

MACHINERY INDUSTRY

Sector Overview

The machinery industry is a sector with a large trade deficit, accounting for around 15% of total imports and between 2-3% of total exports in recent years. However, exports of machinery have increased at a higher rate compared to the machinery imports (185% vs 73%) during the 2000-05 period. The sector exported an estimated 50.5% (\$4.4 billion) of its production in 2005. Average local input content in the production is between 80-85%.

The machinery industry dates back to 1950s, when the first major investment in the area (MKEK – Machinery, Chemical Industry Institution) was made by the state. Currently only a small number of firms operating in defence and sugar machinery industries are public companies and private firms dominate the sector. The industry is characterized by a large number of small and medium-sized companies with only a few large-scale organizations. Average firm size is around 8.1 employment/firm, while this size is around 120 employment/firm in Europe. According to the 2002 General Census, around 16,000 small establishments manufacture products ranging from simple agricultural equipment to capital goods. The sector mainly concentrated on the supply of spare parts. The only exception in this field is the household appliances industry.

A significant number of medium and large-scale companies have know-how and license agreements with well known international companies, but some smaller companies manufacture by copying the market leaders. However, harmonization with EU legislation and with EU machinery directives, which accelerated in 1999 and 2000, and obligatory use of CE labelling are expected to raise the competitiveness level of the major producers soon.

Market Size

Market size is substantial, but the demand has been unstable. The share of machinery in the overall manufacturing industry, which was 2.2% in 1990, increased to 4.1% in 2004.

Demand in the sector is expected to total \$16.0 billion and production \$8.8 billion in 2005.

MACHINERY MARKET, 1990-05						
\$ million, at 1998 prices						
	1990	2000	2002	2003	2004	2005 e
Demand	n.a.	11,521	10,502	11,627	15,151	16,015
Production	n.a.	6,393	5,788	6,600	8,645	8,855
Imports	3,790	6,695	7,379	8,522	10,349	11,636
Exports	161	1,567	2,665	3,494	3,843	4,476

Source: State Planning Organisation (SPO)

In 2004, machinery for specific industries (metal and wood processing machinery, mining and construction, food processing, textile and leather processing, arms, and other specific purpose machinery) is the largest item accounting for 46.4% (\$7,030

million) of total **demand**. Among this group, textile and leather machinery only, in particular, comprised 16.7% (\$2,534 million) of the total demand.

As far as the breakdown of total machinery production is concerned, almost half of the production is accounted by the **household appliances** with a share of 47%. This is followed by sector-specific machinery (\$2,218 million and a 25.7% share in production). The rapid increase in the population and living standards has required more and better quality white goods. The sector has been rapidly adapting itself to the consumer preferences through using up-to-date production technology. Turkey has about 17 million households, which represents a significant market for household appliances. In 2005, 5.53 million refrigerators, 4.38 million washing machines and 783,273 dish washers were produced. Exports, which accounted for 63% of production in 2005, are mainly destined for the U.K., Germany, France, Spain, Romania, Italy and Greece.

The Turkish **textile machinery** industry has had an integral role in the growth of Turkish textile exports. Apart from supplying the domestic market, it has great importance also for Turkey due to its promising export potential. Textile and leather machinery and equipment exports have increased rapidly for the last five years and reached \$133 million with a share of 3.5% in total machinery exports in 2004.

BREAKDOWN OF PRODUCTION, 2004		
\$ million, at 1998 prices		
	Production	Share, % in total
Internal combustion engines, turbines	58	0.7
Pumps-compressors, taps-valves	573	6.6
Bearings and gears + industrial furnaces &ovens + lifting & conveying + other general-purpose mach.	1,700	19.7
Machine tools	342	4.0
Metallurgy machinery + mining /construction + food processing	596	7.0
Textile and leather processing	696	8.0
Armament +mach. for specific purposes	584	6.7
Household appliances	4,092	47.3
<i>Total</i>	<i>8,645</i>	<i>100</i>

Source: SPO

Strong automotive and auto parts sector led to the development of a high production capacity for **engine and spare parts**. This capacity has been directed to the export markets, and the sector performed well in 2004. **Agricultural machinery** industry has also been increasing its exports due to the recent modernization and technological improvements.

The **machine tools** industry is a net importer in high-technology processing machinery; particularly CNCs and local production can only meet 10% of the demand. The sub-sector however, has the technology and workforce to supply on-demand engineered machine tools to foreign customers. Exports reached \$239 million in 2004, destined to nearly 120 countries. There are around 90-100 manufacturers of machine tools in Turkey.

Pumps and compressors production is stimulated by public and private industrial investments and the availability of agricultural subsidies. This helped both the

emergence of a strong pumps / compressors industry, and at the same time, made the sector highly exposed to the changes in macro-economic conditions. Turkish manufacturing industry and agricultural irrigation rely mainly on locally produced pumps and compressors. Currently, exports of pumps and compressors comprise about 8.3% of total machinery exports, with \$318 million in 2004. Main destinations include Germany, Italy, the U.K, the U.S., the Netherlands, France and the Russian Federation.

The **forklift** production is the most important category in lifting and conveying machinery. There are only two local producers in the field, compared to some 30 small and medium size manufacturers of cranes and conveyors. The level of competition is very high in the sector, with around forty different brands being marketed.

Foreign Trade

Turkey **imports** almost every kind of machinery. Machinery imports increase as the industry develops. The recent exception occurred in 2001 when it declined to \$6.4 billion compared with the highest ever import figure of \$9 billion in 1997 for the 1997-99 period

Imports were around \$8.5 billion in 2003 and \$10.3 billion in 2004, representing 72 % of the consumption. The single most important **import** item in 2004 was the textile and leather machinery with a share of \$1.97 billion. Other important items included engines and parts, office equipment and various pumps.

Export performance of the machinery sector is impressive and exports increased from \$161 million to \$3.8 billion in fixed prices between 1990 and 2004. The Turkish machinery and equipments have the price advantage in international markets due to the relatively flexible production system and abundant engineering skill available in the sector. Machinery exports have recorded a substantial increase compared to the overall exports of the country. While the share of **exports** in total production was around 11 % in 1990, it reached 46 % in 2002 and 50.5% in 2005. The annual growth rate of exports was 31% in 2003, 10% in 2004 and 16.4% in 2005.

In 2004, the most important export items were refrigerators & washing machines (\$1.66 billion), followed by engines & spare parts, construction & mining equipment and agricultural machinery & equipment. Germany was the main customer, followed by the U.K., Italy, France and the U.S.

Prospects

- Prospects for the machinery industry are broadly positive, as the industry increasingly invests in more modern equipment.
- A recent challenge is that very cheap products of low wage countries threaten the machinery sector. However Turkey has the advantage of being located in the vicinity of less developed neighbouring countries. Despite the sector being in its infancy, it promises good opportunities for exporters and for those seeking profitable investment alternatives.
- Prospects for the domestic market are also bright in the short-to-medium term, if the current high growth rates of the economy are sustained under the IMF supported economic programmes. The machinery industry fluctuates to a great extent parallel with the changes in the overall size of the economy. Recession

hits sales of non-essential industrial and consumer durables hard, but periods of economic growth stimulate industrial investment in new machinery.

- General level of competitiveness for the sector is not high, due to its concentration on low value added products, but harmonization with the EU Machinery Directive is expected to raise its competitive strength. Consumer purchasing is also expected to grow and raise demand in the coming years.