

4. Characteristics of competitiveness

Indicators employed by the UN measuring demand competitiveness (share in the market), price competitiveness, unit competitiveness and technological competitiveness are used to describe competitiveness.

- Growing demand competitiveness** To express demand competitiveness, indicators measuring the share of CR's exports in world trade and in EU's imports are used. According to statistics of UNCTAD, the CR's share in world export of goods reached 0.4% in 1990. The position of Czech exports in world trade improved after 1993 and reached 1.5% in 2002.
- Constantly growing share of the CR's exports to Euro-zone markets** A complementary view of the questions of demand competitiveness is based on current data on Czech exports and total imports to the Euro-zone. The position of the CR's exports to the Euro-zone market constantly improved in 1999-2004. The share of Czech exporters in the Euro-zone's import market was 2.0% in 1999 and 3.1% in 2004.

Table 11 Development of the share of Czech exports in imports to the Euro-zone

	1999	2000	2001	2002	2003	2004
Exports from CR to Euro-zone, EUR bn	15.7	19.6	23.1	2.48	27.0	33.2
Total imports to Euro-zone, EUR bn	781	1 013	1 014	984	988	1 071
Share of exports from CR in imports to Euro-zone, %	2.0	1.9	2.0	2.5	2.7	3.1

Source: CZSO. Monthly Bulletin. ECB. March 200

- Average development of price competitiveness** The price aspect of competitiveness can be described using the development of export and import prices. The long-term development of terms of trade is favourable because export prices grew by 2.5% a year on average and import prices by +1.1% a year, all in the period of 1993-2004. Price competitiveness grew in spite of the counteracting effect of appreciating *koruna* and increasing unit labour costs, which indicate competitive position at the level of exchange rate and cost of labour. The quality of products participating in exports could thus play an important role. The most favourable terms of trade since 2001 were reached in 2004 (102.1).

Table 12 Development of prices of exports of goods, imports of goods and of terms of trade

Y-o-y change in %, current prices													
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Avg. of 93-04
Exports	4.0	4.6	7.3	1.0	5.2	4.3	-0.9	6.3	0.4	-6.7	0.9	3.7	2.5
Imports	-0.7	-1.0	5.7	1.4	5.1	-2.7	1.8	12.0	-1.5	-8.3	-0.3	1.6	1.1
Terms of trade	5.7	4.6	1.3	-0.7	0.1	7.0	-0.5	-5.2	2.6	0.8	1.2	2.1	1.8

Source: CZSO

- Improving price competitiveness** According to OECD data, there was a favourable development of terms of trade also on the basis of unit values. Whereas import prices remained nearly at the same level between 1994 and 2004, export unit prices rose by 16% in total, which amounted to an average y-o-y increase of 1.5%.
- Structural and qualitative changes improve competitiveness** The trend of export performance of the CR is based on growing value of exports, not mass of exports. According to Eurostat data, EU imports from the CR of products of manufacturing increased by 514% in terms of value and by only 138% in terms of weight between 1993 and 2002 (in euros/ECU). These aggregate data show that the trend of the CR's exports to EU member states was based predominantly on qualitative changes. These changes rested on structural shifts towards more sophisticated products on the one hand, and on growth of unit values of exported products on the other hand.⁶ In spite of this progress, export prices lag behind those

⁶ External trade prices. University of Economics, 2004.

of competitors in the EU (e.g. prices of beer by more than 30%). The explanation is at hand: Prices that a country receives in external markets depend significantly on the level of its economic development. Particularly lower prices, even if products are of high quality, are necessary for a weaker economy to be successful in developed countries.

- **Considerable growth of kilogram prices** In 1999-2004, the value of exports grew considerably faster than the weight of exported products. Kilogram prices thus grew by 13% a year on average.

Table 13 Development of kilogram prices in exports to the Euro-zone

Period	Mass of exports, net (kg)	Value of exports EUR (thous.)	EUR per kilogram	Y-o-y change, %
1999	24 912 215 568	15 769 665	0.6330	.
2000	25 052 088 442	19 655 540	0.7846	23.9
2001	24 225 181 484	23 085 856	0.9597	22.3
2002	22 811 589 741	24 811 858	1.0877	13.3
2003	23 491 545 202	27 004 210	1.1495	5.7
2004	29 022 782 232	33 200 412	1.1439	-0.1

Source: CZSO

- **Low innovation outputs from the R&D sector** Expenditures on R&D in the CR related to GDP are roughly by a third lower than in the EU. Expenditures in 2003 made up 1.93% of GDP in the EU and 1.35% of GDP in the CR. In terms of time, it is a slight process of convergence of financial inputs to the R&D sector. The opposite process takes place in outputs from the R&D sector recorded as the number of patents per 1 million population. The CR reports less than a tenth of the number of patents recorded in the EU25 on average and even a thirtieth in comparison to innovative powers such as Sweden and Finland.

Table 14 Research and development sector: inputs and outputs

	1995	2000	2001	2002	2003
Inputs – expenditure on science and technology	% of GDP				
EU15	1.84	1.88	1.92	1.93	.
Finland	2.28	3.40	3.41	3.46	3.51
CR	0.95	1.23	1.22	1.22	1.35
Outputs – patents	Number of patents per million population				
EU25	81.4	133.6	141.9	138.6	.
Finland	175.1	343.7	377.4	310.9	.
CR	4.3	13.5	11.4	10.9	.

Source: Eurostat. 2004