66.1	62.3
Basic metals and articles thereof	7.1	19.4	22.2	57.1	51.9	55.1	59.1
Electrical machinery, apparatus and equipment, sound and image apparatus	4.2	10.4	15.2	24.3	23.7	36.1	35.6
Transport means	3.6	7.8	9.0	14.4	14.4	21.2	41.5
Miscellaneous	35.5	47.0	50.8	53.9	51.5	63.1	67.9

Source: National Commission for Statistics

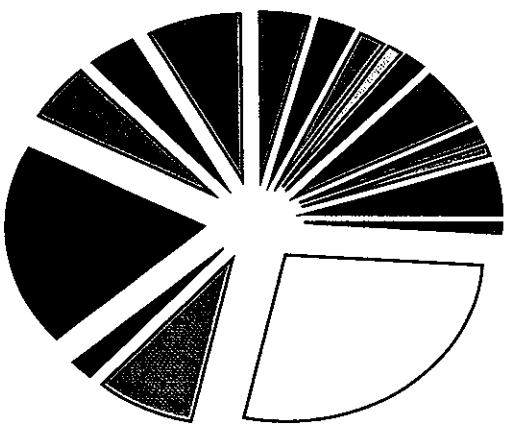
Annex 16 Romanian private sector exports

Mill. USD

Sector	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*
TOTAL EXPORTS Of which:	***679.4***	***1200.6***	***1364.2***	***2481.2***	***3258.6***	***4155.8***	***4621.3***
Animals and animal products	98.4	140.7	161.9	218.8	169.8	154.7	199.2
Vegetal produce	33.6	26.1	29.2	39.2	93.8	205.2	125.0
Fats and oils	0.6	1.5	21.2	20.3	46.2	48.7	105.0
Food, beverages, tobacco	9.8	19.6	19.8	41.0	50.7	64.3	63.6
Mineral products	13.0	40.3	47.7	72.5	90.0	69.6	76.3
Chemicals and chemical products	57.2	128.9	69.5	116.1	228.6	337.0	260.9
Plastic and rubber products	19.6	37.3	24.6	18.2	25.2	52.7	65.8
Hides, leather, fur and articles thereof	5.4	18.6	20.0	38.4	28.3	35.4	44.9
Wood, cork and plaited products	31.8	59.9	103.3	149.6	168.3	216.9	237.2
Paper and articles thereof	0.9	2.5	1.9	7.3	46.3	34.2	33.9
Textiles and textile articles	98.5	208.5	271.5	550.0	778.0	1125.1	1263.7
Footwear, hats, umbrellas and similar	38.7	47.1	80.2	184.7	217.8	349.9	365.8
Stone, cement, ceramic, glass products	33.0	58.4	59.3	71.7	88.6	99.3	94.3
Basic metals and articles thereof	44.9	142.7	213.1	607.6	746.0	698.4	919.0
Electrical machinery, apparatus and equipment, sound and image apparatus	28.8	52.8	66.5	126.0	155.6	242.7	262.4
Transport means	17.8	37.1	36.3	56.3	61.4	93.5	185.6
Miscellaneous	143.5	171.9	204.4	235.0	295.4		357.1

Source: NCS

Exports of private sector in 1997



- Animals and animal products
- Vegetal produce
- Fats and oils
- Food, beverages, tobacco
- Mineral products
- Chemicals and chemical products
- Plastic and rubber products
- Hides, leather, fur and articles thereof
- Wood, cork and plaited products
- Paper and articles thereof
- Textiles and textile articles
- Footwear, hats, umbrellas and similar
- Stone, cement, ceramic, glass products
- Basic metals and articles thereof
- Electrical machinery, apparatus and equipment, sound and image apparatus
- Transport means
- Miscellaneous

Annex 17 Number of active small and medium sized enterprises from industry, construction, trade and other services, by activities

Activity (NACE sections)	1993	1994	1995	1996	1997	1998
Total	*214349*	*283697*	*301781*	*309454*	*314183*	*315970*
Mining and quarrying	71	95	120	118	150	170
Manufacturing	28557	30729	32924	30540	34428	37328
Electric and thermal energy, gas and water	129	165	189	179	172	202
Construction	6210	5891	7266	6684	9132	10230
Wholesale and retail, repair and maintenance of motor-vehicles and motorcycles and of individual and household appliances	141620	213422	220579	225813	225879	221849
Hotels and restaurants	8651	9145	10460	10853	10093	10117
Transport and storage	8567	6178	9356	10086	11187	11546
Post and telecommunications	145	161	316	371	468	548
Real estate transactions, renting and services, activities mainly rendered to enterprises	8304	6859	9229	11075	12105	13269
Education [1)]	453	440	493	515	546	586
Health and social assistance [1)]	2055	2064	2399	2684	3535	3764
Other activities of collective, social and personal services	9587	8548	8450	10536	6488	6361

[1)] Only include the enterprises with activities related to education or health and social assistance, organized as companies.

Source: Statistical Yearbook 1999

Annex 18 Indicators of SMEs in clothing sector

	Group	Number of firms	Number of employees	Average turnover	Average income	Average net profit	Average net losses	Productivity	Average investment
171	**Preparation and spinning of textile fibres**								
171	*TOTAL*	*147*	*3679*	*2141004*	*384269,2*	*200712,1*	*574776,1*	*85547,07*	*1245086*
171	0-9	99	198	438400,6	49535,94	77503,68	203195,8	219200,3	274792,3
171	10-49	24	660	1706252	43375,71	375040,7	896253,6	62045,53	2547406
171	50-249	24	2821	9598998	2105937	534618	1786067	81664,64	3945228
172	Textile weaving								
172	*TOTAL*	*278*	*7809*	*1890769*	*174328,9*	*158684*	*837016,1*	*67311,29*	*756368,1*
172	0-9	178	351	285587,3	35983,98	19908,38	36873,48	144827,7	52230,98
172	10-49	46	936	1677954	117176	440622	223675	82463,57	699055,4
172	50-249	54	6522	7363211	679040,6	375960,1	3996999	60964,95	3126234
173	Finishing of textiles								
173	*TOTAL*	*49*	*797*	*1973151*	*1184234*	*223789,3*	*113827,3*	*121310,4*	*544439,3*
173	0-9	39	56	271324,2	23211,38	16681	25941,38	188957,9	18862,44
173	10-49	5	137	2717510	1073640	683020	95402,4	99179,2	264140,4
173	50-249	5	604	14503038	10350800	1380003	817762,4	120058,3	4924238
174	Manufacture of made-up textile articles, except apparel								
174	*TOTAL*	*1291*	*25483*	*1383210*	*675306,8*	*153794,3*	*55258,54*	*70075,1*	*367257,2*
174	0-9	845	1612	310286,9	57407,58	29382,91	17330,88	162650,4	61896,93
174	10-49	288	6267	1954410	553652,3	195413,7	65545,64	89814,91	417715,5
174	50-249	158	17604	6080134	4201644	743295,7	239348,3	54570,62	1908380
175	**Manufacture of other textiles**								
175	*TOTAL*	*913*	*10380*	*1076119*	*364740,9*	*119106*	*44883,01*	*94652,83*	*238544*
175	0-9	740	1286	254167,3	68162,16	20971,28	13943,15	146254,9	56285,94
175	10-49	113	2448	2337060	513036,3	241824,5	153737,3	107879	390456,8
175	50-249	60	6646	8838745	3743256	1098314	221465,6	79796,08	2200291
176	**Manufacture of knitted and crocheted fabrics**								
176	*TOTAL*	*32*	*278*	*1590809*	*239999,2*	*136500,2*	*8255,06*	*183114,7*	*1086196*
176	0-9	23	39	225144,6	6994,52	14424,52	2586,13	132777,6	46978,52
176	10-49	8	147	5486388	776197,5	504530,1	0	298579	4202058
176	50-249	1	92	1836456	1309520	0	204681	19961,48	61290
177	**Manufacture of knitted and crocheted articles**								
177	*TOTAL*	*660*	*8004*	*1120428*	*612351,4*	*100025,3*	*33953,79*	*92389,1*	*399227,2*
177	0-9	525	826	200907,3	97730,63	12935,02	12264,37	127695,3	172848,3
177	10-49	87	2042	2357138	699899,3	232130,5	120817,3	100426,5	334281,1
177	50-249	48	5136	8936146	6082335	813135	113741,7	83515,39	2992960
181	**Manufacture of leather clothes**								
181	*TOTAL*	*359*	*3225*	*523581*	*194690,1*	*53488,3*	*24219,87*	*58283,9*	*110184,2*
181	0-9	306	492	195069,8	16289,58	22597,72	6159,62	121323,9	31277,9
181	10-49	36	682	1326593	131625	117669,9	164667,5	70025,46	204566,4
181	50-249	17	2051	4736286	3539449	473604,9	51886	39257,37	1330630
182	**Manufacture of other wearing apparel and accessories**								
182	*TOTAL*	*2952*	*55709*	*970510,3*	*468473,1*	*133548,2*	*46099,61*	*51427*	*314890,1*
182	0-9	2084	4256	211177,2	39018,43	21739,85	13853,7	103405,4	71128,97
182	10-49	512	10935	1328353	322559	163713,9	49540,21	62196,34	225861,2
182	50-249	356	40518	4900945	3192326	744682,3	229916,7	43060,77	1869893

Source: NCS, Balance 1999

Annex 19 Indicators of SMEs in wood industry

Thou ROL

	Group	Number of firms	Number of employees	Average turnover	Average income	Average net profit	Average net losses	Productivity	Average investment value
201	**Sawmilling and planing of wood, impregnation of wood**								
201	*TOTAL*	*3091*	*26628*	*1479762*	*584179*	*198135*	*55408*	*171772*	*414912*
201	0-9	2418	4798	475926	92536	59227	22893	239848	135495
201	10-49	556	11081	3516439	1263704	517643	60746	176441	780313
201	50-249	117	10749	12547153	7515616	1550566	702013	136572	4453079
202	**Manufacture of veneer sheets; manufacture of plywood, particle board, fibre board and other panels and boards**								
202	*TOTAL*	*363*	*4274*	*1247446*	*493573*	*149261*	*278649*	*105948*	*3953643*
202	0-9	282	635	278395	42056	28872	121351	123634	180080
202	10-49	57	1209	2354095	698137	325492	604568	110987	4570719
202	50-249	24	2430	10005508	5313061	1145293	1352844	98820	46827451
203	**Manufacture of builders' carpentry and joinery**								
203	*TOTAL*	*1618*	*10705*	*681648*	*265583*	*63397*	*22688*	*103027*	*166809*
203	0-9	1394	2894	216002	48156	20314	8843	104045	39476
203	10-49	187	3606	1899627	713932	133348	82365	98511	460170
203	50-249	37	4205	12069427	6191299	1333060	242697	106199	3481473
204	**Manufacture of wooden containers**								
204	*TOTAL*	*228*	*1148*	*733430*	*232300*	*62094*	*50458*	*145664*	*98312*
204	0-9	202	453	333184	15311	25510	43036	148572	46954
204	10-49	22	351	1937352	529756	120954	119214	121429	349207
204	50-249	4	344	14324303	9554245	1585838	47126	166562	1311945
205	**Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials**								
205	*TOTAL*	*1448*	*14271*	*1038847*	*522869*	*113467*	*72473*	*105406*	*230867*
205	0-9	1150	2213	222003	58788	24552	22726	115365	41351
205	10-49	222	4798	2795906	1455841	300707	185110	129365	553961
205	50-249	76	7260	8266528	4819886	911954	496208	86537	2154781

361	**Manufacture of furniture**								
361	*TOTAL*	*1529*	*21616*	*1442942*	*499218*	*147316*	*97593*	*102066*	*422928*
361	0-9	1120	2447	294075	47671	23882	21107	134599	94137
361	10-49	284	5938	2760410	613945	329181	120702	132024	492673
361	50-249	125	13231	8743501	4284426	840085	730408	82604	3210442

Source: NCS, balance 1999

Annex 20 Evolution of firm number in selected industries during 1991-1998

NACE GROUP	*NO. OF FIRMS IN 1993*	*NO. OF FIRMS IN 1994*	*NO. OF FIRMS IN 1995*	*NO. OF FIRMS IN 1996*	*NO. OF FIRMS IN 1997*	*NO. OF FIRMS IN 1998*
171	237	248	212	197	317	293
172	232	227	244	236	265	263
173	31	36	40	29	36	37
174	431	423	537	553	631	711
175	383	439	626	542	339	358
176	20	32	42	42	42	42
177	942	933	946	863	556	556
181	290	478	242	216	433	415
182	2819	3178	3299	3141	3870	4098
201	827	1025	1291	1284	1762	1953
202	75	103	94	96	221	218
203	567	744	756	757	1184	1273
204	88	122	106	102	139	153
361	1025	1077	1143	1131	1346	1496
261	205	203	197	195	277	290
262	155	141	149	153	196	207
263	14	15	15	14	21	26
264	271	266	223	187	216	253
271	25	31	36	34	33	47
272	11	19	19	19	18	17
273	18	21	25	19	21	28
274	38	44	46	47	46	57
275	154	191	169	203	226	231

Source: NCS

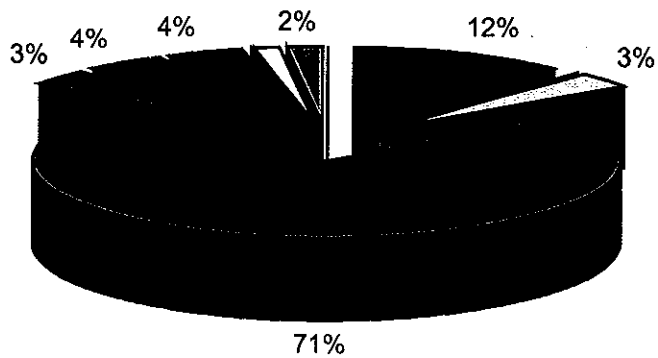
Annex 21 Number of employees

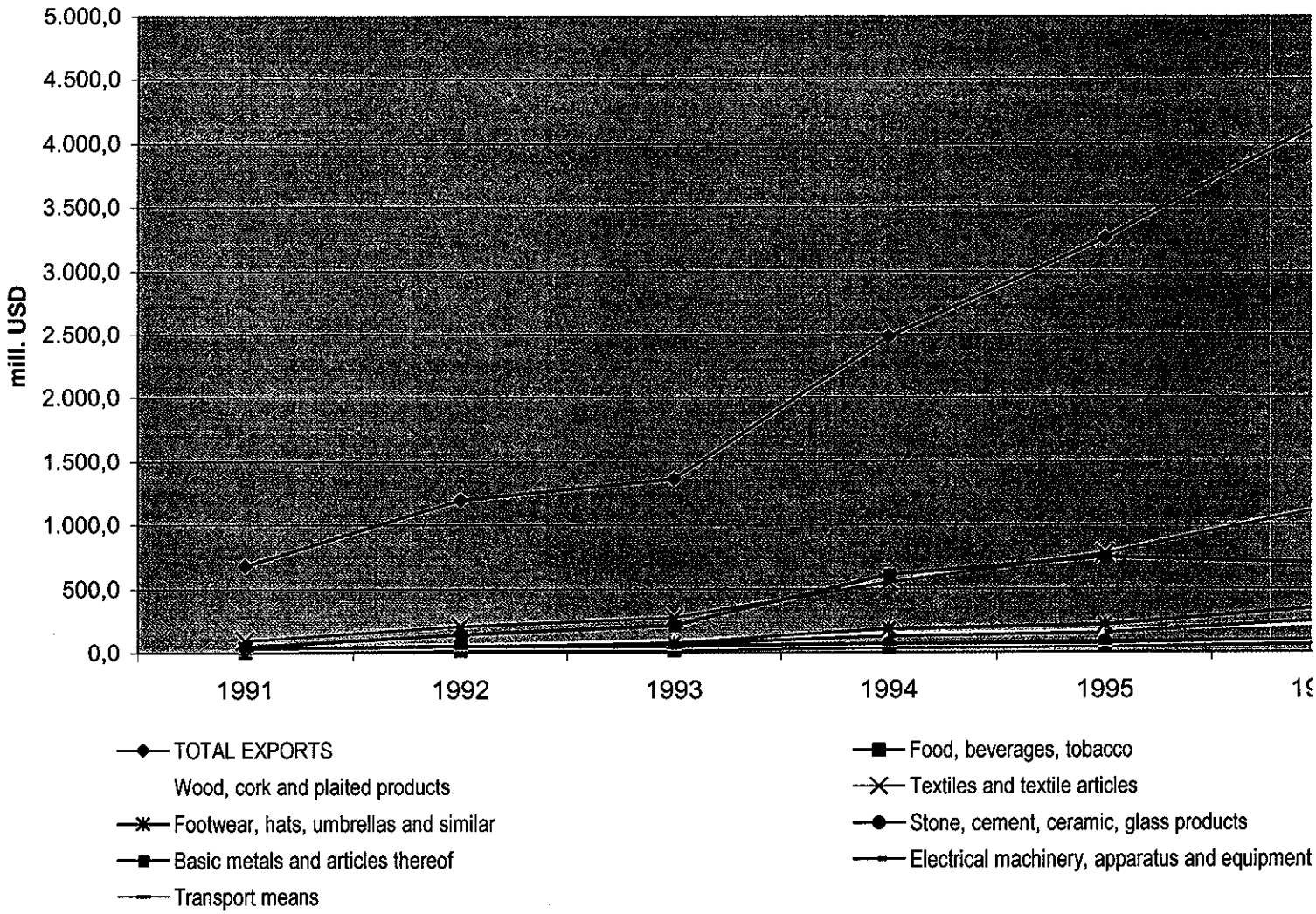
- thou persons -

	Number of employees at:				
	30.VI. 1999	*30.IX. 1999*	*31.XII. 1999**)	*31.I. 2000*	*31.V. 2000*
TOTAL	**4778.2**	**4713.5**	**4563.9**	**4457.1**	**4499.8**
Of which:					
Industry - total	***1990.9***	***1941.2***	***1938.0***	***1912.1***	***1895.8***
Manufacturing	*1682.6*	*1634.9*	*1611.2*	*1588.5*	*1573.0*
• food products, beverages and tobacco	211.4	208.1	192.4	193.6	192.8
• textiles and wearing apparel	329.5	328.3	324.6	326.7	330.9
• leather and footwear	67.3	60.3	71.3	73.9	73.8
• wood processing	70.0	69.8	62.4	62.5	66.8
• pulp, paper and cardboard, publishing	42.2	41.1	39.9	38.1	34.6
▪ manufacture of coke, refined petroleum products and nuclear fuel	28.2	27.3	19.3	19.3	19.3
▪ chemistry and synthetic and man made fibers	89.5	85.5	78.2	79.5	77.7
• rubber and plastic products	33.4	31.9	34.4	33.3	31.3
• construction materials and other non-metallic mineral products	96.5	94.7	84.6	75.1	82.1
• metallurgy	113.6	107.4	101.9	100.1	98.2
• metallic constructions and metal products	71.7	69.4	77.4	73.0	70.5
• machinery and equipment	211.7	202.5	193.4	190.3	174.2
• electrical, electronic and optical equipment	74.1	71.5	74.6	73.7	71.0
• transport means	144.3	140.4	143.1	144.2	140.2
• other industrial activities	99.2	96.7	113.7	105.2	109.6

Source: National Commission for Statistics

Number of active SMEs by activities in 1998



- Mining and quarrying
- Manufacturing
- Electric and thermal energy, gas and water
- Construction
- Wholesale and retail, repair and maintenance
- Hotels and restaurants
- Transport and storage
- Post and telecommunications
- Real estate transactions
- Education 1)
- Health and social assistance 1)
- Other activities of collective, social and personal services

Evolution of private sector exports in selected industries