

## EMF Machinery Working Group

The industrial machinery industry (capital goods) comprises 10 sections organised within the National Federation of Capital Goods Manufacturers' Associations (Federmacchine). It is possible to obtain statistical data through this Federation<sup>1</sup>.

### Figures for the industry, Italy (2004)

#### **Machinery and equipment for ceramics**

Employed: 6,894

#### **Machinery for woodworking**

Employed: 12,000

#### **Machinery for the paper and graphic industry**

Employed: 7,400

#### **Machinery for the textile industry**

Employed: 23,700

#### **Machinery and moulds for rubber and plastics**

Employed: 12,500

#### **Machinery for footwear, leather goods and tanneries**

Employed: 7,000

#### **Machinery and equipment for working natural stones**

Employed: 4,500

#### **Machinery and accessories for glass**

Employed: 11,300

#### **Machinery for wrapping and packaging**

Employed: 16,000. Export: 2,590 million € (2003: 2,370, 9.3%)

#### **Machine tools, robots and automation**

Employed: 31,910. Production: €4,130 million (2003: 4,028, 2.5%). Import: €1,033 million (2003: 972, 6.3%)

|   |                                |
|---|--------------------------------|
| <b>TOTAL EMPLOYED:</b>                        | 132,624 (2003: 134,314, -1.3%) |
| <b>TOTAL PRODUCTION</b> (million €):          | 21,635 (2003: 20,983, +3.1%)   |
| <b>TOTAL EXPORT</b> <sup>2</sup> (million €): | 14,871 (2003: 13,859 +7.3%)    |
| <b>TOTAL IMPORT</b> (million €):              | 3,519 (2003: 3,341 +5.3%)      |
| <b>DOMESTIC DELIVERIES</b> (million €):       | 6,764 (2003: 7,124 -5.1%)      |
| <b>EXPORT/PRODUCTION</b> (million €)          | 68.8%                          |

<sup>1</sup> The Italian National Statistics Institute (ISTAT) provides other sets of figures resulting from the data being put together in different ways.

According to Eurostat, the machinery and equipment industry (NACE DK) in 2002 Germany had 17,434 companies (with an average staff of 61), the United Kingdom had 13,700 companies (with an average staff of 26), France had 15,990 (20.4), Italy had 43,185 companies (13.7 average) and Spain had 14,000 (13.8). The (15-strong) EU had 158,137 companies with an average staff of 22.3.

<sup>2</sup> Italy's 10 leading customers (in 2003) were, in order of importance: Germany, China and Hong Kong, United States, Spain, France, Turkey, United Kingdom, Russia, Mexico and Switzerland.

The most representative sector of the industry is the machine tool sector<sup>3</sup>. Below is a chart showing comparative manufacturing output in Europe.

**Production of Machine Tools in 15-member Europe (in millions of €)  
and number of companies per country**

|                     | <u>Production</u>          | <u>Number of companies</u>  |
|---------------------|----------------------------|-----------------------------|
| Germany             | 6,900 (41.9%)              | 320                         |
| Italy <sup>4</sup>  | 3,695 <sup>5</sup> (22.4%) | 450                         |
| Switzerland         | 1,959 (11.9%)              | 91                          |
| Spain               | 837 (5.1%)                 | 120                         |
| UK                  | 737 (4.8%)                 | 90                          |
| France              | 695 (4.4%)                 | 120                         |
| <b>Total EU-15:</b> | <b>16,460</b>              | <b>1,474 (Total CECIMO)</b> |

-----  
*Source:* CECIMO 2004. The figures for the number of companies refer to 2002

To wind up this statistical overview, here are some figures for the industry worldwide:

**Worldwide machine tool production (2002), figures supplied by CECIMO**

|             |        |       |
|-------------|--------|-------|
| CECIMO (15) | 17,512 | 52.6% |
| Japan       | 6,743  | 20.3% |
| China       | 3,198  | 9.6%  |
| USA         | 2,023  | 6.1%  |
| Taiwan      | 1,854  | 5.6%  |
| South Korea | 881    | 2.6%  |
| Canada      | 361    | 1.1%  |
| Brazil      | 332    | 1.0%  |

The trade balance between Italy and the rest of the world is positive: 1,962,412 (thousands of €) for exports, 867,663 for import. The countries where imports outweigh exports include: South Korea, Japan and Switzerland; while for Germany the two figures are almost equal: 248,212 for exports and 240,542 for imports.

<sup>3</sup> The machine tool industry is represented at the European level by CECIMO (European Committee for Cooperation of the Machine Tool Industries).

<sup>4</sup> The capital goods industry taken as a whole accounts for the following percentages of overall industrial output in Europe: 1.9% in Italy; 3.2% in Germany; 1.0% in France; and 0.9% in the United Kingdom. The figure stands at 9.0% for the EU as a whole.

<sup>5</sup> There is quite clearly a significant difference between the figure from a European source and the figure from an Italian source. But what we are most interested in doing here is highlighting the graded list of countries.

We should also note that fully four Asian countries occupy important places in a list of the top 11 countries importing Italian-manufactured machine tools for the period running from January to July 2005: Japan (2nd), South Korea (6th), Taiwan (7th) and China (11th).

Italian exports: List of countries in order of importance: 1) Germany (11.6%); 2) Spain (8.6%); 3) France (8.4%); 4) United States; 5) China (8.0%).

### Machine tools in Italy: the first 9 months of 2005

The sector continues to suffer from the climate of uncertainty affecting the Italian economy and, in particular, from a stagnating domestic market. Deliveries are positive again thanks to the export market more than anything else.

Use of manufacturing capability has risen, albeit only slightly, and there has also been a slight increase in the order books.

There are once again more optimists than pessimists among the manufacturers.

After this general overview, we can now attempt to paint a picture of the Italian machinery industry taking a fresh look at the figures illustrated above.

Production in the sector picked up in 2004, compared to 2003. Exports began to grow once again (up 5.1%). The figure for domestic deliveries was still negative (down 7.5%). Growth in turnover was insufficient to impart a fresh boost to employment. (down 1.3% in 2004, compared to 2003).

Output from the over 2,200 companies in the 10 sectors that make up the capital goods industry is now worth some €1.2 billion overall (1.6% of GDP).

Sales of machinery abroad account for 4% of Italy's overall exports.

Export trend. As pointed out above, exports in the 10 industries listed account for 68.8% overall, with significant differences between one sector and the other.

The figures range from 48.8% for machine tools<sup>6</sup> to 59% for machinery and moulds for rubber and plastics, 75% for machinery and accessories for glass, 77% for machinery for the textile industry, 85% for machinery for woodworking and 85.2% for machinery for wrapping and packaging.

The overall trade balance in the industry was some €1.2 billion on the positive side. To fully appreciate the importance of this figure, we need to remember that the overall trade balance for Italian goods in 2004 was some €1.5 billion in the red (the other sector that closed in the black was Soft Furnishings and Apparel).

### Export markets in 2003

|       |                                   |
|-------|-----------------------------------|
| 34%   | Italy                             |
| 26%   | Western Europe                    |
| 11.2% | Other European markets            |
| 11.1% | North, Central, and South America |
| 11.2% | Asia                              |
| 5.7%  | Africa and the Middle East        |
| 0.8%  | Oceania                           |

Exports rose in 2004, compared to 2003, in all the regions described except for the Americas (the trend in the United States was flat, while there was a sharp drop in Mexico, Venezuela and Brazil; Argentina fared a lot better) and Asia.

---

<sup>6</sup> The figure for the machine tool sector is not due to the weakness of Italy's industry (which still ranks third in the world in terms of both production and export). Rather, it is due to the fact that some of its main customers are precisely other machine-tool manufacturing countries. Indeed Italy is one of the leading markets in the world for machine tools, precisely because of its major specialisation in the mechanical industry.

Moderate recovery was seen in western Europe in 2004 over 2003.

Exports to central and eastern Europe went well.

Exports to Asia were unsatisfactory both in 2003 and in 2004 (although the figure for India was good).

The future of Italy's machinery industry will depend on its ability to maintain a sufficiently advanced technological level to allow it not to have to compete directly with developing countries, basing its competitiveness on the quality factor instead.

### Structural characteristics

#### **Breakdown by size**

|                | By staff     | By turnover  |
|----------------|--------------|--------------|
| Micro company  | <b>17.3%</b> | <b>27.2%</b> |
| Small company  | <b>46.5%</b> | <b>47.3%</b> |
| Medium company | 30.4%        | 22.3%        |
| Large company  | 5.8%         | 3.2%         |

NB: The criteria laid down by the EU for classifying companies are: for turnover, 2, 10, 50 million euro; for staff, 10, 50, 250 employees.

Over 50% of the companies are small in terms of both turnover and staff.

The company format is consistent with the size of the businesses. Only 36% of them are joint stock companies, while 54% are limited liability companies, and 10% are partnerships.

To all intents and purposes, five regions are concerned by the presence of these companies: Lombardy (41.6%), Emilia Romagna (19.1%), Veneto (14.1%), Piedmont (9.5%) and Tuscany.

The order of these companies changes if the number of employees and turnover are the parameters used.

### The machine industry in Italy and in the leading European countries

The machine tool industry is one of the strengths of Italy's industrial system. Italy occupies third place (with 14.2%) on the European manufacturing scene after Germany (with 25.3%) and France (with 17.1%). If we narrow that down to the machinery industry alone, Germany's quota rises to 35.5% and Italy is in second place with 19.6%, leaving France and the United Kingdom trailing behind with less than 12%.

The picture changes if we look at the number of businesses. Italy alone accounts for some 27% of the companies in Europe, while Germany trails behind in second place with 11%.

### Growth

International integration has leapt forward in recent years. Italian companies, especially small and medium-sized businesses with a strong inclination for export, have opened up to new markets. Italian companies' competitive edge is based on the rapid introduction of innovative technology available on the market (incremental innovation) and, above all, on the search for solutions capable of allowing maximum flexibility to meet specific user needs.

These characteristic traits have allowed Italian companies to compete with their traditional German and Japanese competitors in the past.

Today, though, market globalisation has considerably narrowed the technological gap that exists between Italian companies and their new competitors.

Businesses are going to have to consider a range of different ways to internationalise, making clearer choices in this area. This could even mean their having to consider the need to partially or totally relocate manufacturing abroad (either setting up their own manufacturing units or outsourcing part of their production to foreign companies).

Although it needs to be said that relocation has recently encountered growing obstacles (compliance with delivery deadlines, technical standards, difficulties in finding and managing specialist staff) that have held back its development.

Another undesired effect is the manufacturing impoverishment of the industrial districts from which the businesses that have relocated hail. Not unrelated to this is the fact that the focusing of growing (not to say exclusive) attention on production costs has meant that less energy has been put into the natural tendency to innovate that is such a feature of these districts.

An important role in this process is played by the small economic and financial size of Italy's small and medium companies.

As Italian economist Fabrizio Onida has pointed out, it is necessary to set up a team of small- and medium-sized companies because the smaller ones do not have the managerial or financial resources for addressing the necessary processes.

Among other things, this also means upgrading the banking system, which still appears to be reluctant to back truly innovative projects even today, and updating an industrial policy that to date has focused too little on facilitating company restructuring in such a way as to allow small family businesses to grow in size.

### Innovation

To narrow the gap in competitiveness with developing countries (due first and foremost to low labour costs), it is necessary to constantly innovate the product (and also the manufacturing processes). Only ongoing investment in innovation and in product quality is going to make it possible to compete successfully. To achieve that result, companies need to grow in terms of their size, but financial constraints, poor infrastructures and inflexible red tape are hampering that growth.

Moreover, small businesses either finance themselves or else they turn to the banks, but what they do not do is turn to the money markets. Banks have to become amenable to offering risk capital<sup>7</sup>.

Yet it is crucial that we bear in mind that the slogan of growth in size can be misleading. The big business model in Italy is by no means exempt from criticism. The size of the companies in the industry reflects the organisational format and structure that has traditionally proved most effective in adapting to the needs of the market.

It is true that Italian businesses have an average of 13.7 employees, compared to 61.1 for Germany, but their turnover per employee (productivity) – €166,000 - is second only to that of French companies (€179,000), and greater than that of German companies (158,000 €).

Given that it is no longer possible to envisage Europe alone, or even worse, Italy alone, as the industry's reference market, it is necessary first and foremost to make strategic choices, and then to translate those choices into organisational decisions.

The kind of organisation that is consistent with the new objectives requires autonomous investment in individual companies or a search for new kinds of partnership or cooperation among companies.

It is necessary to allow managers greater independence rather than forcing them to be merely the executors of orders from the owners (e.g. the family).

---

<sup>7</sup> Not to mention the higher financing costs that a small business has to bear..

What we hope to see is the development of private equity funds designed to back companies in the process of growth in size through financing for the investments that such a process demands.