

2. Sources of economic growth in the CR

According to the standard conception of the supply side of the economy, labour, fixed capital and productivity of factors, i.e. technological progress, form the sources of economic growth. In compliance with the methodological approach of international institutions (OECD, IMF), a set of relevant indicators on quantitative and qualitative aspects of factors of production is used to express sources of growth. Labour pool is represented by employment rate, number of workers (quantitative point of view) and by number of university graduates and number of years of study (qualitative point of view). Among other indicators are investment quota, investment dynamics, capital stock and productivity of factors of production. Included are also other supporting factors of economic growth.

- Improvement of growth position of the Czech economy** The economic development in the last decade (1994-2004) took place under a strong effect of processes of globalisation, integration of the Euro-zone and application of elements of the new economy. The tendency of differentiating rates of economic growth strengthened during the 1990s. Ireland, the USA and Finland formed a group of developed countries with accelerating rates of economic growth, compared to the 1980s. On the other hand, rates of economic growth decelerated in Germany, France, Italy and Austria. Differences in the utilisation of sources of growth are considered to be the main causes of differentiation of growth. The position of the CR as regards rates of economic growth has been improving: GDP grew by 3.1% a year on average in 2000-2004 and accelerated to 4% in 2004.

Table 3 Economic growth – GDP

Y-o-y change in %, constant prices

Fast growing developed economies	Avrg. of 1995-2004	Avrg. of 2000-2004	2004
Ireland	7.9	6.2	5.2
USA	3.3	2.8	4.4
Finland	3.6	2.9	3.7
Slowly growing developed economies			
Germany	1.3	1.4	1.6
France	2.9	2.1	2.4
Italy	1.6	1.4	1.3
Austria	2.1	1.6	1.9

Source: Economic Outlook, 2004

- Relatively low employment rate** Employment in the Czech economy does not develop towards being a quantitative source of economic growth. This is proved by a long-term decrease in employment amounting to 0.6% a year on average in 1995-2004 which did not stop even in the upward stage of economic growth in 2000-2004. It indicates structural causes of the relatively low employment rate. There are multiple reasons for this situation. Among the general ones should be mentioned insufficient motivation of employers to take on employees and low spatial, professional and qualifications mobility. A relatively new fact is actually zero job creation in the tertiary sector, even though many international comparisons show that this sector is undersized. This is probably related to discrepancies between the structures of supply and demand for services. A not insignificant source of decreasing employment is also the dynamic growth of productivity and wages and salaries which puts pressure on making people redundant.
- Employment rate in the CR is around the average in EU member states** Employment rate in the CR has been decreasing in the long term and the figure of 64.9% reached in 2003 is close to the EU15 average (64.2%). Above-the-average employment rates are reported by Sweden and the Netherlands (73.6%), Denmark (75.1%), Great Britain (71.7%), Austria (69.1%) and Finland (68.7%); employment rates in these countries are on the increase.

Table 4 International comparison of employment rate

Year	EU15	EU25	CR	Sweden	Netherlands	Denmark
1998	61.1	61.1	63.5	68.7	69.4	75.3
2000	63.2	62.3	64.9	71.1	72.9	76.4
2003	64.2	62.8	64.9	73.6	73.6	75.1

Source: Employment in Europe 2004, European Commission, August 2004.

- **Low share of university graduates in employment in the CR**

The position of the CR as regards the share of university graduates in total employment is unsatisfactory. While the share of persons with a university degree in employment made up 12.7% in the CR, the average in the EU was twice as high (24.7%) and the development trend indicates that this qualifications gap will widen. The share of university graduates in employment in some countries such as Belgium, Finland or Great Britain is above 30% and tends to further increase.

Table 5 International comparison of the share of university graduates in employment

Year	EU15	EU25	CR	Belgium	Finland	Great Britain
1998	20.2	.	10.7	33.1	30.3	.
2000	23.7	.	12.0	33.9	32.4	29.2
2003	24.7	24.0	12.7	34.8	32.7	30.9

Source: Employment in Europe 2004, European Commission, August 2004.

- **Employment rate is based on a broader set of determinants**

Analytical workplaces in the EU defined the key potential determinants of employment rate as follows: level of labour taxation; mechanisms of contracts on wages and salaries; systems of paying unemployment; level and composition of active employment policy. Emphasised is synergy of these institutional factors of the labour market. The hitherto development of employment rate was significantly affected by growing part-time job contracts and by increasing degree of economic openness.

- **Low dimension of part-time jobs in the CR**

From the point of view of long-term development trends, the scope of part-time jobs in the OECD rose by a third between 1993 and 2003. The highest increases were recorded in Finland and Ireland. International comparisons show that part-time jobs are below the share of 10% in Slovakia, Hungary, Greece and Spain; this figure for the CR is 3.7%. The average rate of part-time jobs is 15% in the OECD and 17% in the EU.

- **Accumulation of fixed capital is one of the main determinants of economic growth**

There are differences in investment rates among the OECD countries. Investment rate indicates the approximation of relation between capital accumulation and economic growth. The dimension of investment rate accounts for a large part of differentiations in the economic level, i.e. GDP per capita. Long-term average investment rates measured in the OECD countries in the 1980s and 1990s ranged between 10 and 20% of GDP. Statistical data show that the rate of economic growth increased in countries in which investment rates grew during the 1990. This economic relation holds for a number of countries such as the USA, Canada, Great Britain, Austria, Belgium, Denmark, New Zealand and Spain. According to international comparisons, investment rate in the CR is above the average and ranges between 27 and 33% of GDP.

- **Accelerating growth of investment**

Investment was the most important source of accelerating economic growth. Statistical data show that countries where economic growth speeded up reached also a significant acceleration of investment activity during the 1990s (up to 50%, compared to investment at the beginning of the 1990s). The average rate of growth of gross fixed capital formation (GFCF) in the OECD stood at 3.7% a year between 1996 and 2004, the highest growth being reported for Ireland (9.5% a year). With the exception of recession in 1977-1999, the rate of growth of GFCF in the CR was always higher than that of GDP. GDP in 1996-2004 grew by 2.2% a year on average, whereas GFCF by 3.0% a year. Both indicators were dynamic in 2000-2004 when GDP grew by 3.1% a year and GFCF by 5.5% a year. Increase in GFCF reached an all-time high of 9.1% in 2004.

Differences in economic growth can also be explained by changes in the structure of investment capital in favour of double-digit increases in investment in ICT. Its share stood at up to 20% of the total volume of investment. Particularly big progress was achieved in the USA where studies of companies and sectors corroborated that the contribution of ICT to economic growth in the 1990s was roughly 18%.

Table 6 Gross fixed capital formation

Y-o-y change in %, constant prices

	Avg. of 1996-2004	Avg. of 2000-2004	2004
OECD	3.7	2.2	6.0
Euro-zone	3.9	0.9	1.9
CR	3.0	5.5	9.1

Source: Economic Outlook, OECD, 2004

- **Labour productivity contributes decisively to economic growth**

Increase in labour productivity in the business sector of the CR reached 2.2% a year on average between 1996 and 2004, i.e. labour productivity in the CR converged to that in the Euro-zone. Due to the accelerating growth of labour productivity in the CR in 2000-2004 when the average annual increase was 3.4%, the catching up with the Euro-zone speeded up; the growth in the Euro-zone slowed down to 0.7% a year.

Table 7 Labour productivity in the business sector

Y-o-y change in %, constant prices

	OECD	Euro-zone	CR	Ireland
Average of 1996-2004	1.9	1.0	2.2	4.1
Average of 2000-2004	2.0	0.7	3.4	3.8

Source: Economic Outlook, OECD, 2004

- **Gap in labour productivity between the CR and EU average narrowing**

The gap between labour productivity per worker in the CR and the EU25 average narrowed. Labour productivity related to the EU25 increased from 57.7% in 1995 to 63.5% in 2004. In 2003, labour productivity per hour worked was as low as 46% of that reached in the EU15.

Table 8 International comparison of labour productivity levels

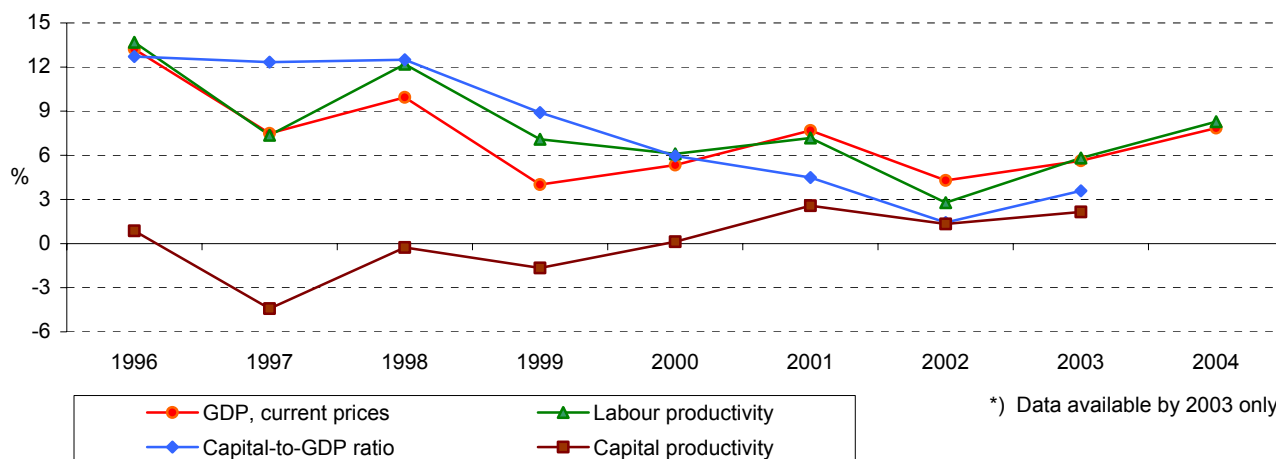
Labour productivity per person	1995	2000	2001	2002	2003	2004
EU25	100.0	100.0	100.0	100.0	100.0	100.0
Ireland	114.8	123.0	125.3	129.1	127.2	128.0
CR	57.7	59.8	61.1	61.5	62.0	63.5
Labour productivity per hour worked						
EU15	100.0	100.0	100.0	100.0	100.0	100.0
Belgium	119.9	122.0	120.1	120.2	121.6	.
CR	41.3	41.9	44.7	43.2	46.1	.

Source: Eurostat, February 2004

- **Difference in capital productivity**

Capital productivity started to grow in some developed economies. While a tendency towards decreasing capital productivity was still apparent in the OECD countries in the 1980s, there was a turning point in the development trend in some OECD countries in the 1990s. In most cases it was made possible by a technological change (innovation) reflected in products and processes and subsequently also in better organisational and managerial practices. Capital productivity in Australia, Denmark, Ireland, the Netherlands, Norway and the USA grew by 1-2% a year in the 1990s. The accelerating growth of labour productivity and the turning point in the trend of capital effectiveness acted in favour of growing multi-factor productivity whose annual rate was close to 2% in some countries. The average annual rate of growth of capital productivity in the CR was 0.1% in 1995-2003 and accelerated to 0.9% a year in 1999-2003.

Graph 1 Sources of GDP growth (y-o-y changes in %, current prices)



Source: ČZSO

- Inflation effects** A comparison of inflation rate and economic growth in the OECD countries showed a negative correlation between the levels of inflation and GDP. However, the strength of this correlation is low when levels of inflation rate are low. The basic analytical finding is that a decrease in the variability of inflation does not generate such a slowdown or decrease of GDP like in countries where this phenomenon did not occur.

Table 9 International comparison of the development of consumer prices

	Euro-zone		CR	
	Avg. of 1995-2004	2000-2004	Avg. of 1995-2004	2000-2004
Average inflation rate	2.0	2.2	5.2	2.6
Average variability (deviation from average in percentage points)	0.4	-0.2	-2.4	-1.4

Source: CZSO, OECD + own calculations

Empirical data on the development of inflation in the Euro-zone show a very high level of price stability. Average inflation rate was 2.0% a year in 1995-2004 and 2.2% a year in the medium-term horizon of 2000-2004; the difference was minimal. Progress took place in the average variability of deviations from the trend when the average deviation from the trend reached 0.4 percentage points in 1995-2004 (long-term development) and only -0.2 percentage points in 2000-2004. From the point of view of prices, the conditions for economic growth were favourable, yet a descending stage of business cycle set in.

- The CR saw a shift towards a low and stable inflation rate** While inflation in the CR increased by 5.2% a year on average in 1995-2004, the growth was only 2.6% a year in 2000-2004. The rate of price variability dropped by 1.0 percentage points in the reference periods. In spite of that, the dispersion between the highest inflation rate in 2001 (4.7%) and the lowest inflation rate in 2003 (0.1%) amounted to 4.6 percentage points. Deflationary pressures that gained ground in 2002 and 2003 probably weakened the profitability of companies, investment activities and hence economic growth.
- Less than fifth of OECD countries' government expenditures are targeted at boosting growth** Public budget expenditures in most of the OECD countries increased in the 1980s and part of the 1990s, ranging between 40 and 50% of GDP at the turn of the century. Only less than a fifth of public budget expenditures are allocated to industries which have a boosting effect on economic growth. Among these "productive" industries are especially education, infrastructure and R&D. The highest shares of this productive budgetary investment are reported for Australia (23.6% of total budgetary expenditures), Korea (30.4%), Portugal (19%) and Great Britain (17.2%). Some countries already experience decreasing shares of productive expenditures due to increasing representation of private financial resources. As to the internal structure of productive industries, the biggest proportion has education (7-13%) followed by transport and communications (5-8%) and R&D (around 2% on average).

In the CR, education and R&D are below the average and transport and communications are above the average.

- **Changing contributions of components of domestic demand to GDP growth**

The contributions of demand components to GDP growth were not stable between 2000 and 2004. Most volatile was the contribution of exports, but it accelerated over the last three years and thus contributed to a turn in the trend of net export from the red to black figures. Household expenditures (1.6 percentage points) and GFCF (1.7 percentage points) showed well-balanced contributions to GDP growth. Their fluctuation during individual years was affected by changes in the development of prices, wages and salaries and interest rates. Of a growth-promoting structure was the year 2004 when contributions of exports, GFCF and net export stood at 13, 2.4 and 1.1 percentage points, respectively.

Table 10 Contributions of demand components to GDP growth rate
(percentage points, constant prices)

Year	GDP growth rate	Expenditure of households	Expenditure of government and NPISHs	Gross fixed capital formation	External trade		
					Exports	Imports	Net exports
1996	4.2	4.4	0.4	3.3	2.8	-6.7	-3.9
1997	-0.7	0.7	0.3	-2.1	4.3	-4.1	0.2
1998	-1.1	-0.8	-0.2	-0.8	5.9	-5.4	0.5
1999	1.2	1.1	1.1	-1.4	3.4	-3.5	-0.1
2000	3.9	1.5	0.0	2.8	10.8	-11.9	-1.1
2001	2.6	1.5	0.8	2.0	8.4	-10.6	-2.2
2002	1.5	1.4	1.0	1.1	1.7	-4.4	-2.7
2003	3.7	2.6	1.0	0.9	5.9	-7.3	-1.6
2004	4.0	1.2	-0.7	2.4	13.0	-11.9	1.1
Avg. of 2000-2004	3.1	1.6	0.4	1.7	8.0	-8.8	-0.8

Source: CZSO