Interim Report

on the Czech Republic Strategy for Sustainable Development

Office of the Government of the Czech Republic

Prague, 2006

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Prepared pursuant to the Government Resolution 1242/2004 (article II/2)

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Introduction

The Czech Republic Strategy for Sustainable Development, adopted under Czech Government Resolution No 1242 of 8 December 2004, constitutes a framework for the drafting of policies and similar documents (sectoral policies or action programmes). It serves as the basis for strategic decision-making in individual sectors, as well as for inter-sectoral cooperation and cooperation with interest groups. The Strategy defines the principal (strategic) goals, as well as partial goals and instruments, formulated so as to eliminate, to the maximum extent possible, imbalances in relations between the economic, environmental and social pillars of sustainability. They are designed to achieve the best attainable quality of life for the present generation and to create conditions for a high quality of life for future generations. Strategic goals are defined for individual themes of social development:

Economic pillar: strengthening the competitiveness of the economy
- maintain the stability of the Czech economy and safeguard its resistance to external and internal negative effects;
- create conditions for economic growth which is capable, with minimum environmental impact, of ensuring an optimum rate of employment, public service financing (especially in the social sphere) and a progressive reduction in the public and "internal" debt;
- create conditions for a flexible economy based on knowledge and skills, and increase the competitiveness of industry, agriculture and services.

Environmental pillar: protecting nature, the environment, natural resources and the landscape, environmental limits
- ensure that the territory of the Czech Republic benefits from the best possible quality of all components of the environment (including the sound functioning of their basic mutual relations), and subsequently increase their quality, thus creating conditions for the progressive regeneration of the landscape, for the minimisation – or even elimination – of risks to human health, and for the regeneration of wildlife, at the same time preserving the Czech Republic's natural resources (non-renewable sources, biological diversity and diversity of the landscape) to the highest extent economically and socially acceptable;
- minimise conflicts of interests between economic activities and environmental protection, and gradually decouple environmental pressures from economic growth;

- make a contribution, commensurate to the possibilities and significance of the Czech Republic, towards the solution of European and global environmental issues (specifically the threat of climatic changes and depletion of the Earth's ozone layer, as well as the loss of biodiversity).

Social pillar: strengthening social cohesion and stability

- support human resource development with a view to maximising social cohesion;
- continuously reduce unemployment to a rate where people are economically and socially motivated to engage in gainful activities;
- maintain a stable number of inhabitants in the Czech Republic, increase the population over time and improve its age structure.

Research and development, education

- attain a high level of education in society, and thus ensure the competitiveness of Czech society and develop ethical values in accordance with European cultural traditions.

European and international context

- advocate and promote the principles of sustainable development in the framework of the broadest international relations, in international global and regional organisations, and as part of bilateral relations. This involves co-operation and initiative at all international levels and, in particular, efforts towards overcoming ethnic, economic, ecological and social conflicts between different cultural communities;
- be an active member of the EU and contribute to the EU's becoming a functioning and prosperous community, provided that the prosperity of the EU increases the living standard of Czech citizens and improves the quality of their lives, security and freedom.

Good governance

- ensure the gradual approximation of the constitutional system to the needs of society for purposes of transition to a trajectory of sustainable development;
- ensure that regions/municipalities are granted a status corresponding to their prospective functions in ensuring an equilibrium between the pillars of sustainable development;
- improve conditions for the participation of the public in decision-making in matters concerning sustainable development, and create the broadest possible consensus in respect of the transition to sustainable development;

- set up and develop institutions and forms of work of the public administration in accordance with the requirements of sustainable development.

INTERIM REPORT ON THE STRATEGY FOR SUSTAINABLE DEVELOPMENT

The present Interim Report has been drafted based on Czech Government Resolution No 1242 of 8 December 2004. The purpose of the Report is to explore how the challenges and goals set out in the Czech Republic Strategy for Sustainable Development have been achieved thus far. The Report is a means of informing politicians and the public about the status and recent development of the Czech Republic in the area of sustainable development.

The Report is based on a set of indicators defined by the three pillars of the Strategy (the economic, environmental and social pillars) and complemented by an additional three areas stated in the Strategy (research & development and education, European and international context, and good governance).

As regards the economic pillar, the situation in the Czech Republic has been improving generally. An unmistakable sign of this is the relatively long and considerable growth in GDP and labour productivity. The Czech Republic has thus maintained the advantage it had over the other V-4 members states and some other countries after the fall of the communist regime. On the other hand, we have been trying to catch up with comparable EU-15 member states (Belgium, Sweden or Austria), with some success only achieved very recently. In the long run, our relative position as compared to these countries has not changed to any remarkable extent due to the ongoing transformation and the related restructuring of the economy. Indeed, disappointment is caused by the level of decoupling environmental pressures from economic growth, where none of the indicators (material, energy and transport intensity related to GDP) shows any considerable improvement in the international comparison, although certain differences exist between them. Undesirable trends or negative international comparisons mark the energy and transport intensity (energy and transport indicators related to GDP), while the situation is somewhat better in respect of the material intensity of the economy.

As concerns the environment, considerable improvement was achieved in the early 1990s in particular. Recent years, however, have not seen such enormously positive results. This is due to intensive pollution at the beginning of transformation when the Czech Republic had – unlike the situation with the economy – the worst starting position of the post-communist countries. Between 1990 and 1999, extraordinarily fast improvement was achieved in the basic

parameters of the quality of the environment. Air pollution was reduced at record-breaking speed, the quality of water improved substantially, and the condition of wildlife (with delayed response) improved as well. The general decline in biodiversity, manifested worldwide, has not been stopped. From approximately 1999 to the present, the decline in the level of pollution has slowed considerably, or has stalled altogether in some cases. In respect of CO_2 emissions the Czech Republic records slightly worse values than the EU-25 average. In the presented set of indicators, the issue of climate change – characterised by greenhouse gases emissions – predominates, and notably this is one of the least favourable areas in the Czech Republic. In respect of the consumption of industrial fertilisers and pesticides, on the other hand, the Czech Republic has one of the best results among the countries being compared.

Indicators in the social sphere show that development may be considered reasonably good. The value of this indicator that, to a considerable extent, characterises the overall quality of life – the average life expectancy – has been increasing significantly, in fact since the fall of the totalitarian regime. In comparison with the EU-15, however, the situation is not so favourable – the Czech Republic's position has not changed to any significant extent. A positive result, even in the international comparison, is returned by the indicator of the population living below the poverty line after social transfers, where we held the leading position among all EU-25 countries. On the other hand, the steadfastly increasing rate of general and registered unemployment is alarming. Nonetheless, the rate has begun declining this year.

The development trend of the indicator assessing research and development (gross domestic expenditure from the state budget to R&D) has been positive, and the indicator level is higher than in most new EU countries. Nevertheless, compared with the EU-15, its level is still low. In education, the Czech Republic has achieved very good results in respect of the indicator of highest education attained, namely secondary education. Please note, however, that the result for the indicator of tertiary education is not so pleasant. The selected ancillary indicators characterising access to the Internet do not provide a clear picture.

The international dimension of sustainable development is characterised by a sole indicator – the amount of official development aid, which is more favourable for the Czech Republic than for the other post-communist countries, but less favourable when compared with the EU-15. This situation is, as we have seen, typical for other areas too.

Indicators characterising good governance are prevailingly of an innovative nature. Therefore, they typically do not allow international comparison or, to a certain extent, any other assessment, whether positive or negative. It may be assumed that indicators in this area will continue developing and better

opportunities for assessment will be available in the future. Despite these limiting factors, developments in the average duration of court proceedings and the Corruption Perceptions Index may be interpreted as strongly adverse.

METHODOLOGY FOR DRAFTING THE INTERIM REPORT

Considering this Interim Report is the first of its kind, it is reminiscent of a pilot document. The Report contains a total of 36 indicators, compiled on the basis of official data and tested methodologies and comprising a set of selected indicators which, according to experts, cover the most significant themes and objectives of the Czech Republic Strategy for Sustainable Development. The indicators are not categorised by individual themes as most of them also reflect the links existing between the themes. The order of indicators in this Report follows their order in the Strategy.

The selected indicators characterise the status and basic trends of the six principal themes of the Strategy. The aim of the Interim Report is not to explicitly assess whether the determined values of the indicators are "good" or "bad". The indicators provide information about relevant facts in relation to the sustainability of development in several manners that were used for the purposes of the summary assessment (in the table below):

- if a particular goal is set (e.g. expenditures on official development aid or volume of greenhouse gases emissions), the indicators provide information about the accomplishment of the particular quantitative target, or about the drawing near or receding from the given quantitative target;
- where no explicit goal is set, the indicator may be substituted by the experience of countries (cities, businesses etc., as appropriate), which can be compared with the level attained (consumption of pesticides, life expectancy etc.), using the benchmarking method.

In cases of the existence of data and the construction of indicators using the same methodology over a longer period of time, time series may be obtained. The assessment may then be complemented by a trend analysis, which improves the communicative value of the indicator, but is in itself insufficient. A detailed assessment should be made in a broader context in terms of data (information), time and territory.

As indicated in the aforesaid discussion on the development of indicators (mainly those characterising good governance), however, the set of indicators is not quite predicative and further modifications will be necessary in this respect.

We believe that the total number of indicators should not be increased in the future as they would gradually lose their predicative value. This means that if we wish to introduce any new indicators, others would need to be removed. For instance, it is desirable to consider introducing some indicators used internationally for a prolonged period of time (e.g. the competitiveness index published by the World Economic Forum). It would also be worthwhile considering whether or not to include certain aggregate indicators if they use an internationally recognised methodology (e.g. the human development index, ecological footprint, or environmental sustainability index).

These issues will be handled by the Work Group (of the Government Council for Sustainable Development) for Indicators of Sustainable Development, which will be responsible for ensuring that at the time of the next following periodical survey of attainment of the challenges and goals set out in the Czech Republic Strategy for Sustainable Development, to take place annually, the then most relevant set of indicators is used.

Table 1: Summary assessment of indicators

	Indicator	Distance to target (or assessment of trend)	International comparison
1	Gross Domestic Product per capita	+	+/–
2	Share of government deficit/surplus in GDP Share of government debt in GDP	+/– –	+/– +
3	Current account of balance of payments/GDP ratio	+/–	–
4	Labour productivity	+	+/–
5	Environmental protection expenditures	–	+/–
6	Public environmental protection expenditures	–	n.a.
7	Material consumption	+	–
8	Passenger transport intensity	+/–	+/–
9	Freight transport intensity	+/–	+/–
10	Energy intensity of GDP	–	–
11	Total consumption of primary energy supply	–	–
12	Share of energy from renewable sources	–	–
13	CO_2 emissions per capita	+/–	–
14	CO_2 emissions per GDP	+/–	–
15	Material use of waste	+	n.a.
16	Consumption of basic nutrients in industrial fertilisers	+	+
17	Consumption of pesticides	+	+
18	Index of common species of wild birds	–	+/–
19	Index of alien species of plants	–	+/–
20	Share of organic farming in total farmland	+	+
21	Life expectancy	+	–

22	Mortality	+	–
23	General unemployment rate	–	+/–
24	Registered unemployment rate	–	+/–
25	Employment of older people	+	+/–
26	Population living below poverty line before and after social transfers	n.a.	+
27	Research&Development expenditure	+/–	–
28	Highest level of education attained	+	+
29	Access to the Internet	+/–	–
30	Total international development cooperation	+/–	+/–
31	Availability of public cultural services	–	n.a.
32	Average duration of court proceedings	–	n.a.
33	Corruption Perceptions Index	–	–
34	Coverage of the Czech Republic's territory by approved town and country documentation of municipalities	+/–	n.a.
35	Regional dispersion of the employment rate of the 15-64 category	–	+/–
36	Civil society	+	+/–

Legend:

+   drawing near the target; values at the level of leading countries
+/– varying values, or values that are stable but without progress towards the goal;
     values at the average level of countries being compared
–   receding from the target; values at the level of last of the countries
n.a. no data available

1. Gross Domestic Product per capita

Meaning and context of the indicator

Gross Domestic Product (GDP) is commonly used to express the overall economic activity. GDP is the key aggregate indicator of the economic dimension of sustainable development. Comparison of the dynamics of GDP with social and environmental indicators illustrates the extent of concord of the development of the main pillars of sustainable development. Growth in GDP can be achieved either through boosting the employment rate and investment activities, or through the growth of productivity of labour and capital. GDP per capita is an approximate indication of the living standard. Every country determines its GDP in its local currency.

Method of calculation of the indicator

This indicator is a productivity indicator (production performance of the economy), expressed as the gross added value of resident units (including undertakings under foreign control). Conversion to constant prices is done using the double deflation method (consumption of inputs converted to constant prices is deducted from total production converted to constant prices, or imports converted to constant prices is deducted from total final use converted to constant prices). For the purpose of comparing the economic level of different countries per capita GDP in purchasing power parity is used to eliminate any differences in pricing levels. The purchasing power parity is, as a rule, measured in an international monetary unit that is based on the average price level in the countries being compared, such as the PPS – purchasing power standard for EU countries, expressing the average price level in the EU-25 on the basis of EUR. The OECD uses the "international dollar" reflecting the average price level of the current thirty OECD members.

Development of the indicator in the Czech Republic

GDP grew between 1996 and 2004 by an average of 2.2% per year. Per capita GDP grew at a similar pace (by 0.1 p.p. faster). This was due to moderate changes in the average number of population, which declined between 1996 and 2004 by 124,000.

Table 1.1: Gross Domestic Product per capita (year-on-year change in %, c. p.), Czech Republic, 1996-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004	Ø 1995-2004
GDP, %	4.2	-0.7	-1.1	1.2	3.9	2.6	1.5	3.2	4.4	2.2
per capita GDP	4.3	-0.6	-1.1	1.3	4.0	3.1	1.7	3.4	4.4	2.3

Source: Czech Statistical Office

The long-term development trend of the economic performance growth has not avoided sways. After an ascending phase of the economic cycle in 1994 to 1996, there followed two years of recession, caused among other reasons by financial instability. After a consolidation of the banking sector the economic growth continued. Between 2000 and 2004 GDP increased on average by 3.1% annually, and in 2004 by 4.4%.

Economic growth was boosted primarily by increased investment activities. From 2000 to 2004, the cost of gross fixed capital formation increased on average by 5.5% annually. In connection with increasing availability of fixed capital, labour productivity growth accelerated in 2003 and 2004 above 4% annually, surpassing the dynamics of GDP growth.

Structural adaptations played a positive role in the process of economic development. On the supply side of the economy, economic growth was spurred chiefly by industry, whose position in the national economic structure has settled at a level of 30%. Industry has undergone progressive structural change, with dominating electric and optical apparatuses and vehicles, whose share in the overall industrial production reaches two-digit figures. Similar shifts have occurred in the structure of exports, where the share of export of machinery and vehicles exceeds 50% of the total export performance. Growing competitiveness has a positive effect on the acceleration of the growth of the export performance in 2003 and 2004. This is evidenced by the considerable increase in the share of Czech exports in foreign markets, and especially in the Euro area imports market, where the share of Czech exports amounted to more than 3% in 2004. Progress was also achieved with respect to other parameters of pricing (favourable development of exchange rates) and unit (increase of the price per kilogramme) competitiveness.

On the demand side of the economy, contribution to the growth of GDP has been unstable in the course of the period in question. The most remarkable variations were seen in exports, which nonetheless accelerated in 2003 and 2004 and thus contributed to the shift of net exports from red to black numbers. Balanced contribution to the growth of GDP was made by household

expenditures (1.6 p.p.) and the gross fixed capital formation (1.7 p.p.). Their variations over time were due to unstable developments in prices, wages and interest rates. The year 2004 had a strongly pro-growth structure, with exports contributing with 13 p.p., gross fixed capital formation with 2.4 p.p., and net exports with 1.1 p.p.

However, not all determinants of economic growth (and long-term determinants in particular) developed favourably. Weaknesses are seen in the decreasing rate of employment, the low share of domestic innovation potential, and the percentage of the population with tertiary education.

International comparison

The position of the Czech Republic according to an international comparison of the per capita GDP level converted based on purchasing power parity has changed only insignificantly. Based on Eurostat estimates, GDP in the Czech Republic amounted to 70% of the EU-25 average in 1995, and to 72% in 2004. A faster rate of growth in real convergence was achieved by Slovakia (from 44% to 52%), Hungary (from 49% to 61%) and Poland (from 40% to 47%).

Table 1.2: GDP levels per capita (in purchasing power parity, EU-25=100), international comparison, 2004

Luxembourg	223	Slovenia	78
Ireland	139	Portugal	73
Denmark	122	Malta	72
Austria	122	Czech Republic	72
Netherlands	120	Hungary	61
United Kingdom	119	Slovakia	52
Belgium	119	Estonia	50
Sweden	116	Lithuania	48
Finland	115	Poland	47
France	111	Latvia	43
Germany	109	Croatia	46
Eurozone	107	Romania	32
Italy	105	Bulgaria	30
EU-25	100	Turkey	29
Spain	98	Norway	153
Greece	82	Switzerland	130
Cyprus	82	Iceland	116

Source: Eurostat, May 2005

An important component of international comparison is the comparison of the GDP growth rates with selected groups of developed countries where the average rates of growth were differentiated between 1995 and 2004. The group

of developed countries with accelerated GDP growth comprises mainly Ireland, USA and Finland. The slowly growing economies include Germany, Italy and Austria. The Czech Republic, too, may be included in this group with regard to the period from 1995 to 2004. Between 2000 and 2004, however, the growth of GDP in the Czech Republic became more dynamic and had an above-average rate of growth compared with the EU-25, which made it possible to transfer the Czech Republic from the slow-growth group to the fast-growth group.

Table 1.3: Growth in GDP (year-on-year change in %, c. p.), international comparison

Fast-growing economies among developed countries	Ø 1995 to 2004	Ø 2000 to 2004	2004
Ireland	7.9	6.2	5.2
USA	3.3	2.8	4.4
Finland	3.6	2.9	3.7
Czech Republic	x	3.1	4.4
Slowly growing economies in developed countries			
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
Czech Republic[1]	2.2	x	x

Note: [1] Czech Republic 1996 to 2004
Source: Economic Outlook, 2004

2. Share of government deficit/surplus in GDP and share of government debt in GDP

Meaning and context of the indicators

a) Macroeconomic context

The overall balance of public finance is equal to the difference between aggregate incomes and aggregate expenditures of public budgets. Quantification of both variables may differ depending on the delimitation of the government sector and the methodology used, i.e. the accruals vs. cash approach – for details see "Method of calculation of the indicators".

Public budgets comprise all income and expenditure activities of the government. Public budgets include the financial management of[1]

- the state budget, the National Fund and state extra budgetary funds (the State Fund of Culture, the State Environmental Fund, the State Land Cultivation Fund, the State Fund for the Support and Development of Czech Cinematography, the State Fund for Transport Infrastructure, the State Fund for Housing Development, the State Agricultural Intervention Fund);

- the National Property Fund;

- the Land Fund of the Czech Republic;

- health insurance companies;

- self-governed territorial units (budgets of municipalities and regions).

A budget deficit means that the amount of public expenditures of a budget exceeds the amount of public incomes. When quantifying a deficit it is necessary to respect certain more general criteria that perceive fiscal policy as an effective tool in influencing the macroeconomic situation.

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[1] This narrower definition is consistent with the GFS 1986 methodology. The ESA 95 methodology relevant for the Maastricht criteria uses a broader definition of the government sector, including in addition the Czech Consolidation Agency with subsidiaries (Konpo, Prisko, Česká finanční), Česká inkasní, the Administration of the Railway Infrastructure, the Viticultural Fund, the Supporting and Guarantee Agricultural and Forestry Fund, public universities, and centrally and locally administered contributory organisations. See the chart at http://www.mfcr.cz/cps/rde/xchg/SID-53EDF4E6-5EBA952C/mfcr/hs.xsl/gfsm_2001_13972.html).

From the perspective of sustainability, relevant is the share (relation) of the budget deficit, or public debt, to GDP, and not its absolute amount.

An analysis of the impacts of government deficit on the sustainable development of the economy can be characterised by the following macroeconomic formula:

$$BS = G - T = S - (I + NX)$$

where:

BS	government budget deficit (BS positive), or surplus (BS negative);
G	government expenditures on goods and services;
T	net taxes, i.e. taxes net of transfers;
S	private domestic savings;
I	private domestic investment expenditures;
NX	net exports.

The equation above indicates how government budget deficit may be financed. Based on the equation terms on the right side of the equation, this is possible in three ways:

1. by increasing private domestic savings;

2. by reducing private domestic investments;

3. by reducing investments abroad (or loans from abroad).

The equation also outlines the relation between the budget deficit, savings, investments and foreign trade deficit.

A budget deficit may be of two types. The first type is a cyclical deficit, resulting from variations of the product in the course of the economic cycle. This is caused by a decline in the dynamics of economic growth, which affects both the expenditure side of the budget (higher unemployment allowance and social benefits) and the income side (lower tax returns). This deficit is temporary and occurs only during economic recession. The second type, structural deficit, is caused by a structure of incomes and expenditures that is unsustainable in the long run. This is mostly due to high mandatory expenditures (social transfers and debt service). Accumulation of budget deficits further leads to increasing public debt. Countries with high public debt and budget deficit gradually find themselves in a situation where it is more and more difficult to keep control of the budget situation. Solutions are typically associated with unpopular budget cuts and limitation of government consumption. Another solution is monetisation of debt. However, monetisation increases the inflation rate.

b) Accession of the Czech Republic to the Eurozone

The accession of an EU member state to the Eurozone is conditional on the achievement of a high level of convergence, which is measured by sustainability of performance of the four convergence criteria, including long-term sustainability of public finance assessed in the light of the development of the government deficit and government debt.

- **Government deficit criterion**

  The convergence criterion of government deficit requires that the ratio of projected or actual deficit of the government sector to Gross Domestic product should not exceed 3%, except in cases where:

  - the ratio declined substantially and continuously and achieved a level near the recommended value;

  - and/or the reference value was exceeded on an exceptional and temporary basis and the ratio remained near the reference value.

  The term "government deficit" means net borrowings of the sector of governmental institutions as defined in ESA 95, with minimal variations (see below).

- **Government debt criterion**

  The convergence criterion of government debt provides that the ratio of the government debt to the Gross Domestic Product in market prices should not exceed 60%, except in cases where the ratio sufficiently decreases and approximates, at a satisfactory rate, the reference value.

  The term "government debt" means the total gross debt of the sector of governmental institutions according to ESA 95 with some partial methodological modifications.

The loss of independent monetary policy will mean that accommodation of the economy to shocks will place increased requirements on other adaptation mechanisms, such as the stabilising function of public budgets, flexibility of the labour market and the shock-absorbing capability of the financial system.

Meeting the Maastricht criteria for deficit (3% of GDP) and debt (60% of GDP) of the government sector in itself will not provide for stabilisation of the public finance within the framework of the European fiscal rules. It is necessary to create sufficient manoeuvring space ensuring that we will be able to keep the

deficit of the government sector below the 3% reference value permanently, even under unfavourable economic circumstances. Problems may be caused in the future by further delaying of the pension and health care system reform. Expenditure to debt service is a mandatory expenditure and its growth will further limit the space for the stabilising functions of public budgets.

Method of calculation of the indicators

There are two basic methods of recording the government debt and deficit – the government financial statistics methodology and the methodology of the European Statistical Office. The differences between the two methodologies can be described, in a simplified way, as the difference between single-entry bookkeeping, using current cash flows, and double-entry bookkeeping, working also with accounts receivable and payable. This is reflected in the different approach to keeping records of the state guarantees and economic management of the Czech Consolidation Agency. Another substantial difference is in the different definitions of the government sector.

The advantage of the Government Finance Statistics (GFS 1986), designed by the International Monetary Fund, is that it provides data relatively shortly after the end of the period monitored, and also that it has lower requirements regarding the source data. It also allows early drafting of fiscal predictions. It is also been used because it has a direct link to the state budget and budgets of state funds. This is why budget documents state the government sector deficit under the GFS 1986 methodology, and the same approach was applied to the reform of public budgets.

The GFS methodology is based on cash flows. All transactions of the current year are monitored on the cash-in principle, i.e. at the moment when the income or expenditure transaction is being implemented.

The methodology of national accounts – the European System of National and Regional Accounts (ESA 95) – is relevant for the calculation of the Maastricht criteria. This methodology was designed by Eurostat. ESA 95 works with data on the accrual principle. This means that transactions in the given fiscal year are recorded when the economic value is generated or extinguished, and also when the receivables and liabilities increase or decrease regardless of when the transaction will be paid in cash. Thus, this methodology follows receivables and liabilities in addition to incomes and expenditures in cash. ESA 95 therefore has no direct link to the statistics of incomes, expenditures and deficit stated in the budget documentation.

Implementation of the accrual principle in practice means that while GFS 1986 follows actual incomes and expenditures, ESA 95 records claimed (accrued)

items. This applies in particular to taxes and contributions to social security and health insurance.

For the purposes of this Report, we use data calculated based on ESA 95.

Development of the indicators in the Czech Republic

Table 2.1: Government deficit and government debt under ESA 95 (in % of GDP, under ESA 95), Czech Republic, 1996-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004
deficit	3.1	2.4	5.0	3.6	3.7	5.9	6.8	11.7	3.0
debt	.	12.2	12.9	13.4	18.2	27.2	30.7	38.3	37.4

Source: Macroeconomic prediction for the Czech Republic, April 2005, the Ministry of Finance of the Czech Republic, where source data were provided by the Czech Statistical Office (notification tables – March 2005, transmission tables – April 2005). Supplemental calculation of Eurostat under ESA 95 added for 1997 to 2000. Latest data available as at 25 May 2005.

Public finances developed in 2004 more favourably than originally expected – to a certain extent due to more vigorous growth and also as a result of changes in the budgeting rules in 2004, which made it possible for the first time to transfer savings to the budget year 2005. Government deficit in 2004 was at a level of 3% of GDP, which is far below the target set by the last convergence programme (5.2% of GDP).

As regards the issue of government debt, its level (despite the current growth trend) is still relatively low compared to the reference value of 60% of GDP. Provided that the government fiscal strategy is complied with, the fulfilment of this criterion at the time of its expected assessment should not be threatened.

Given the still low initial amount of government debt, the Czech Republic thus far has not had any difficulty fulfilling this convergence criterion. However, the growth in the public debt caused by the yearly deficits of the government sector and by covering high-risk guarantees and losses of various types has numerous economic and political implications. The growing amount of public debt causes the higher cost of the associated debt service. Public debt is financed by issues of treasury notes and bonds, or by loans. The amount of interest derives from the market interest rate and the total amount of debt.

The increase in debt since 1998 has resulted in a considerable increase in the debt service. In this context, the term "snowball effect" is often used to describe the effect of the interest rate and the growth rate of the economy on the amount of debt service of the state and, consequently, on the total debt amount. A higher

debt service means, under otherwise unchanged conditions, less liquid funds available for other public expenditures.

Chart 2.1: Development of government deficit (% of GDP), Czech Republic, 1996-2004
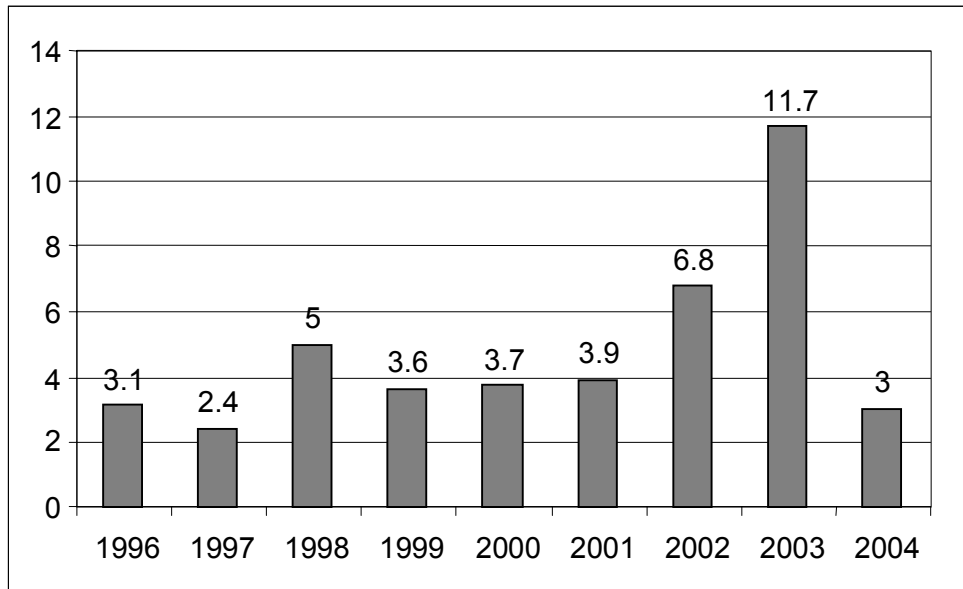
Source: Eurostat

Chart 2.2: Development of government debt (% of GDP), Czech Republic, 1997-2004
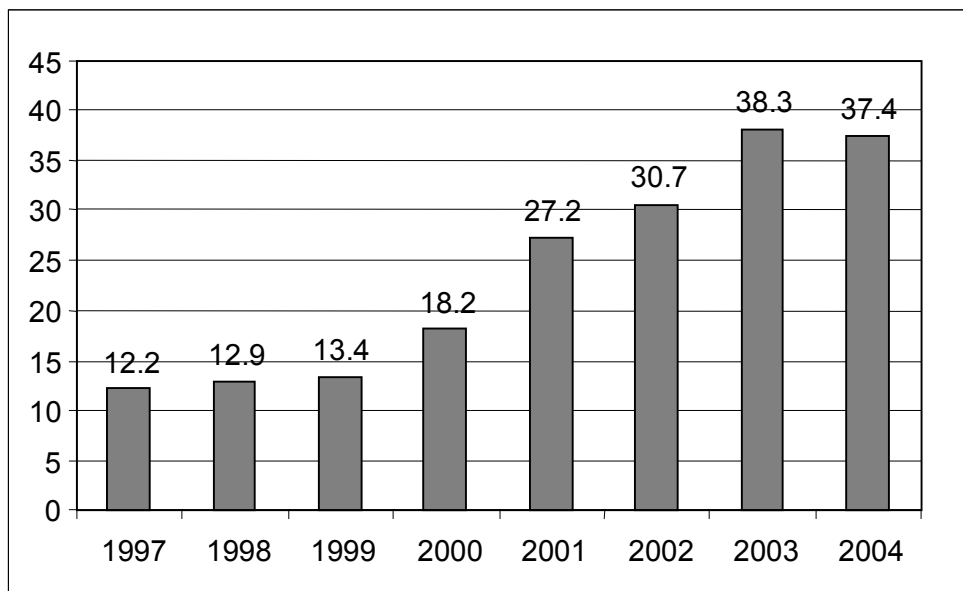
Source: Eurostat

International comparison

The issue of deficit budgets and increasing public debt is one of the key macroeconomic topics not only in the Czech Republic but also in many other member states of the European Monetary Union (EMU).

Deficits of public finances may have a serious adverse impact on currency. Lack of discipline on the part of some members thus may cause harm to other members.

There are three fundamental questions concerning EMU member states – which countries currently have the highest public finance deficit, which countries have had high deficits over a long span of time, and which countries have the highest public debt without any considerable efforts to undertake reform designed to reduce debt. At present, the following Eurozone countries have major problems with imbalanced public finance: Greece (-6.1% of GDP in 2004), Germany (-3.7% of GDP in 2004) and France (-3.7% of GDP in 2001).

Countries with high public finance deficits existing over long periods of time tend to have a high total debt. However, public debt may have been incurred much earlier in many countries. Long-lasting very high levels of public debt exist in Italy, Greece, Portugal, Spain and Belgium. Greece has been showing a clearly negative trend in recent years, and the country's public debt rate even keeps increasing (110.5% of GDP). Italy (105.8%) places second and Belgium third (95.6% of GDP in 2004).

Table 2.2: Amount of surplus/deficit (% GDP), international comparison, 2004

Finland	2.1%
Estonia	1.8%
Sweden	1.4%
Ireland	1.3%
Belgium	0.1%
Spain	-0.3%
Latvia	-0.8%
Luxembourg	-1.1%
Austria	-1.3%
Slovenia	-1.9%
Lithuania	-2.5%
Netherlands	-2.5%
Denmark	-2.8%
Portugal	-2.9%
Czech Republic	-3.0%
Italy	-3.0%
United Kingdom	-3.2%
Slovakia	-3.3%
Germany	-3.7%
France	-3.7%
Cyprus	-4.2%
Hungary	-4.5%
Poland	-4.8%
Malta	-5.2%
Greece	-6.1%
EU-25 average	-2.6%

Source: Eurostat

Table 2.3: Amount of debt (% GDP), international comparison, 2004

Estonia	4.9%
Luxembourg	7.5%
Latvia	14.4%
Lithuania	19.7%
Slovenia	29.4%
Ireland	29.9%
Czech Republic	37.4%
United Kingdom	41.6%
Denmark	42.7%
Poland	43.6%
Slovakia	43.6%
Finland	45.1%
Spain	48.9%
Sweden	51.2%
Netherlands	55.7%
Hungary	57.6%
Portugal	61.9%
Austria	65.2%
France	65.6%
Germany	66.0%
Cyprus	71.9%
Malta	75.0%
Belgium	95.6%
Italy	105.8%
Greece	110.5%
EU average	63.8%

Source: Eurostat

3. Current account of balance of payments/GDP ratio

Meaning and context of the indicator

The indicator *Current account of balance of payments/GDP ratio* indicates the level of external imbalance of the economy. The output of this indicator is expressed in relative units (%). A sensitive limit of external imbalance is, as a rule, perceived as a 5% ratio of the deficit (negative balance) of the current account to GDP, which, if exceeded over a long time, may raise doubt among foreign investors concerning the sustainability of financing of the balance of payments deficit in the medium term. A reduction in the negative share of the current account in GDP is associated with an improvement in the export performance of the economy, i.e. with growing export of goods and services, and also with growing income of residents from investments abroad. On the other hand, the indicator may deteriorate due to increased imports of goods and services and increased payments to foreign investors following from their investments in the Czech Republic.

The development of the indicator is always assessed in the context of development of the other macroeconomic indicators in the field of external relations, including debt and liquidity indicators characterising the sustainability of indebtedness of the economy in question and its ability to meet its payment obligations. Knowledge of the structure of the current account is also important, whether the developments are due to direct productive activity or financial flows that need not be immediately related to the economic activities.

This indicator monitors, in particular, the development of the balance on goods and services, which characterises the equilibrium in trade exchange as a result of the competitiveness of the Czech economy in foreign markets. Another component of the indicator – the income balance – is the result of the different structure and rate of yield of the financial assets and liabilities of domestic entities vis-à-vis non-residents. This indicator significantly reflects positive economic results of foreign direct investments, which are attributable to foreign owners in the form of dividends, or reinvested earnings (which do not represent an actual payment to a foreign country).

Method of calculation of the indicator

The indicator Current account of balance of payments to GDP ratio comprises the indicator "current account balance" as the numerator and the indicator "gross domestic product" as the denominator. The resulting indicator is expressed in %. Both source indicators are expressed in current prices in CZK. The indicator is often expressed as a moving annual cumulation with quarterly periodicity.

The balance of payments systematically reflects economic transactions with foreign countries over a period of time. The current account and the financial account are its basic components. The current account itself consists of four partial balances: trade balance, balance of services, income balance and current transfers. The current account thus records flows of goods (exports and imports), flows of services (receipts and expenditures associated with transport services, tourism and other services), income on capital, investments and labour (interest, dividends, reinvested earnings, compensation of employees), and transfers, e. i. offest items without receiving any real resource of financial item in exchange (such as contributions to funds, official foreign aid, donations, gifts, subsistence allowances, pension).

The gross domestic product is the basic macroeconomic aggregate of the economy's performance over a period of time (quarter, year). It is equal to the aggregate production of resident producers (in purchasing prices) after deduction of consumption of inputs and addition of import taxes. From another point of view, it is equal to the aggregate of final consumption, gross capital formation and the balance of foreign trade.

Development of the indicator in the Czech Republic

In the course of the monitored period between 1995 and 2004 (in respect of which there is a consistent underlying time series of data on GDP), the value of the indicator "current account to GDP ratio" fluctuated substantially (Chart 3.1). The values of the indicator varied from –2.1% to –6.7%. The average value of the indicator in the monitored period of time amounted to –4.7%.

In period 1995 - 1998, the current account to GDP ratio, or the deficit of the current account, was in fact predetermined by the development of the trade deficit. The development of the other three partial balances in the total may in principle be considered as merely complementary, which only partly modified the trend of development of the current account (Chart 3.2).

The determining role of the development of the trade balance within the framework of the current account grew increasingly weaker after 1999 as a result of the continuously deepening deficit of the income balance (and subsequently, from 2002, the decline in the surplus of the balance of services). While in 1995 the deficit of income balance amounted to CZK 2.8 billion, in 2000 it amounted to CZK 53.0 billion and in 2004 it reached the amount of CZK 139.5 billion. This development of the income balance was mostly due to the increase in expenditures, specifically the increasing amounts paid in the form of dividends to foreign owners of direct investments in the Czech Republic and also the increasing amounts of reinvested earnings for further development of their real investment activities in the Czech Republic.

However, continuous reductions in the trade deficit after 2000 as a result of the progressive changes on the supply side, as an after-effect of the previous high tide of foreign direct investment, significantly slowed down the deepening of the overall deficit of the current account and deterioration of its GDP ratio. By 2004 the trade deficit, compared with 2000, decreased by CZK 98.5 billion. After five years of year-on-year increase of the current account deficit and its GDP ratio the development thus took a positive turn. It may be expected that in 2005, due to the expected further substantial year-on-year improvement of the trade balance (upon its transition from deficit to surplus), milder deepening of the deficit of income balance and net inflow from the EU budget in the balance of transfers, the deficit of the current account will further decrease and the current account to GDP will drop considerably below -5%.

Chart 3.1: Current account of balance of payments to GDP ratio, Czech Republic, 1995-2004
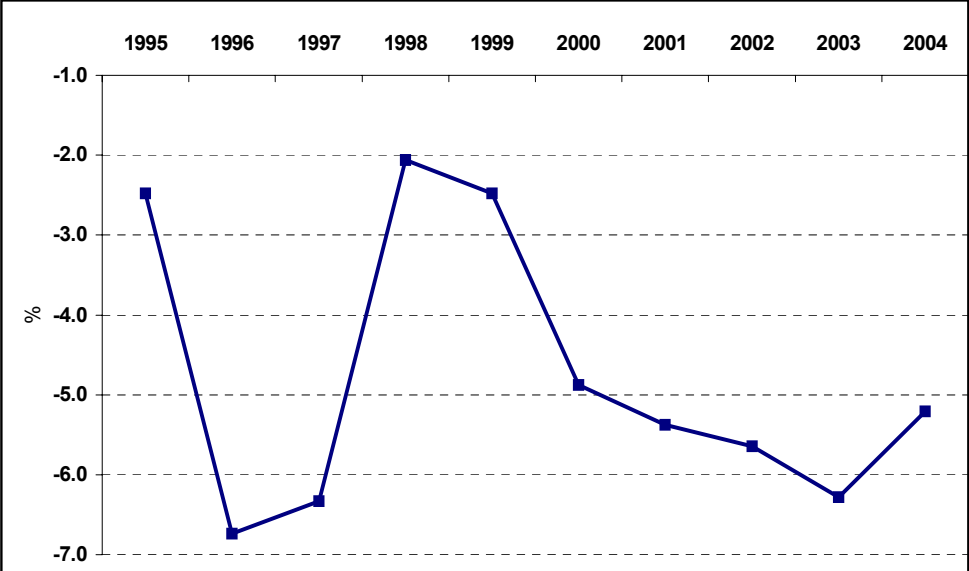
Source: Czech National Bank, Czech Statistical Office

Table 3.1: Source data for calculation of the indicator "current account of balance of payments to GDP ratio" (bn CZK), Czech Republic, 1995-2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
current account	-36.3	-111.9	-113	-40.5	-50.6	-104.9	-124.5	-136.4	-160.6	-143.3
GDP	1466.7	1660.6	1785.1	1962.5	2041.4	2150.1	2315.3	2414.7	2555.8	2750.3

Source: Czech National Bank, Czech Statistical Office

Chart 3.2: Balance of payments current account and its components, Czech Republic, 1993-2004
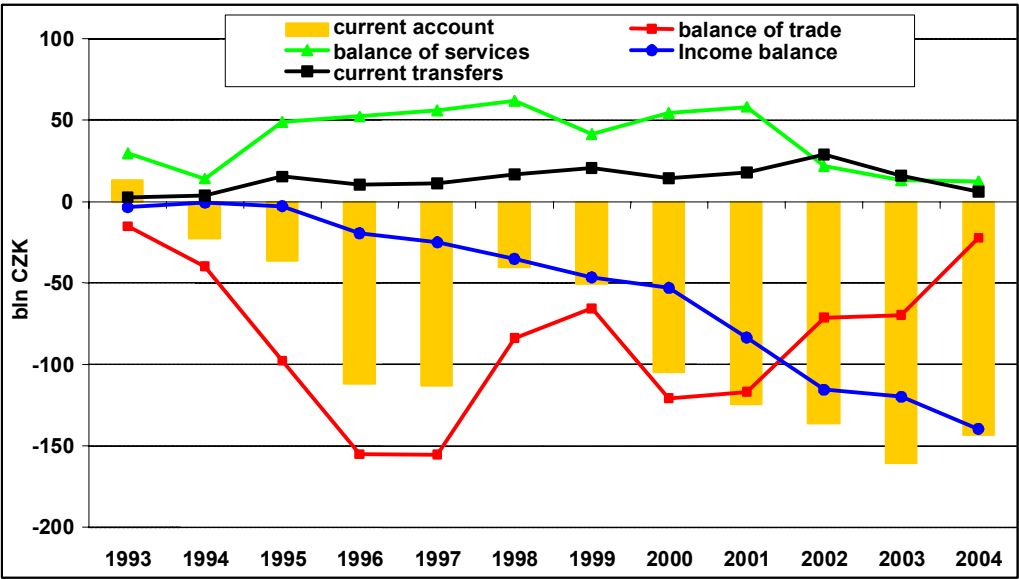
Source: Czech National Bank

International comparison

International comparison of the indicator *current account of balance of payments to GDP ratio* indicates its considerable variability, both in terms of individual countries and time. On the one hand, developed market economies experience an increasing ratio of the surplus of the current account to GDP (Germany), while on the other hand some experience an increasing ratio of the current account deficit to GDP (USA). Major differences also exist among the new EU member states. While in Hungary the current account deficit to GDP ratio is growing, in Slovakia and Poland its ratio is declining (Chart 3.3). The Czech Republic has recently (since 2001) belonged to the group of countries with an increased current account deficit to GDP, exceeding 5%.

Chart 3.3: Current account to GDP ratio, international comparison, 2002 and 2004
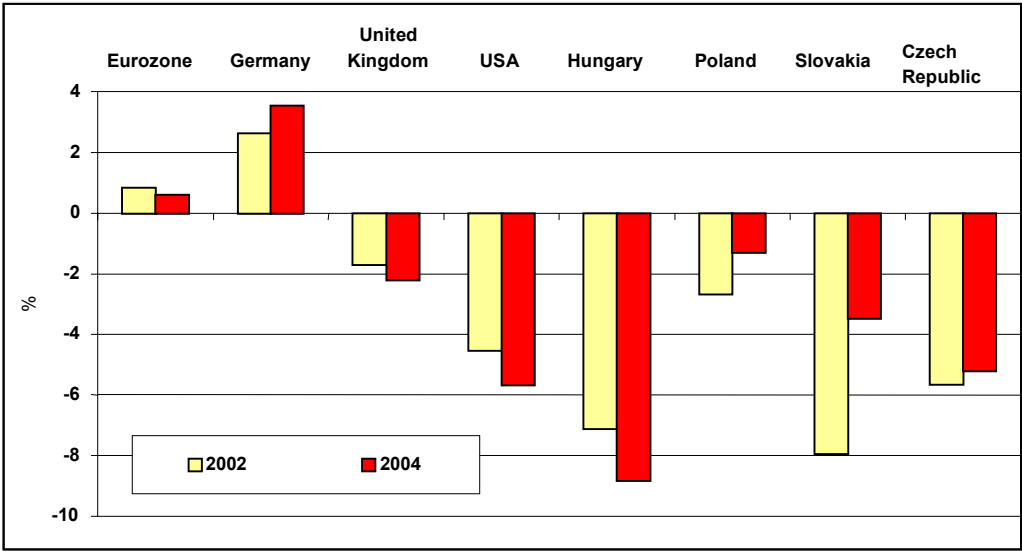
Source: Bloomberg, Slovak Statistical Office, Czech National Bank, Czech Statistical Office

4. Labour productivity

Meaning and context of the indicator

The growth of labour productivity is one of the principal sources of the growth of GDP. Its dynamics indicate the rate for non-inflation increase of wages and salaries. Some institutions, e.g. OECD, limit measurement of productivity solely to the business sector. This is justified by a convention applied in most OECD countries, under which measurement of output of the government sector is based on the assumption that labour productivity is constant over time.

Method of calculation of the indicator

The calculation of the *Labour productivity* indicator is based on the method of estimated GDP or, as the case may be, only the product of the business sector. The second component of the calculation – number of employees – has been obtained from employment statistics, whose international comparability is based on the recommendation of the International Labour Organisation (ILO) concerning the definition of "number of employees". Another method is the calculation of labour productivity by means of hours of work. This method makes the calculation more precise as it eliminates the differences between individual countries as to the extent of working hours and the number of labour contracts for part-time employment.

The rate of growth of labour productivity is influenced by changes in the structure of employment. The growth of labour productivity accelerates in the case of transfers of labour force from sectors with low labour productivity, such as agriculture, to sectors with higher productivity, such as industry and certain types of services. The calculation of labour productivity in the private business sector has certain specificities, as it is based on deducting the value added and the number of employees in the non-market sector from the total aggregate.

Development of the indicator in the Czech Republic

Labour productivity, expressed per employee, increased from 1996 to 2004 by an annual average of 2.6%. In 2004, the rate of labour productivity growth accelerated to 4.6%. Labour productivity developed differently in different sectors. The fastest average dynamics between 1996 and 2003 were in the manufacturing and processing industry (3.8% per year), while productivity in the market services sector increased by 3.0% per year.

Table 4.1: Labour productivity (year-on-year change in %, c. p.), Czech Republic, 1996-2003

	1996	1997	1998	1999	2000	2001	2002	2003	Ø 1996 -2003
Aggregate labour productivity	3.1	0.1	0.8	4.0	4.6	2.1	0.8	3.9	2.4
Industry, construction sector	9.5	-2.1	-5.6	10.0	7.1	-5.8	8.4	8.9	3.8
Total services	0.8	-0.2	8.2	1.4	2.2	8.3	-3.1	-0.6	2.1
of which: market services	-3.6	2.5	13.2	0.9	4.1	10.8	-4.6	1.1	3.0

Source: Czech Statistical Office

Labour productivity was most significantly accelerated by investments, which helped increase the availability of fixed capital to labour. The rate of growth of gross fixed capital formation (GFCF) in the Czech Republic has always been higher, except during the 1997-1999 recession, than that of GDP. Between 1996 and 2004 GDP grew on average by 2.2% per year, while GFCF grew by 3.0% per year. Investment demand became more dynamic between 2000 and 2004, when fixed capital formation increased by 5.5% per year, and in 2004 by a record-breaking 9.1%. These investment processes, in particular investments in machinery, had a positive effect on labour productivity, which grew in 2003 and 2004 by more than 4% annually.

Labour productivity and wages developed inconsistently between 1996 and 2004. Real wages grew at an average rate of 4.2% annually, while labour productivity growth achieved a rate of just 2.7% per year. The growth of labour productivity was faster only in 1998 and 2000. It is interesting that wages grew faster than labour productivity both in the expansion stages of the economic cycle, i.e. between 1994 and 1996 and between 2000 and 2004, and in the recession period of 1997 to 1999. If wages continue growing faster than labour productivity for an extensive period of time, there may be risks of the weakening competitiveness of Czech products and/or increased inflation pressures.

International comparison

Based on estimates by OECD, labour productivity in the business sector in the Czech Republic grew between 1996 and 2004 by an average of 2.2% annually, and thus convergence was achieved with regard to the developments in the Euro area. Due to the acceleration of labour productivity growth in the Czech Republic between 2000 and 2004, when the average annual growth reached 3.4%, this indicator approximated the then current level in the Eurozone where growth decelerated to an annualised rate of 0.7%. The differences in

development in different countries are due to numerous factors, the most relevant of which are the development of material and human capital and technological knowledge.

Table 4.2: Labour productivity in the business sector (year-on-year change in %, c. p.), international comparison, 1996-2004

	OECD	Eurozone	Czech Republic	Ireland
Ø 1996 to 2004	1.9	1.0	2.2	4.1
Ø 2000 to 2004	2.0	0.7	3.4	3.8

Source: Economic Outlook, OECD, 2004

The gap between the level of labour productivity per employee in the Czech Republic and the average level in the EU-25 has shrunk. The proportion of productivity to the EU-25 level increased from 57.7% in 1995 to 63.5% in 2004. Labour productivity per hour of work in 2003 achieved a level of just 46% of the level recorded in the EU-15.

Table 4.3: Labour productivity, international comparison, 1995-2004

Labour productivity per capita	1995	2000	2001	2002	2003	2004
EU-25	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
Czech Republic	57.7	59.8	61.1	61.5	62.0	63.5
Labour prod. per hour of work						
EU-15	100.0	100.0	100.0	100.0	100.0	100.0
Belgium	119.9	122.0	120.1	120.2	121.6	.
Czech Republic	41.3	41.9	44.7	43.2	46.1	.

Source: Eurostat, February 2004

An additional view at the development of labour productivity is provided by a comparison with developments in countries of the Central European region. Labour productivity per employee[2] in the Czech Republic achieved approximately 58% of the average EU-25 level in 1997. By 2004, this rate increased to 63.5%, i.e. by 5.5 p.p. In Poland, labour productivity per employee increased between 1997 and 2004 by 13.9 p.p., in Slovakia by 11.5 p.p., and in Hungary by 9.3 p.p. Slovenia recorded growth by 8.7 p.p. In the "old" EU member states the relative rate of labour productivity per employee prorated to the EU-25 average gradually decreased in this period by 3.5 p.p. in the aggregate. Despite the weakest dynamics of approximation, the position of the Czech Republic regarding the relative level of labour productivity per employee and the per-hour productivity is roughly at the average level of the countries

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[2] Measured as GDP in purchasing power parity per employed person.

referred to above. The considerable difference in the productivity levels of these countries compared to the EU-15 is still due primarily to the structure of their economies. Further changes to this structure probably provide the greatest potential for real convergence in this area.

Chart 4.1: Productivity per employee (GDP in PPS per employed person in proportion to the EU-25, where EU-25 = 100), international comparison, 1997-2005
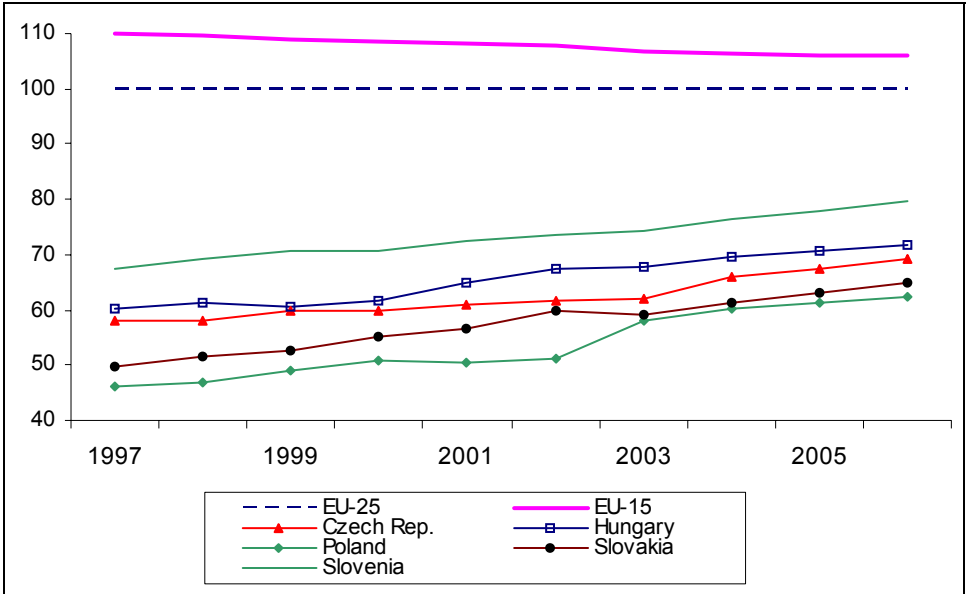
Source: Eurostat

Chart 4.2: Per-hour labour productivity (in PPS per hour of work in proportion to the EU-15, (EU-15 = 100), international comparison, 1997-2003
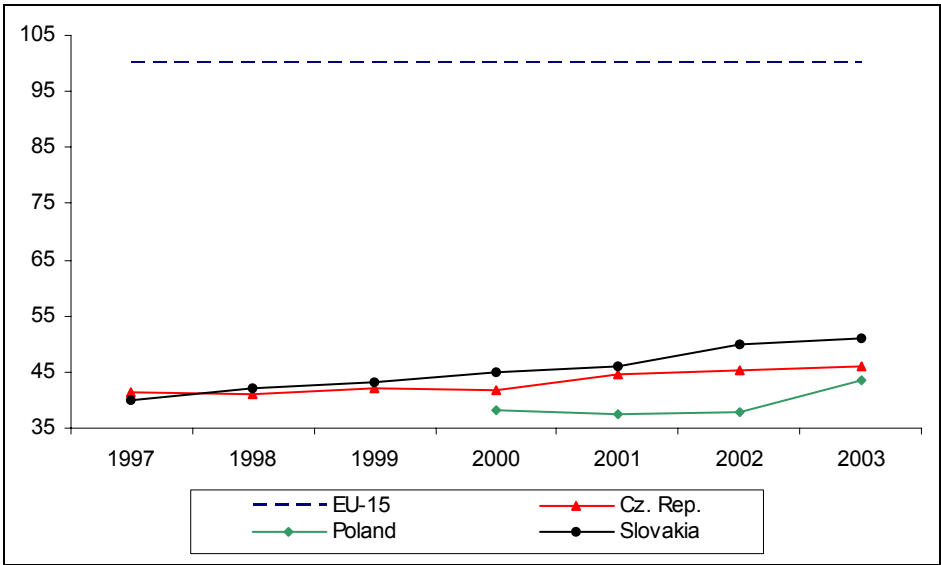
Source: Eurostat

5. Environmental protection expenditures

Meaning and context of the indicator

Out of the overall expenditures towards environmental protection in the Czech Republic, only investments were monitored up to 2002. Since 2003, non-investment environmental protection expenditures have also been monitored. The relevant data are obtained from the ŽP 1-01 annual statistical report, distributed to selected economic organisations, and the VI 1-01 annual report intended for organisational units of the state, self-governing territorial units, contributory organisations and similar governmental institutions. Data concerning investment expenditures on environmental protection are taken from the ŽP 1-01 and VI 1-01 reports. Data concerning non-investment expenditures on environmental protection are taken from the ŽP 1-01 report only.

One of the most relevant indicators for the overall assessment of the level of expenditures on environmental protection is their development in relation to the overall performance of the economy, i.e. to GDP.

Method of calculation of the indicator

The indicator *Expenditures on environmental protection* includes investment expenditures and non-investment expenditures on environmental protection relating to environmental protection activities the principal aim of which is to detect, remove, monitor, control, reduce, prevent or eliminate pollutants and pollution or any other damage to the environment. These expenditures are divided into 9 categories (programme themes) of environmental protection according to the international classification CEPA 2000.

Investment expenditures on environmental protection include all costs of acquisition of tangible fixed assets that the reporting units incurred in acquiring such assets (by means of purchase or own activities), combined with the aggregate value of the tangible fixed assets obtained in the form of free-of-charge acquisition or transfer pursuant to applicable laws, or by transfer from personal use to use for business purposes.

Non-investment expenditures on environmental protection include payroll expenses, rental payments, fees for energy, utilities and other material, and fees for services, the principal purpose of which is to prevent, reduce, treat or eliminate pollutants and pollution or any other degradation of the environment resulting from the operations of an undertaking.

Development of the indicator in the Czech Republic

As noted above, out of the overall expenditures on environmental protection in the Czech Republic, only investments were monitored up to 2002. Non-investment environmental protection expenditures have only been monitored since 2003.

The aggregate amount of statistically monitored **investment expenditures on environmental protection** was CZK 6.0 bil. in 1990, and reached its maximum in 1997 – CZK 40.5 bil. Since 1998 the expenditures kept dropping to CZK 14.9 bil. in 2002, with an increase to CZK 19.4 bil. in 2003. As regards the thematic focus, the largest amounts were invested in 2003 in waste water treatment (CZK 9.5 bil.) and protection of the air and climate (CZK 4.2 bil.). Most investments in protection of the environment in 2003 were procured from own resources and from budgetary resources (CZK 11.2 bil.). The investments involved primarily investments in wastewater management (CZK 4.8 bil.) and protection of the air and climate (CZK 3.0 bil.). The development of investment expenditures on environmental protection in the period 1990-2003 is shown in Chart 5.1.

Chart 5.1: Investment environment protection expenditures by focus, Czech Republic, 1990-2003
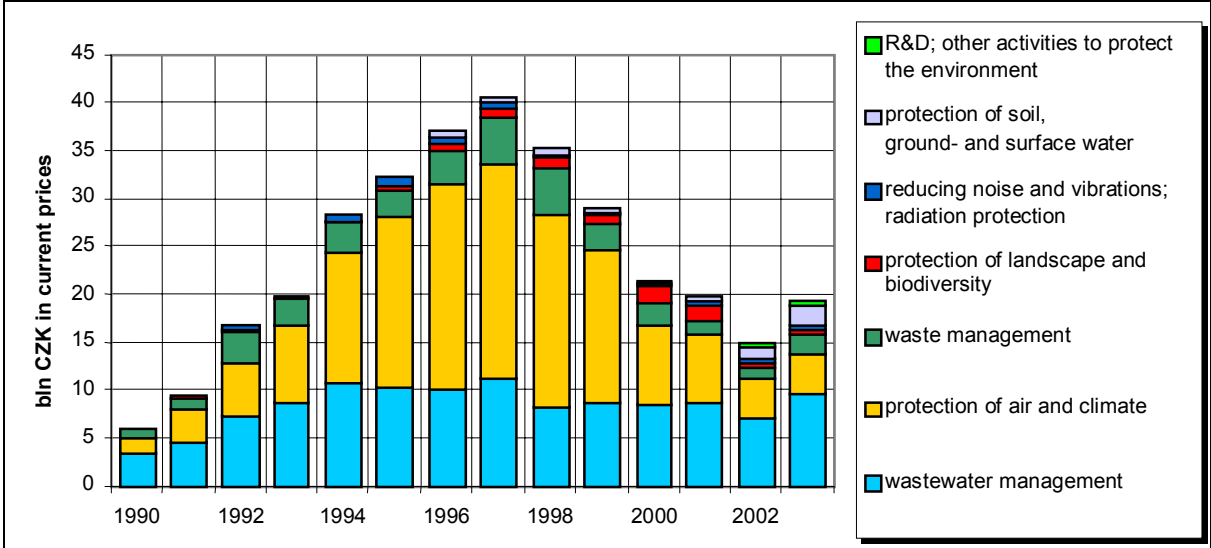
Source: Ministry of Finance of the Czech Republic

Non-investment environment protection expenditures in 2003 amounted to CZK 22.6 bil. (of which internal non-investment expenditures CZK 13.6 bil. and external non-investment expenditures CZK 9.0 bil.). Chart 5.2 shows that, in terms of thematic focus, the largest amounts were expended in 2003 on waste (CZK 11.3 bil.) and wastewater (CZK 4.8 bil.) management.

Chart 5.2: Non-investment environment protection expenditures by focus, Czech Republic, 2003
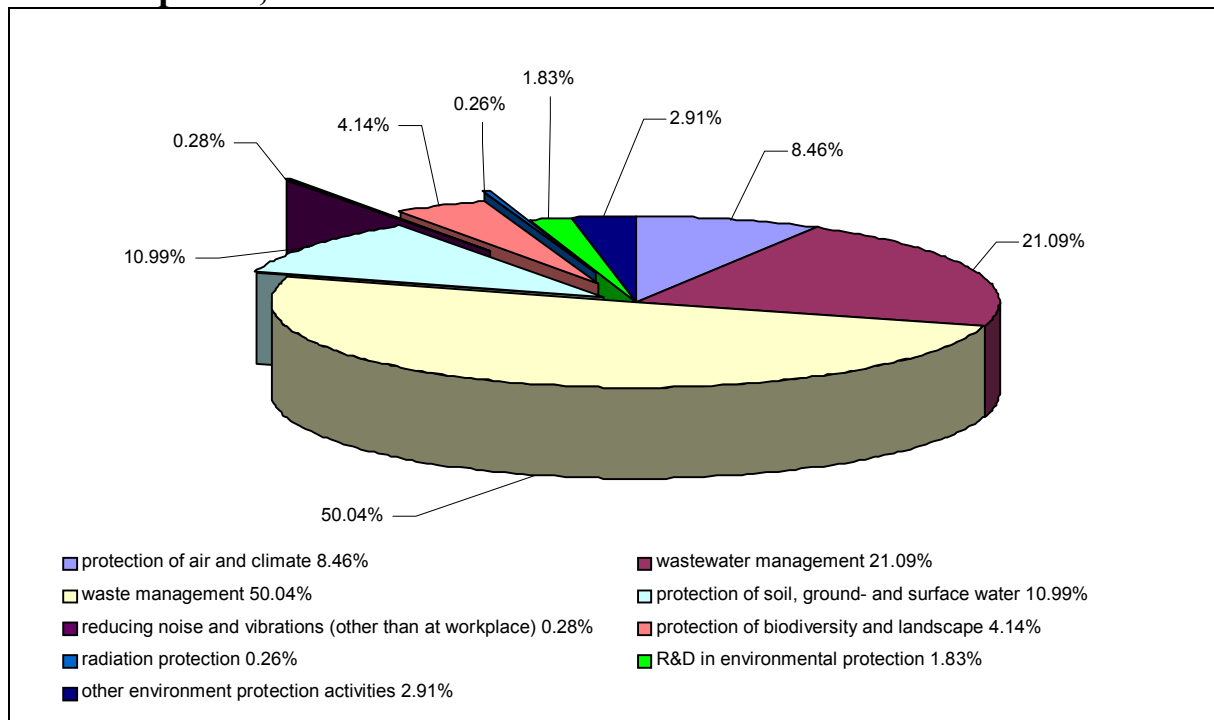
Source: Czech Statistical Office

Environment protection expenditures in 2003 amounted to CZK 42.0 bil. As regards thematic focus, most funds were expended in 2003 on wastewater management (CZK 14.3 bil.) and waste management (CZK 13.4 bil.).

One of the most relevant factors for the overall assessment of the level of expenditures on environmental protection is their development in relation to the overall performance of the economy, i.e. to GDP (see Chart 5.3). As non-investment expenditures have only been monitored since 2003, this indicator is monitored as the proportion of investment environmental expenditures to GDP. The proportion of the statistically monitored investment environmental expenditures to GDP began growing rapidly after 1990 (from 1.1% in 1990 to 2.5% in 1994), while from 1994 to 1997 this proportion stagnated (2.4% in 1995 and 1996 and 2.5% in 1997), and from 1998 to 2002 declined to 0.7%, and then increased moderately to 0.8% in 2003. The proportion of total environmental expenditures in relation to GDP amounted to 1.5% in 2003.

Chart 5.3: Investment environment protection expenditures (% of GDP), Czech Republic, 1990-2003
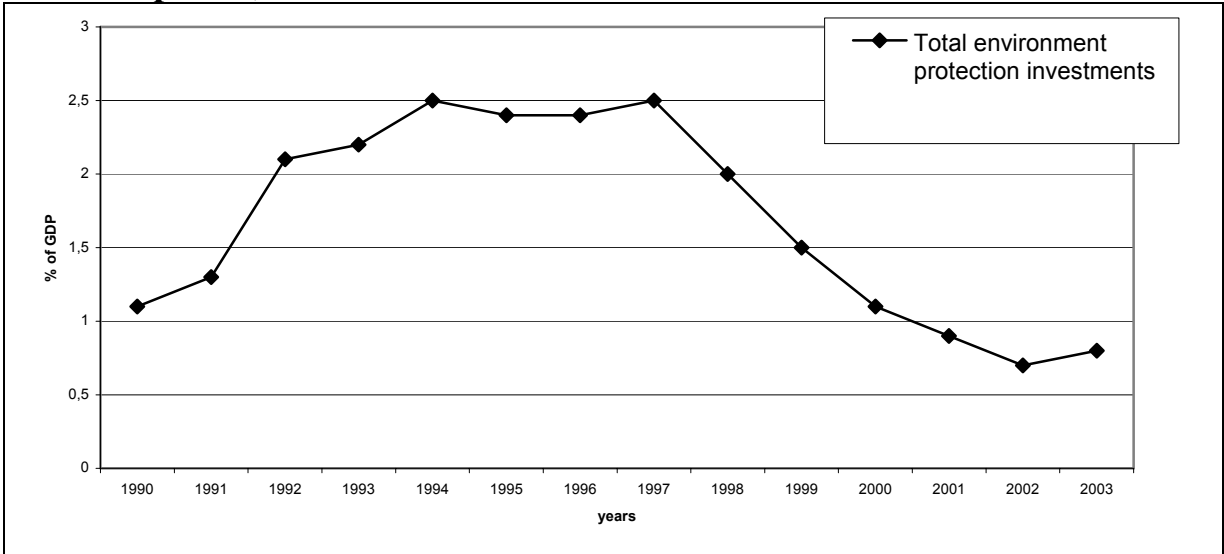
Source: Ministry of Finance of the Czech Republic

International comparison

The international comparison is clear from Tables 5.1 and 5.2, showing the proportion of environment protection expenditures to GDP in the public and private sectors. In respect of the Czech Republic the tables state the proportion of investment environment protection expenditures to GDP as only these were monitored in the Czech Republic until 2002.

Table 5.1: Proportion of environment protection expenditures to GDP (in %) – public sector, international comparison, 1990-2000

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Canada	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	.
USA	0.6	0.6	0.6	0.6	0.7	.	.	.	.	0.2	.
Japan	0.3	.	0.3	.	0.5	0.5	0.5	0.5	0.5	0.6	.
Korea	.	.	0.8	0.8	0.8	0.8	0.8	1.0	0.9	0.9	0.8
Australia	.	0.4	0.4	0.5	0.5	0.5	0.5	.	.	.	0.2
Austria	1.1	1.2	1.1	1.2	1.0	1.4	1.3	1.4	1.5	1.3	.
Belgium	.	.	.	.	0.4	0.4	0.6	0.7	0.7	0.7	0.7
Czech Rep.	.	.	.	0.5	0.8	0.8	0.8	0.7	0.6	0.6	0.5
Finland	.	.	.	0.7	0.6	0.5	0.6	0.6	0.5	0.5	0.5
France	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9
Germany	.	0.9	0.9	0.9	0.8	0.8	1.5	1.4	1.4	1.3	.
Hungary	.	.	.	.	.	.	.	0.2	0.5	.	.
Netherlands	0.9	1.1	1.1	.	.	1.3	.	1.1	1.1	.	.
Poland	0.2	0.2	0.4	0.4	0.3	0.3	0.6	0.6	0.9	0.9	0.8
Portugal	0.7	0.6	0.7	0.7	0.6	.	0.7	0.7	0.5	0.5	0.5
Slovakia	4.2	2.4	1.9	1.4	0.9	0.5	.	.	.	0.5	0.1
Sweden	.	0.8	.	.	.	0.2	0.2	0.2	0.2	0.2	0.2
UK	0.4	.	.	.	.	.	.	0.4	0.4	0.4	0.4

Source: OECD

Table 5.2: Proportion of environment protection expenditures to GDP (in %) – business sector, international comparison, 1990-2003

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Canada	.	.	.	.	0.5	0.5	0.6	0.5	0.5	.	0.5
USA	0.8	0.8	0.9	0.9	0.9	.	.	.	.	0.2	.
Japan	.	0.8	0.9	1.0	0.9	0.8	0.9	0.8	0.8	0.8	.
Korea	.	.	0.7	0.7	0.7	0.8	0.8	0.8	0.6	0.7	0.7
Australia	.	0.2	0.3	0.3	0.3	0.3	0.3	.	.	.	.
Austria	0.9	1.0	.	.	0.8	0.6	0.6	0.6	0.5	0.5	.
Belgium	.	.	.	.	.	.	0.4	0.4	0.4	0.3	0.3
Czech Rep.	.	.	.	1.4	1.6	1.5	1.5	1.6	1.2	0.9	0.5
Finland	.	.	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.3	.
France	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Germany	.	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3
Hungary	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	.	.
Netherlands	0.7	0.7	0.7	.	.	0.5	.	0.6	0.5	.	.
Poland	0.5	0.8	0.6	0.6	0.6	0.7	2.0	1.9	1.9	1.6	1.2
Portugal	.	.	.	.	0.1	0.2	0.2	0.2	0.2	0.2	0.3
Slovakia	.	.	.	.	.	.	.	.	2.6	1.6	0.7
Sweden	.	0.3	.	.	.	.	.	.	.	0.2	0.1
UK	0.3	.	.	.	0.3	.	.	0.3	.	0.3	0.3

Source: OECD

6. Public environmental protection expenditures

Meaning and context of the indicator

Environmental protection expenditures from public budgets are such expenditures made from the state budget, state funds, the National Property Fund of the Czech Republic (so-called environmental protection expenditures from central sources) and local budgets.

One of the most relevant factors for the overall assessment of the level of public environmental protection expenditures is their development in relation to the overall performance of the economy, i.e. to GDP.

Method of calculation of the indicator

Effective from 1997, *Public environmental protection expenditures* have been determined based on a new methodology. The structure of environmental protection expenditures is consistent with the new budget structure issued by the Ministry of Finance of the Czech Republic, which is also used by the Czech Statistical Office and which is compatible with statistical reporting used in EU countries.

Development of the indicator in the Czech Republic

The development of individual types of environmental protection expenditures from central sources is shown in Table 6.1.

Table 6.1: Environmental protection expenditures from central sources (in mil. CZK, in current prices), Czech Republic, 1997-2004

	1997	1998	1999	2000	2001	2002	2003	2004
State budget	4,401.0	4,732.4	5,540.2	5,038.4	4,313.7	4,954.8	5,988.2	6,613.8
State funds	3,269.2	2,278.4	2,609.7	2,884.4	3,711.3	4,131.8	4,722.6	4,203.2
NPF CR	1,357.3	2,173.6	1,758.9	2,129.7	2,769.7	3,228.5	2,587.3	3,563.3
Total	9,027.5	9,184.4	9,908.9	10,052.5	10,794.7	12,315.1	13,298.1	14,380.3

Source: Ministry of Finance of the Czech Republic, Ministry of Environment of the Czech Republic, the State Environmental Fund of the Czech Republic, the National Property Fund of the Czech Republic

The most significant central source of financing of environmental projects is, from the point of view of amounts expended, the state budget from which subsidies, recoverable financial assistance (interest-free loans) and guarantees for commercial loans are made available. In 2004, environmental expenditures

from the state budget amounted to CZK 6.6 bil., with most of these funds allocated to the protection of biodiversity and landscape (CZK 2.6 bil.).

The second most important public source of environmental expenditures is the State Environmental Fund of the Czech Republic. The sources of income of the State Environmental Fund include fees for pollution of the environment and for consumption of natural resources, and fines. In 2004, aggregate expenditures from state funds amounted to CZK 4.2 bil., with most of these funds allocated to water protection (CZK 2.0 bil.) and air protection (CZK 1.0 bil.).

The third central source is the National Property Fund of the Czech Republic, which is not a state fund but its expenditures are included in expenditures from public budgets. Its aim is to finance remediation work related to past environmental burden in privatised undertakings. In 2004, environmental expenditures of the National Property Fund amounted to CZK 3.6 bil.

Local budgets comprise another public source of environmental expenditures. The development of these expenditures is shown in Table 6.2. In 2004, environmental expenditures from local budgets amounted to CZK 23.2 bil., with most of these funds allocated in 2004 to water protection (CZK 9.9 bil.), waste management (CZK 6.5 bil.) and the protection of biodiversity and landscape (CZK 6.2 bil.).

Table 6.2: Environmental protection expenditures from local budgets (bil. CZK), Czech Republic, 1997-2004

	1997	1998	1999	2000	2001	2002	2003	2004
Expenditure	12.9	12.4	14.5	14.9	15.6	17.3	21.6	23.2

Source: Ministry of Finance of the Czech Republic

One of the most relevant factors for the overall assessment of the level of public environmental protection expenditures is their development in relation to the overall performance of the economy, i.e. to GDP. After 1990, the proportion of expenditures from public budgets to GDP continuously increased until 1992 (from 0.9% in 1990 to 1.5% in 1992). After 1992, however, the indicator kept decreasing to a mere 0.5% between 1998 and 2003.

International comparison

No international comparison is made in respect of this indicator.

7. Material consumption

Meaning and context of the indicator

Material consumption is regarded as an appropriate indicator of environmental pressure as the extraction and processing of raw materials is associated with numerous key environmental issues. If related to GDP, the material consumption indicator will provide information about the efficiency with which materials entering the economic system are transformed into economic output expressed in monetary units. This indicator is referred to as the material intensity of GDP. When the material intensity declines, environmental pressure per unit of GDP declines as well, and competitiveness increases as a result of reduced production costs due to lower levels of purchases of raw materials and other materials necessary for the production process.

Method of calculation of the indicator

Material consumption is monitored as the indicator *Domestic material consumption* (DMC), compiled according to Eurostat[3] methodology for calculating material flow indicators. Domestic material consumption is the sum of the physical quantity of raw materials extracted (energy raw materials, ores, non-ore raw materials, and building materials) and biomass produced (crop, timber and fish harvest etc.) in the territory of a particular country. All imports are then added to and all exports are deducted from these materials (imports and exports of raw materials, biomass, semi-finished products, and final consumption products). Domestic material consumption is typically monitored in millions of tonnes or in tonnes per capita. The material intensity of GDP is calculated as the proportion of domestic material consumption to GDP in constant prices (for methodology of calculation of GDP see the indicator *GDP per capita*). Material intensity is presented in kg per CZK 1,000 of GDP or as an index, where the baseline year has a value of 100 and the following years indicate a percentage change compared with the baseline value.

Development of the indicator in the Czech Republic

The development of Domestic material consumption in the Czech Republic between 1990 and 2003 is shown in Table 7.1 and Chart 7.1.

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[3] Eurostat (2001): Economy-wide material flow accounts and derived indicators. A Methodological Guide. Luxembourg, 92 p.

Table 7.1: Domestic material consumption by group of materials (mil. tonnes), Czech Republic, 1990-2003

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Energy raw materials	131.1	113.8	104.2	96.2	83.7	83.5	88.8	86.6	79.6	70.5	77.4	76.4	71.6	73.2
Ores	11.4	0.9	5.1	4.9	1.9	6.9	5.6	5.0	6.0	3.9	5.8	5.9	5.6	7.0
Non-ore and building raw materials	117.6	74.6	67.8	67.4	68.9	71.1	78.5	81.8	74.7	75.0	75.0	74.2	72.4	80.4
Biomass	46.3	43.5	33.7	37.5	34.0	34.7	37.1	36.8	35.4	33.4	32.7	35.2	33.9	28.7
Final consumption products	-6.8	-4.1	-6.1	-3.9	-6.7	-5.2	-3.9	-4.0	-5.1	-5.2	-5.8	-5.0	-7.9	-8.1
Total	299.6	228.7	204.7	202.1	181.9	191.0	206.1	206.2	190.5	177.6	185.0	186.6	175.7	181.2

Source: Charles University Environment Center

Chart 7.1: Domestic material consumption, Czech Republic, 1990-2003
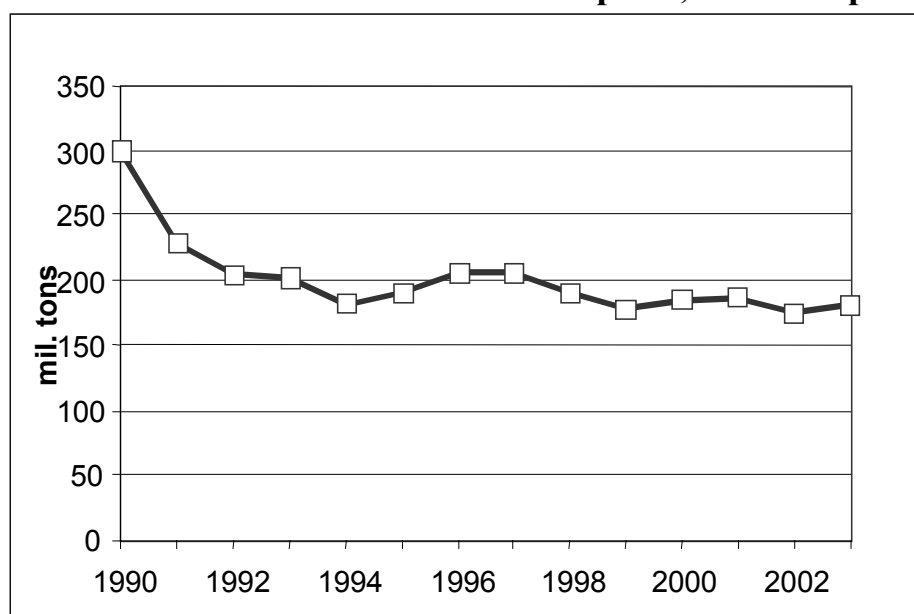
Source: Charles University Environment Center

For the entire period of time monitored, domestic material consumption declined from 299.6 mil. tonnes in 1990 to 181.2 mil. tonnes in 2003[4]. The decline was most dramatic in the early 1990s, but continued at a moderate rate during the remaining part of the period monitored. In 2002, the indicator reached its historically lowest level (175.7 mil. tonnes), with a slight increase in 2003. The decline in domestic material consumption indicates that the overall environmental pressure associated with material consumption in the Czech Republic declined during the entire period monitored.

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[4] As the number of inhabitants in the Czech Republic has been very stable in the region of 10 million inhabitants, these figures correspond to approximately 29 tonnes per capita in 1990 and 18 tonnes per capita in 2003.

The decline in domestic material consumption was due to reduced consumption of brown and hard coal as a result of reduced operations in energetically demanding industries (e.g. metallurgy), an overall improvement in energy efficiency, i.e. the effectiveness of converting fuel to useful work, thanks to the introduction of new technologies and as a result of the introduction of gas heating (one tonne of gas generates more energy than one tonne of coal, and therefore its consumption is lower). As regards the other components of domestic material consumption (ores, non-ore raw materials, building materials, biomass), their consumption decreased considerably in early 1990s in connection with the decline in economic performance and then followed a moderately growing trajectory in the case of ores, non-ore and building materials, and a moderately declining trend in the case of biomass. A somewhat exceptional position is that of a group of materials designated as final consumption products. As the Czech Republic exports more products than it imports, the balance in this group of materials was negative between 1990 and 2003 (the consumption of products produced in the Czech Republic is not included in this category as they are accounted for in other categories as raw materials necessary fro their production). The negative balance of final consumption products reflects the Czech Republic's efforts to export products with a high value added. As regards the consumption of renewable resources, their share in domestic material consumption did not change to any considerable extent between 1990 and 2003, remaining in the region of 18%.

Chart 7.2 illustrates the development of material intensity of GDP in the Czech Republic.

Chart 7.2: Material intensity, Czech Republic, 1995-2003
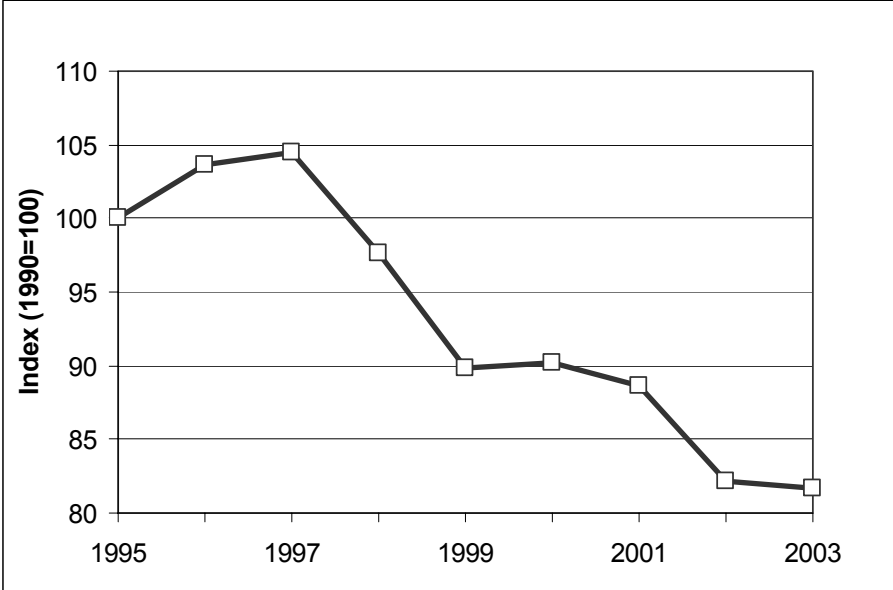
Note: 1995 constant prices
Source: DMC – Charles University Environment Center, GDP – Czech Statistical Office

The material intensity in the Czech Republic between 1995 and 2003 initially slightly increased, and then declined significantly. For the entire period, it decreased by approximately 18%. The initial increased was due to the fact that domestic material consumption grew faster than GDP in 1996 and 1997, while in the following years (with the exception of 2000) domestic material consumption declined and GDP grew, or GDP grew faster than material consumption. The decline of material consumption between 1998 and 2003 indicates that the efficiency of the transformation of materials to economic output was improving with a concurrent decline in environmental pressure per GDP unit.

International comparison

Chart 7.3 offers an international comparison of DMC per capita and GDP per capita.

Chart 7.3: Domestic material consumption (DMC) and GDP per capita, international comparison, 1999
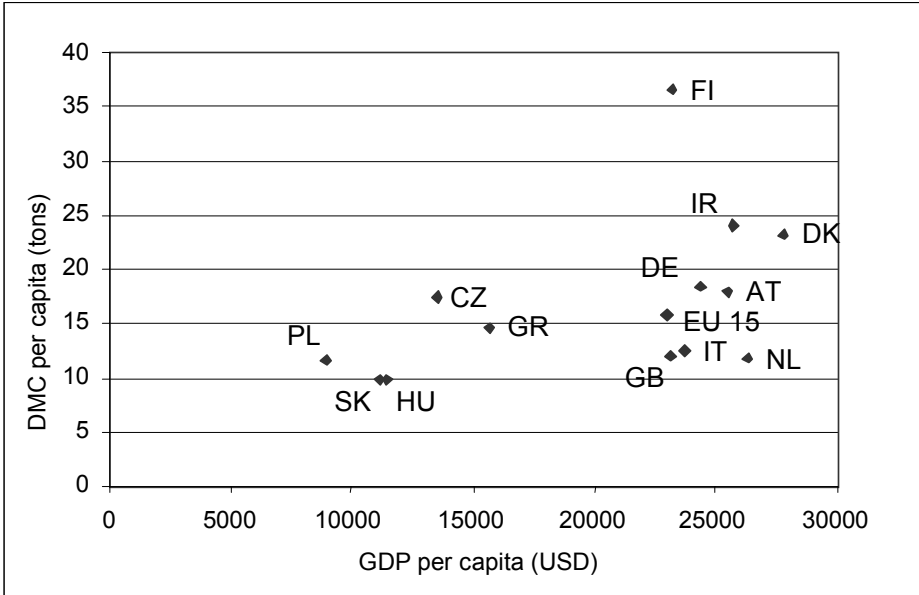
Note: GDP calculated using the purchasing power parity, CZ – Czech Republic, FI – Finland, IR – Ireland, DK – Denmark, DE – Germany, AT – Austria, GB – United Kingdom, IT – Italy, NL – Netherlands, GR – Greece, SK – Slovakia, HU – Hungary, PL - Poland
Source: DMC in the Czech Republic – Charles University Environment Center; DMC in Poland, Slovakia and Hungary – estimate by Charles University Environment Center based on data for 2000; DMC in the remaining countries – Eurostat; GDP – OECD

International comparison indicates that the Czech Republic achieves rather above-average levels of domestic material consumption per capita, while in the case of GDP the level is significantly below the average as compared to the EU-

15 and slightly above the average as compared to the new EU member states. As regards environmental pressure, which is associated with material consumption, the Czech Republic is above the average in the European context. The levels of DMC and GDP per capita indicate further that the material intensity in the Czech Republic (1.28 tonnes per 1,000 USD GDP) are somewhat higher than in some of the new EU member states (0.87 tonne per 1,000 USD GDP in Slovakia and 0.85 tonne per 1,000 USD GDP in Hungary), but in certain cases it is more than double that of some EU-15 countries (e.g. 0.45 tonne per 1,000 USD GDP in the Netherlands or 0.51 tonne per capita per 1,000 USD GDP in the United Kingdom). The highest values of all countries the subject of comparison are achieved by Finland (1.57 tonnes per 1,000 USD GDP), considerably diverging from the EU-15 average (0.68 tonne per 1,000 USD GDP).

If we set as our goal a reduction in material intensity, and use the EU-15 average as the reference value, it will be necessary in the next period not to increase, or further reduce, the consumption of materials, at the same time considerably improving economic performance. Of key importance in this respect will be the continued introduction of modern technologies with lower requirements as to material inputs and producing less waste, and an increase in the extent of recycling.

8. Passenger transport intensity

Meaning and context of the indicator

The indicator *Passenger transport intensity* expresses the proportion of transport performance to GDP. Keeping in mind the principles of sustainable development, it is desirable to decouple the development of GDP from transport performance so as to ensure that GDP will grow and transport performance will stagnate or, optimally, decline.

Method of calculation of the indicator

This indicator represents the proportion of the indicator *Passenger transport performance* to the indicator *GDP*. It is expressed in person-km/CZK, with GDP taken in constant prices (for 1995).

Passenger transport performance is stated in person-kilometres (a unit expressing the transport of one passenger over a distance of one kilometre) and the aggregate figure comprises the performance of railway and public bus transport service, obtained from the departmental statistical system of the Ministry of Transport. The indicator also comprises an expert estimate of the transport performance in individual automobile transport, based on the amount of vehicle kilometres, an estimate of the average annual mileage of the passenger car and average occupancy of the passenger car, made by the Transport Research Centre.

GDP is a macro aggregate expressing the economic value created in the national economy for the previous period of time (as a rule, a year). GDP measures cash flows in the economy. It is also possible to interpret GDP as the value of goods and services of domestic origin intended for final use. GDP thus expresses the monetary value of market and non-market activities in a given year, and is often regarded as an indicator of the material standard of living of the population.

Development of the indicator in the Czech Republic

The development of this indicator over the period of time in question to a considerable extent copies the development of passenger transport performance. Between 1995 and 1997 the value of the indicator declined as a result of different developments of GDP (grows) and transport performance (declines). From 1998 to 2000 the value of the indicator increased, which was due to the fact that transport performance copied the growth of GDP. The values declined moderately between 2000 and 2003. In the last year of the period in question the indicator monitored decreased, which is a positive development from the

perspective of sustainable development as the growth curves of GDP and transport performance diverged.

Chart 8.1: Passenger transport intensity, Czech Republic, 1995-2004
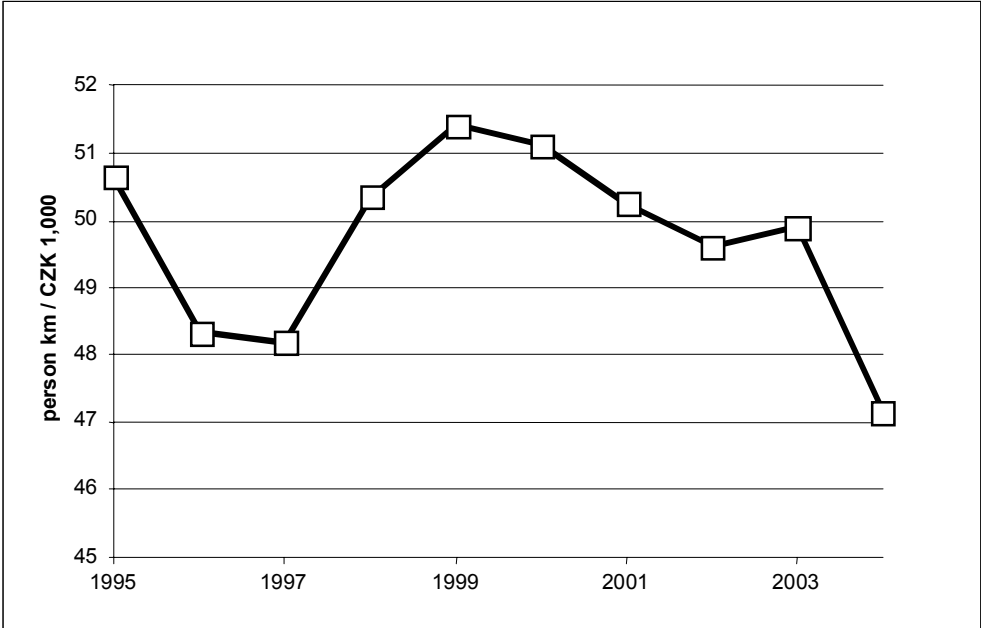
Source: Ministry of Transport of the Czech Republic, Czech Statistical Office

Chart 8.2: Passenger transport performance and GDP, Czech Republic, 1995-2004
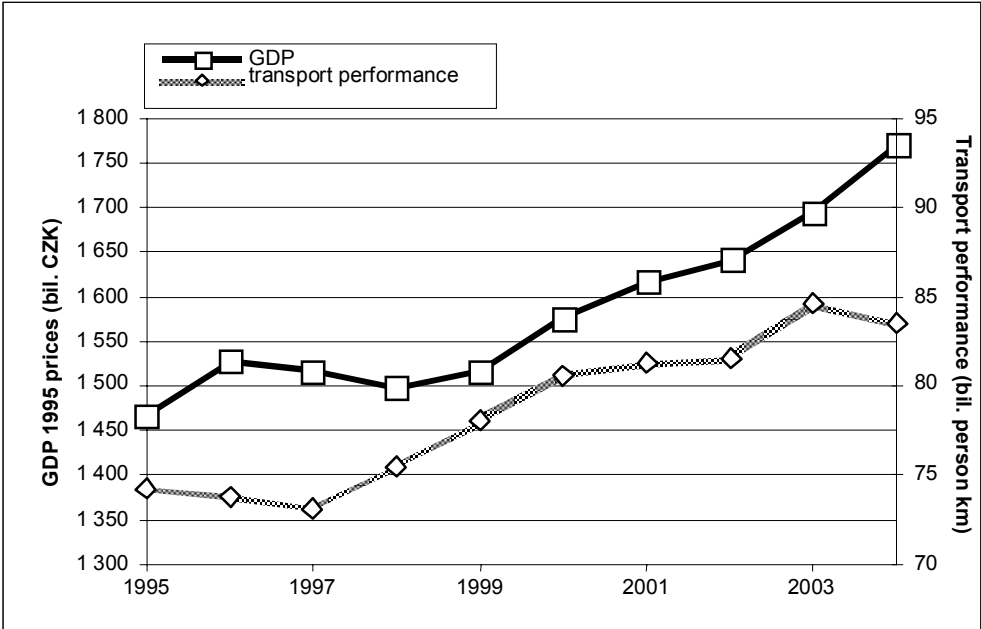
Source: Ministry of Transport, Czech Statistical Office

Table 8.1: Passenger transport performance and GDP, Czech Republic, 1995-2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GDP 1995 prices (bil. CZK)	1,467	1,528	1,517	1,499	1,517	1,576	1,618	1,642	1,695	1,770
person km - total (mil.)	74,278	73,829	73,091	75,479	78,003	80,571	81,327	81,454	84,566	83,476

Source: Ministry of Transport of the Czech Republic, Czech Statistical Office

International comparison

The international comparison applied to the percentage development of transport intensity in 2001 related to the baseline year 1995. In this comparison, the Czech Republic achieved similar levels of transport requirements as in 1995, which documents the fact that the development of transport performance copies the development of GDP. On the other hand, in countries such as Finland, Austria, Germany or Netherlands, the level of the indicator decreased. The decline in transport intensity in these countries was due to the fact that GDP grew faster than transport performance.

Chart 8.3: Passenger transport intensity (in 1995 constant prices in 1000 €), international comparison, 2001
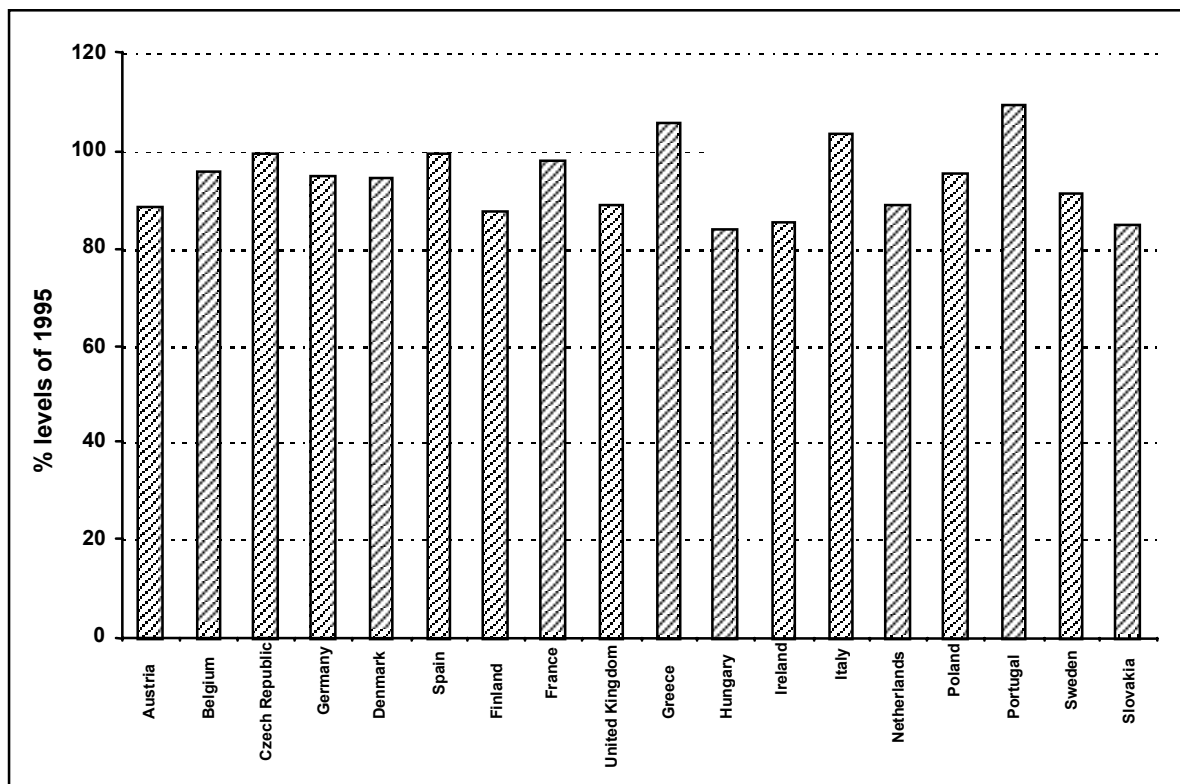
Source: Eurostat

9. Freight transport intensity

Meaning and context of the indicator

The indicator *Freight transport intensity* expresses the proportion of transport performance to GDP. Keeping in mind the principles of sustainable development, it is desirable to separate the curves of development of GDP from transport performance so as to ensure that GDP will grow and transport performance will stagnate or, optimally, decline.

Method of calculation of the indicator

This indicator represents the proportion of the indicator *Freight transport performance* to the indicator *GDP*. It is expressed in tkm/CZK 1,000, with GDP taken in constant prices.

Freight transport performance is stated in tonne-kilometres (a unit expressing the transport of one tonne of goods over a distance of one kilometre) and the aggregate figure comprises the performance of railway, road and inland waterborne transport service, obtained from the departmental statistical system of the Ministry of Transport.

GDP is a macro aggregate expressing the economic value created in the national economy for the previous period of time (as a rule, a year). GDP measures cash flows in the economy. It is also possible to interpret GDP as the value of goods and services of domestic origin intended for final use. GDP thus expresses the monetary value of market and non-market activities in given year, and is often regarded as an indicator of the material standard of living of the population.

Development of the indicator in the Czech Republic

The development of this indicator over the period of time in question to a considerable extent copies the development of freight transport performance. Between 1995 and 1998 the value of the indicator fluctuated considerably as a result of development of transport performance. From 1998 to 2001 the indicator stagnated in the region of 36 tkm/CZK 1,000 despite the growing trend of transport performance. This was due to the fact that GDP copied the growth of transport performance. Transport intensity increased in 2002 and 2003 as a result of a faster growth of transport performance compared to GDP. In the last year of the period monitored the indicator declined, which is a positive development from the perspective of sustainable development as the growth curves of GDP and transport performance diverged.

Chart 9.1: Freight transport intensity, Czech Republic, 1995-2004[5]
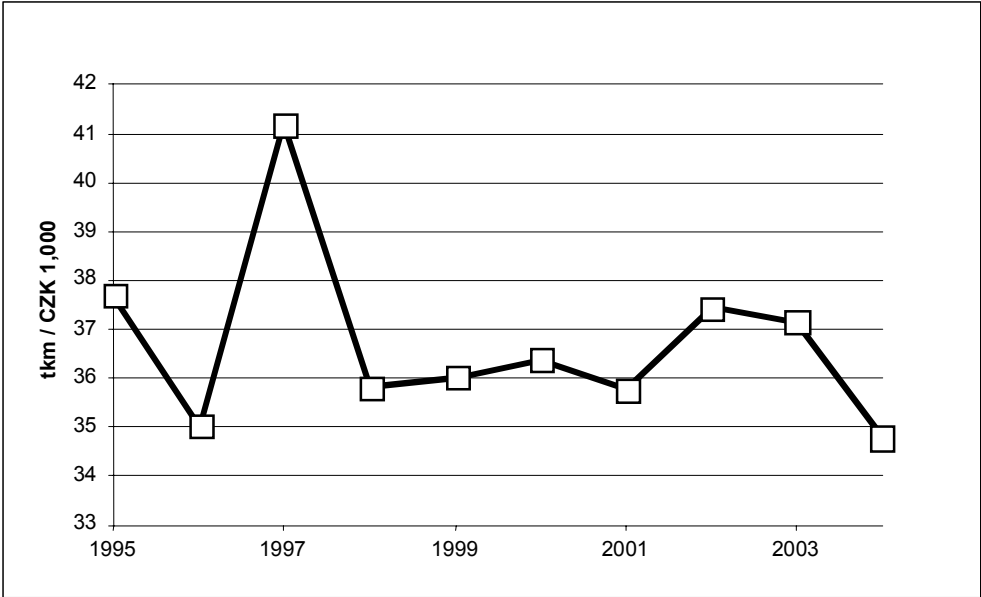
Source: Ministry of Transport of the Czech Republic, Czech Statistical Office

Chart 9.2: Freight transport performance and GDP, Czech Republic, 1995-2004
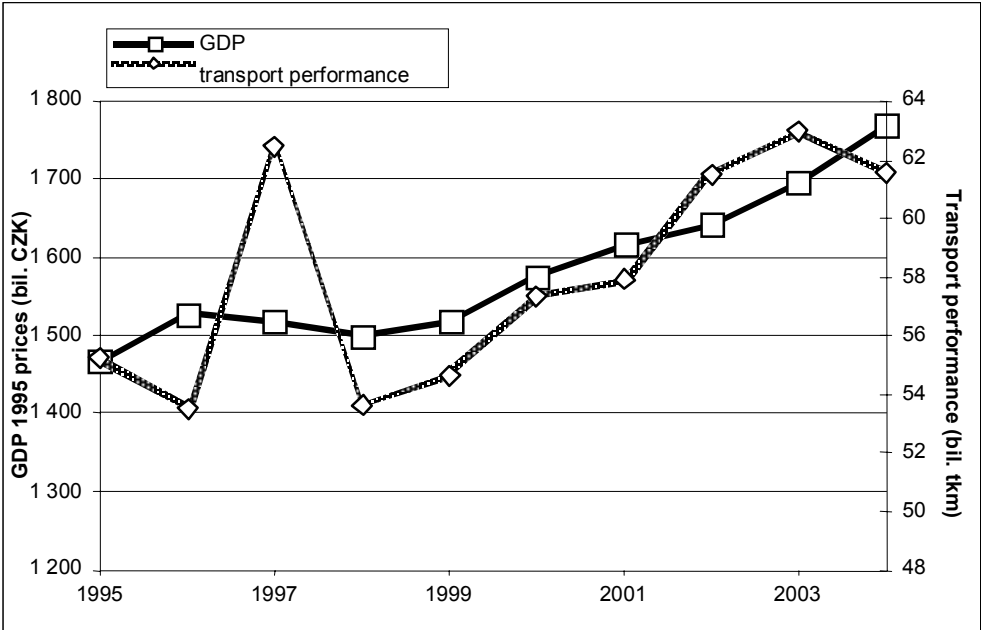
Source: Ministry of Transport of the Czech Republic, Czech Statistical Office

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[5] The swerve in the curve in 1997 is due to a change in approach to the collection and assessment of the relevant data

Table 9.1: Freight transport intensity, Czech Republic, 1995-2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
GDP 1995 prices (bil. CZK)	1,467	1,528	1,517	1,499	1,517	1,576	1,618	1,642	1,695	1,770
tkm - total (mil.)	55,272	53,515	62,460	53,652	54,622	57,343	57,877	61,489	62,976	61,554

Source: Ministry of Transport of the Czech Republic, Czech Statistical Office

International comparison

The international comparison applied to the percentage development of transport intensity in 2003 related to the baseline year 1995. In this comparison, the Czech Republic achieved the same levels of transport requirements as in 1995, which documents the fact that the development of transport performance copies the development of GDP. On the other hand, in countries such as France, Denmark, Sweden or Netherlands, the level of the indicator decreased. The decline in transport intensity in these countries was due to the fact that GDP grew faster than transport performance.

Transport performance is related only to the territory of the reporting country, for the purpose of the comparability of individual types of transport.

Chart 9.3: Freight transport intensity expressed in tkm/GDP (in 1995 constant prices in '000 €), international comparison, 2003
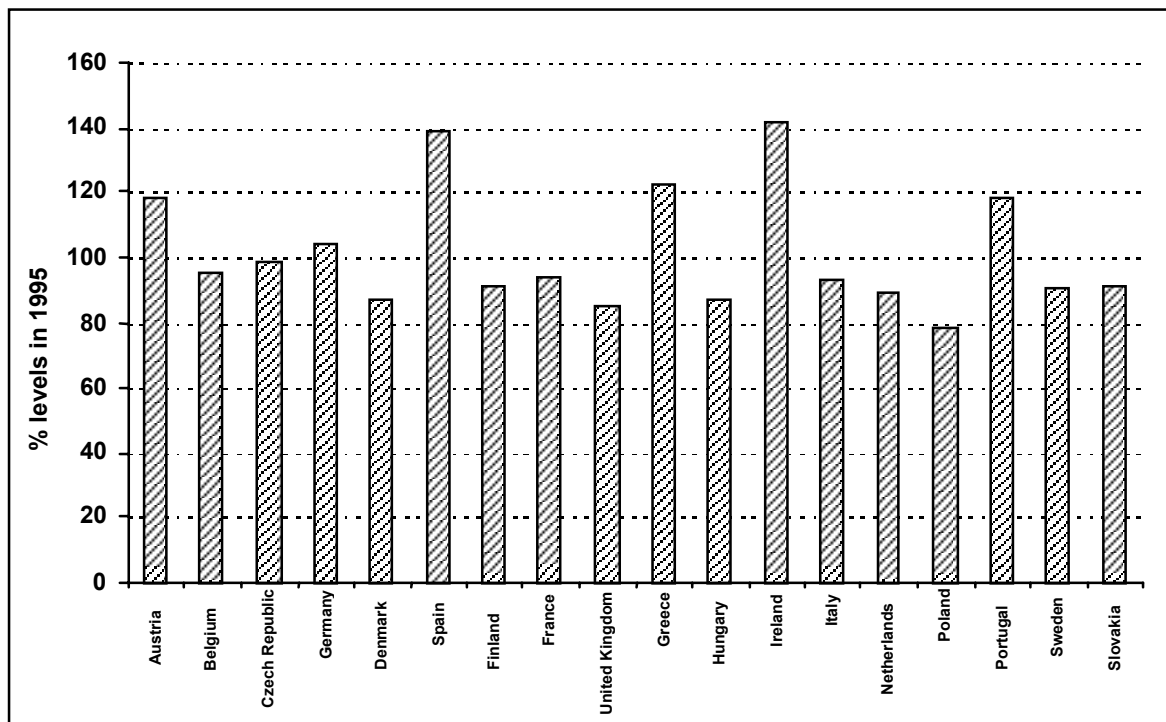
Source: Eurostat

10. Energy intensity of GDP

Meaning and context of the indicator

The indicator of *Energy intensity of GDP* indicates how efficiently we are able to transform primary energy sources into economic output. This indicator is expressed as a ratio of energy and economic indicators. Any decrease of energy intensity of GDP is generally associated with new technologies, energy innovation and savings, transition of the economy from heavy to light industry and services, and economic revival. On the other hand, growth tends to be associated with wastage, obsolete technologies, economic inhibition or export of secondary energy sources.

Method of calculation of the indicator

This indicator is the ratio of the indicator *Total primary energy supply* and *GDP*. It is expressed in GJ per thousand CZK, with GDP taken in 1995 constant prices. This indicator may also be expressed as year-on-year comparison indexed either in relation to the baseline year.

Total primary energy supply (TPES) is stated on a balance basis in derived SI units (J – Joule or PJ – 10^{15} J). The balance is calculated as domestic extraction of all energy raw materials plus their imports minus their exports. The balance is further adjusted by inventory and transfers. Energy sources are classified as gaseous, liquid and solid and primary electricity and heat (for details see Total primary energy supply).

GDP is a macro aggregate expressing the economic value created in the national economy during the previous period of time (as a rule, a year). GDP measures cash flows in the economy. It is also possible to interpret GDP as the value of goods and services of domestic origin intended for final use. GDP thus expresses the monetary value of market and non-market activities in given year, and is often regarded as an indicator of the material standard of living of the population. It is appropriate to monitor the growth of this indicator in longer time sequences (for details see *GDP per capita*).

Development of the indicator in the Czech Republic

Energy intensity declined by 21% from 1.19 GJ/'000 CZK in 1995 to 1.06 GJ/'000 CZK in 2003. The indicator continued declining relatively regularly from 1996 to 2000 when energy intensity decreased on average by 3% annually. After this period the year-on-year rate of the decrease dropped to less than 1% (2000-2002), and in 2002 the indicator increased by 2% compared to the previous year, despite the growing trend of GDP. This increase was due to

growing exports of secondary forms of energy, and electricity in particular, which increased between 2000 and 2003 by approximately 40% (the relevant 2004 data were not available at the time of drafting this Report). The problem is that the efficiency of the conversion of heat to electricity is around 35%, and thus much more energy will appear on the positive side of the balance of production of domestic resources than on the negative side of export. As electricity is a commodity with a relatively low value added, exports of electricity do not contribute to the generation of GDP (the denominator) at the same rate at which it contributes to the increase in TPES (the numerator). The indicative goal of the National Energy Policy (NEP) in respect of this indicator is to accelerate and then stabilise the annual rate of decline in energy intensity of the generation of GDP in the range of 3.0 to 3.5%, providing that in 2005 the level according to this plan is 1.05 GJ/'000 CZK.

Chart 10.1: Energy intensity of GDP, Czech Republic, 1995-2004
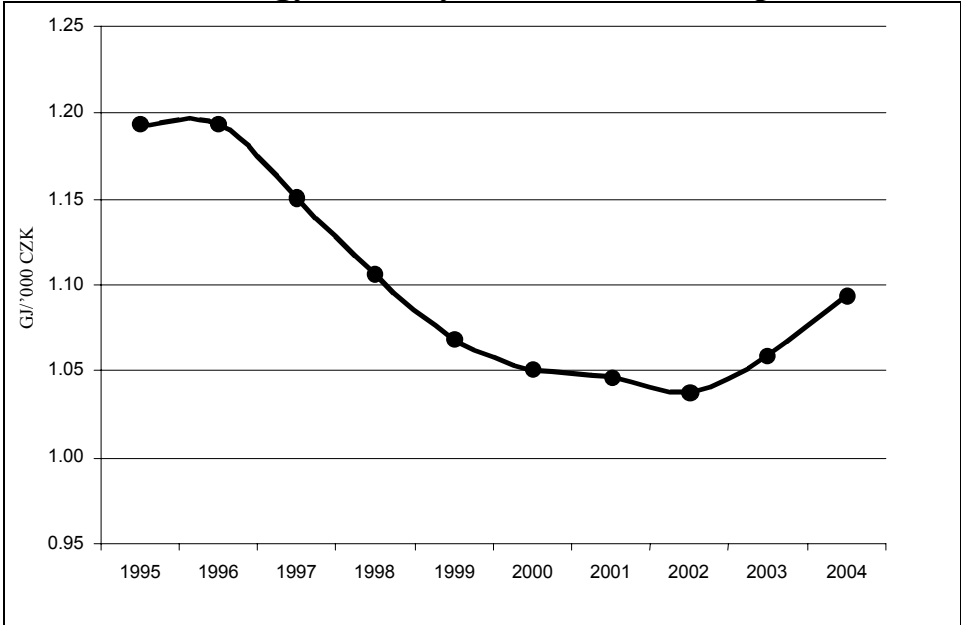
Source: Czech Statistical Office, Ministry of Industry and Trade of the Czech Republic

Table 10.1: Basic data for the calculation of energy intensity of GDP, Czech Republic, 1995-2003

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
TPES (PJ)	1749	1823	1744	1658	1621	1656	1693	1704	1803	1938
GDP (mil. CZK)	1466	1527	1516	1499	1517	1576	1618	1642	1703	1771

Source: Czech Statistical Office

Chart 10.2: TPES and GDP, Czech Republic, 1995-2003
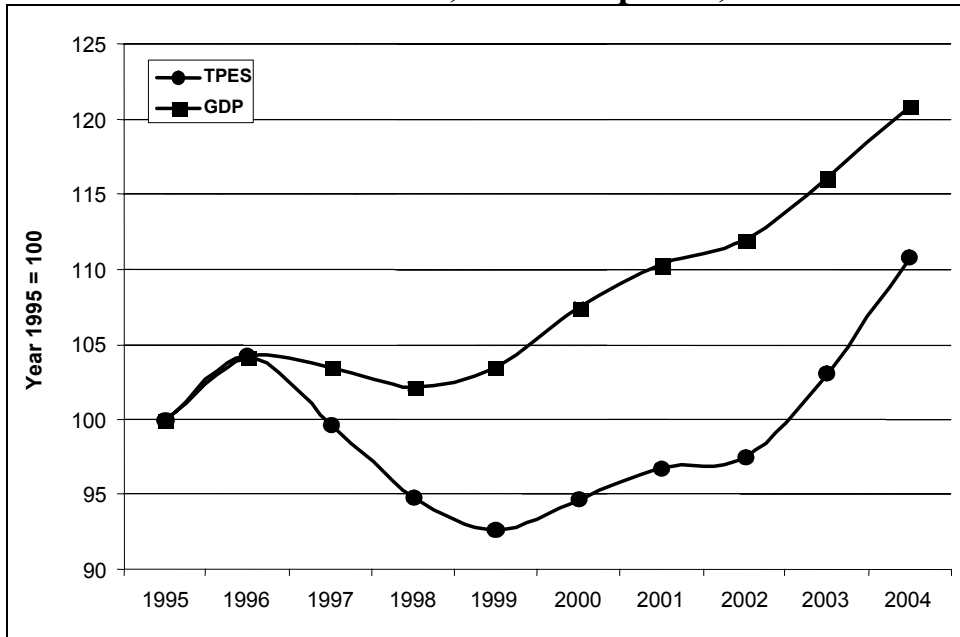
Source: Czech Statistical Office

International comparison

Chart 10.3: Energy intensity of GDP, international comparison, 2002
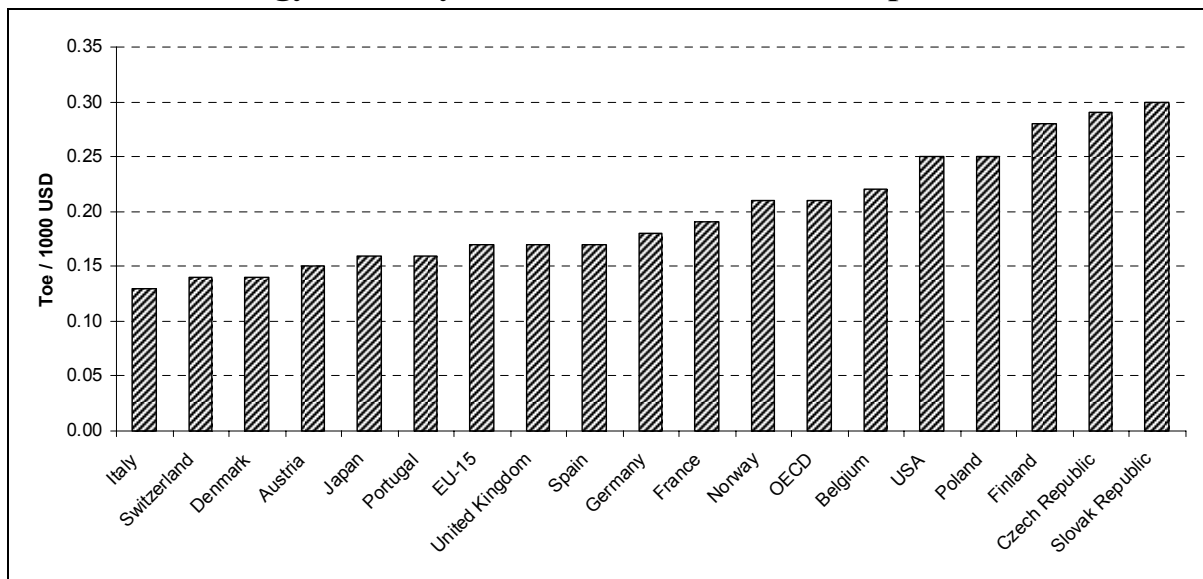
Note: Total primary energy supply (in toe = tonnes of oil equivalent) divided by GDP (in USD – based on purchasing power parity and 1995 constant prices)
Source: OECD

In the international comparison with OECD countries the Czech Republic holds the second worst place after Slovakia. Energy intensity of GDP in the Czech Republic is nearly twice as high as the EU-15 average. This comparison shows how the Czech Republic has failed to decrease this indicator. If we wish to achieve a rate of energy intensity similar to that in the EU-15, we will not only need to increase the rate of GDP, but will also have to actively reduce the consumption of primary energy sources (for details see TPES and GDP per capita).

11. Total primary energy supply

Meaning and context of the indicator

The indicator *Total primary energy supply (TPES)* indicates the aggregate amount of energy required for society to work and provides indirect information about the pressure that society exerts on the geobiosphere. This indicator is denominated in derived SI units (J – Joule) and is calculated on an annual basis. The growth of this indicator tends to be associated with economic development and growing consumption. Its absolute level depends on climatic conditions, the structure of the economy and economic performance of the country.

Method of calculation of the indicator

TPES is one of the three constituents of the balance of energy (the other two being *energy processes* and *total final consumption)*. The indicator is structured as the sum of domestic extraction of all energy raw materials (with the exception of primary electricity and primary heat where the energy of the carrier is accounted for) plus their imports minus exports. The balance is further adjusted by inventory and transfers. Energy sources are classified as gaseous, liquid and solid and primary electricity and heat. An ancillary indicator is the indicator of total final consumption of energy, which is complementary to TPES. Total final consumption (TFC) is the consumption determined before the energy enters appliances in which it will be used for the final utility effect and not for generation of another form of energy (with the exception of secondary energy sources). In the energy balance, final consumption is categorised by the sector of consumption. Both indicators are denominated in PJ (Petajoule – 10^{15} J) and are internationally established and well comparable.

Development of the indicator in the Czech Republic

TPES in the Czech Republic (Chart 11.1) decreased at a rate of 3 to 5% per year between 1996 and 1999, and then grew moderately as of 2000 at an annual rate of 2%, which increased to 5% in 2003 and to 7% in 2004.

The objectives of the Czech Republic relating to this indicator are set out in the National Energy Policy (NEP). The long-term objective of NEP is "not to increase the absolute amount of TPES; ensure that economic growth is achieved primarily by increasing energy efficiency" (see also Energy intensity of GDP). Based on the NEP scenario, TPES should be 1750 PJ in 2005, but as it equalled 1940 PJ in 2004, it is likely that this target will not be achieved.

Chart 11.1: Total primary energy supply, Czech Republic, 1995-2004
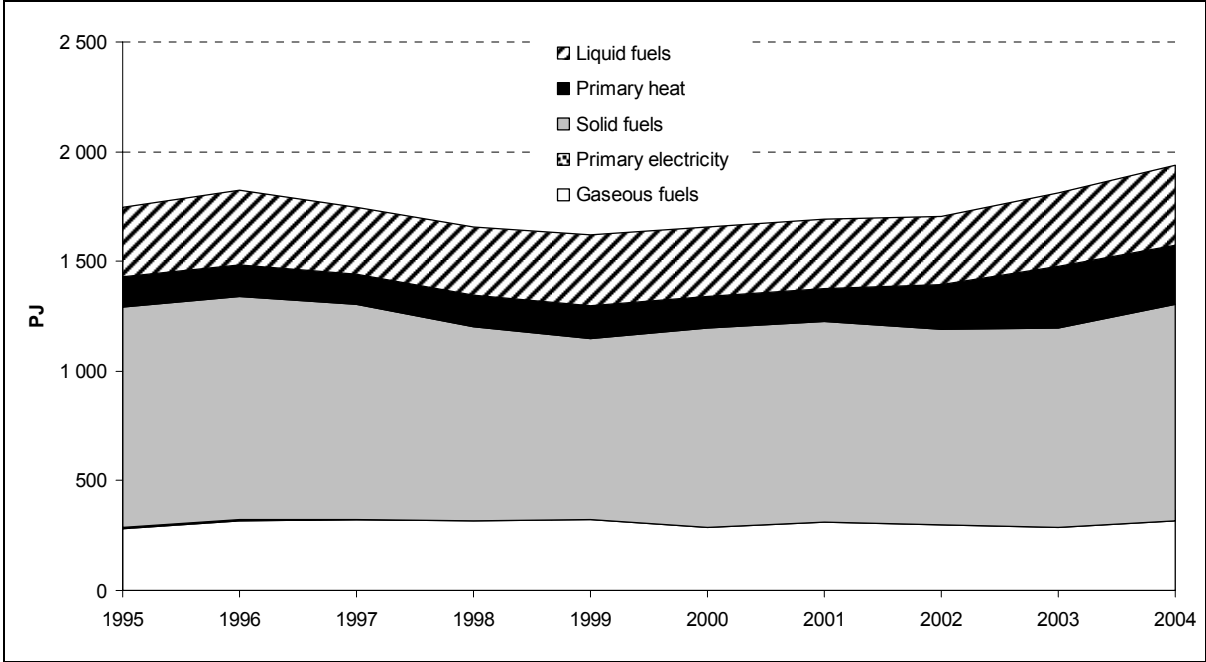
Source: Czech Statistical Office, Ministry of Industry and Trade of the Czech Republic

Another objective of NEP is the structure of TPES. The structure of TPES in 2004 and the targets of NEP for 2005 are shown in Table 11.1. On the basis of these data we can assume that this indicator, too, will not meet the targets set out in NEP.

Table 11.1: Structure of TPES and goals under NEP for 2005, Czech Republic, 2004

	2004	**NEP 2005**
Solid fuels	51 %	42-44 %
Liquid fuels	19 %	15-16 %
Gaseous fuels	19 %	20-22 %
Primary heat	14 %	16-17 %
Renewable resources	2.89 %	5-6 %

Source: Ministry of Industry and Trade of the Czech Republic

The TFC indicator (see Chart 11.2), which in the late 1990s very closely copied TPES, does not follow the same trend after 1999. By plotting both variables in a chart we will illustrate the decoupling of the TPES and TFC curves. While decoupling in respect of indicators reflecting the relation between environmental impacts and economic performance is desirable, this is not the case in this context. The cause of this decoupling (i.e. increase of TPES and decrease or slower growth of TFC) is the growth in exports of electrical energy, which increased by approximately 40% from 2000 to 2003. Electricity (as a secondary source of energy) is generated from primary sources (coal and primary heat) with a 35% efficiency, and thus every J of electricity generated requires three times as much TPES.

Chart 11.2: Total final and primary consumption of energy, Czech Republic, 1995-2003
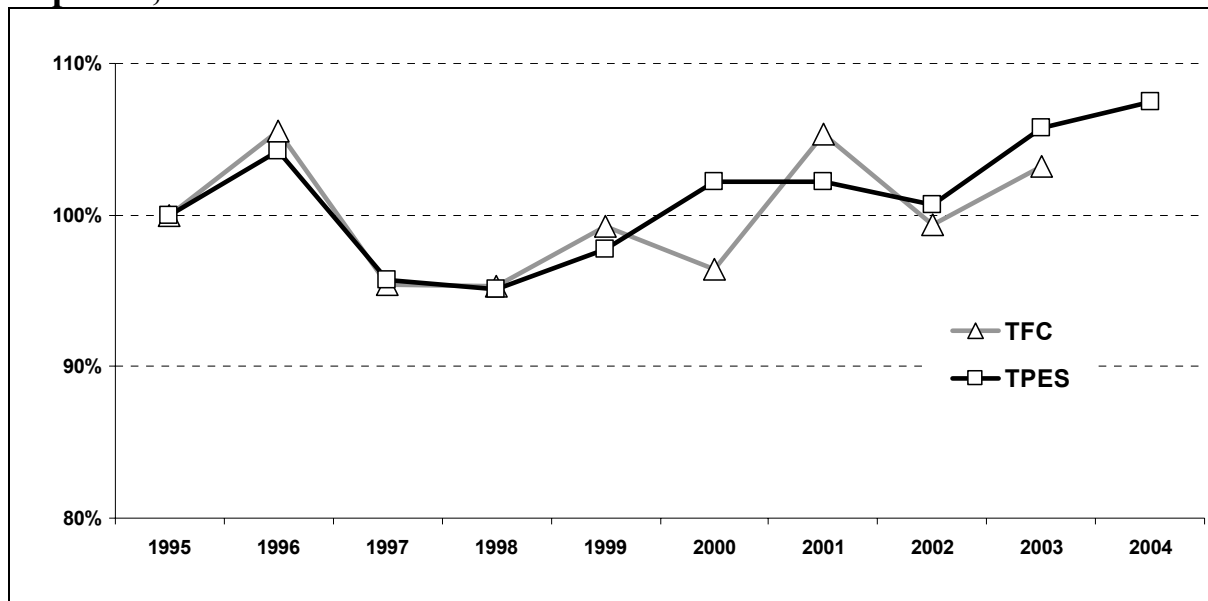
Source: Czech Statistical Office

International comparison

Chart 11.3: Total primary energy supply, international comparison, 2002
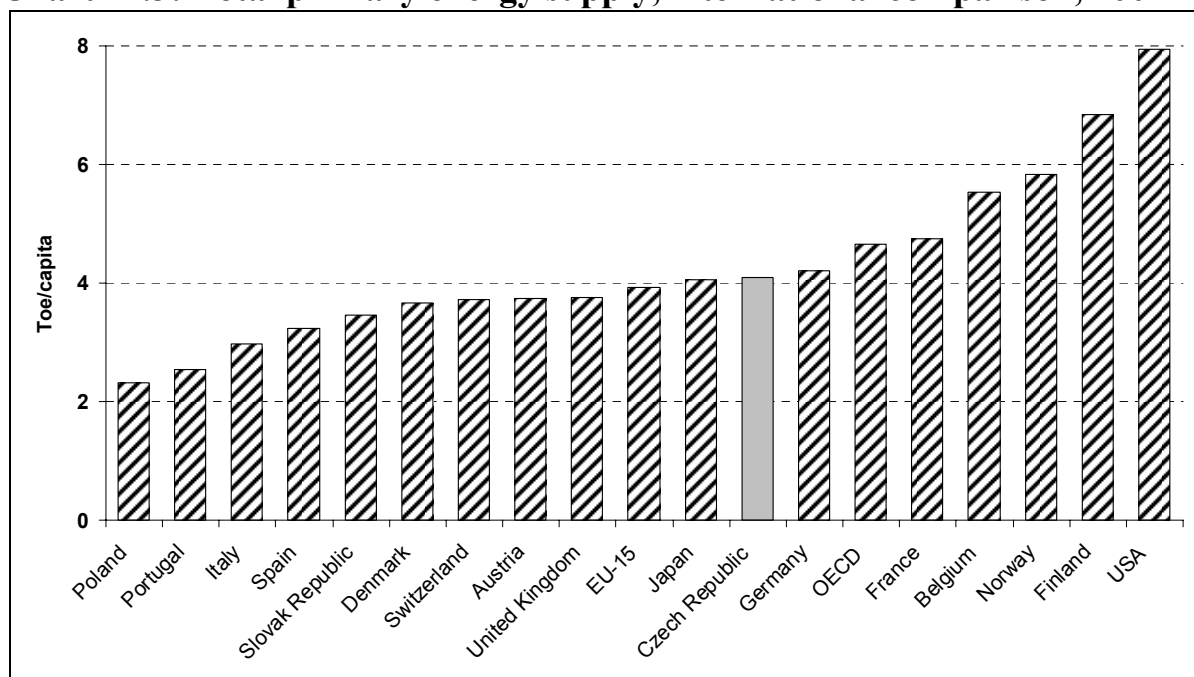
Source: OECD

The international comparison should take account of climatic conditions and the length of the heating season in the countries compared. Comparison is made per capita, which normalises the indicator for the various size of population in individual countries. In the international comparison the Czech Republic is roughly at the level of the EU-15 and the rate of consumption is more or less

comparable with countries with the same geographic conditions. For a comparison per unit of economic performance, see Energy intensity of GDP.

12. Share of energy from renewable sources

Meaning and context of the indicator

Renewable energy sources (RES) are the only energy sources usable in the long run. It is therefore necessary to ensure that renewable sources in the future gradually replace non-renewable sources.

Renewable sources are defined by law (Act No 180/2005 Coll.) as "renewable non-fossil natural sources of energy, including wind energy, solar energy, geothermal energy, energy of water, soil, air, biomass, landfill gas, sludge gas and biogas". Nuclear energy is not considered as renewable energy although it is not obtained from fossil fuel. We will use two indicators for the purposes of this Report – *Total RES* and *RES used to generate electricity*.

Method of calculation of the indicator

The indicator is compiled from the results of statistical surveys carried out by the Ministry of Industry and Trade (biogas, municipal solid waste (MSW), biomass, solar systems, heat pumps) and data of the Energy Regulatory Office (wind and hydroelectric plants), and data obtained by a survey of the Czech Statistical Office are used in respect of total consumption of primary energy sources. The entire indicator in the annual aggregate is compiled by the Ministry of Industry and Trade. The indicator is presented in derived SI units – J (Joule), or multiples (PJ - Petajoule - 10^{15} J), and in respect of electrical energy in Wh (Watt hour), or multiples (MWh – Megawatt hour – 10^{6} Wh).

The percentage of electricity generated from RES is calculated as the proportion of gross power generation from RES to total gross power generation (categories Power generation – generation and distribution of electricity and heat (NACE 401, 403) and Power generation – other). Thus we will obtain a somewhat lower figure than if we used as a denominator the resulting balance of electrical energy (i.e. gross generation plus imports minus exports), but the result more exactly reflects the situation in the Czech Republic.

Development of the indicator in the Czech Republic

Energy obtained from water and biomass has been utilised over a long span of time in the Czech Republic. Unfortunately, this indicator was not systematically monitored before 2004 and thus reliable long-term data are only available for hydroelectric plants (Chart 12.1).

As regards hydroelectric energy, capacities for building major hydroelectric plants have been exhausted while small hydroelectric plants still have some

potential, though in the aggregate their share is minor. Hydro energy is influenced by the climatic conditions in any particular year. This is illustrated by the difference between 2002 and 2003, where the difference between a flood year followed by an extremely dry year is obvious.

The overall distribution of consumption of renewable sources in 2003 and 2004 (Chart 12.1) documents that biomass plays the key role. Consumption of RES in 2003 amounted to 2.76% of the total consumption of PES. In 2004 this figure increased by approximately 0.1 percentage point to 2.89%. The aim of the NEP was to achieve by 2005 a structure of PES where RES would satisfy 5 to 6% of total consumption (see also *Total primary energy suppl*y). Looking at 2004, it appears that this target will likely not be achieved. The European Union as a whole intends to achieve a condition by 2010 where 12% of primary energy sources will be covered by renewable sources.

Generation of electricity from renewable sources in the Czech Republic is covered in particular by major hydroelectric plants (Chart 12.2). Like in the case of total RES, data falling before 2003 are currently unreliable, with the exception of hydro energy which is already presented in Chart 12.1. In 2004, hydroelectric plants accounted for 73% of total electrical energy generated from RES, followed by 21% generated from biomass and 5% generated from biogas. The remaining sources were negligible. Generation of electricity from renewable sources accounted in 2004 for 3.29% of total domestic gross generation of electricity. The growth between 2003 and 2004 was caused mainly by the dry year 2003, when the hydroelectric sector did not produce as much electricity as usual. The targets for this indicator are set by Act No 180/2005 Sb. on renewable sources. The objective is to achieve 8% of electricity generated from RES by 2010. The National Energy Policy identifies an additional indicative goal: "Provide conditions for accomplishing the national target of RES use – achieving the proportion of RES to gross consumption of electricity of 5-6% in 2005". Though no estimates for 2005 are available, it is likely that this target will not be accomplished.

Chart 12.1: Consumption of renewable energy sources, Czech Republic, 1995-2004
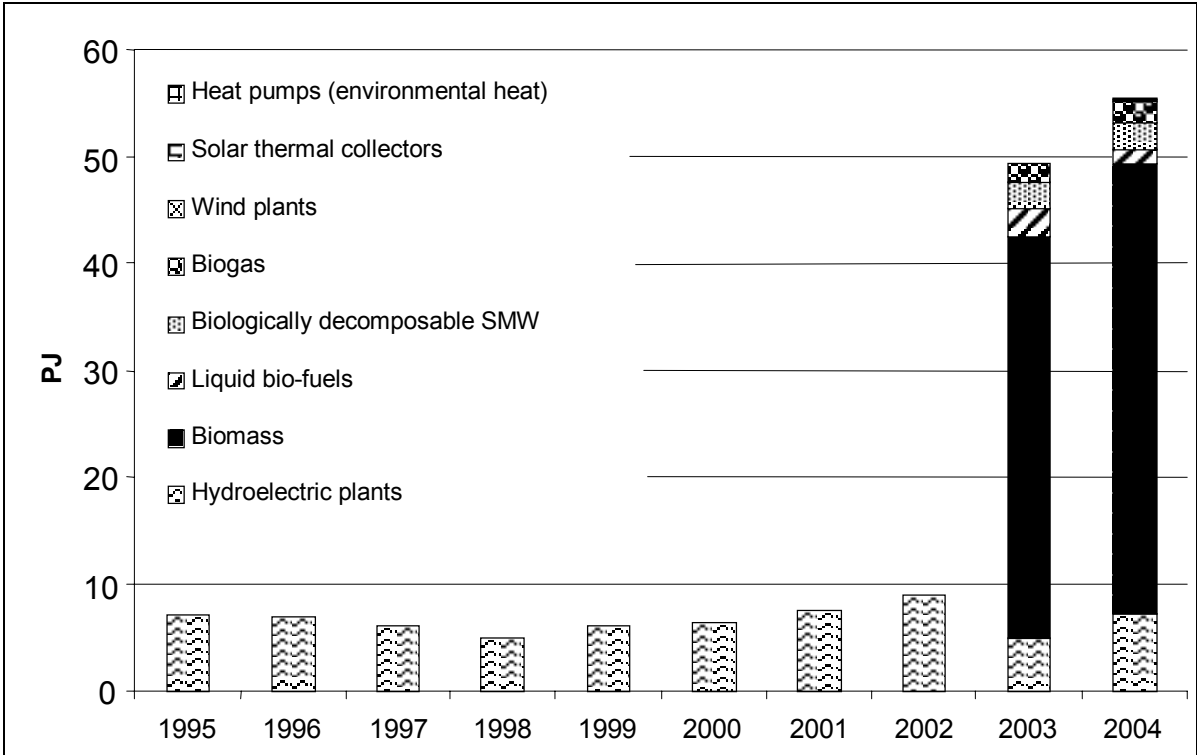
Note: data for sources other than hydroelectric are not available before 2003
Source: Ministry of Industry and Trade of the Czech Republic, Czech Statistical Office

Chart 12.2: Generation of power from renewable sources, Czech Republic, 2003-2004
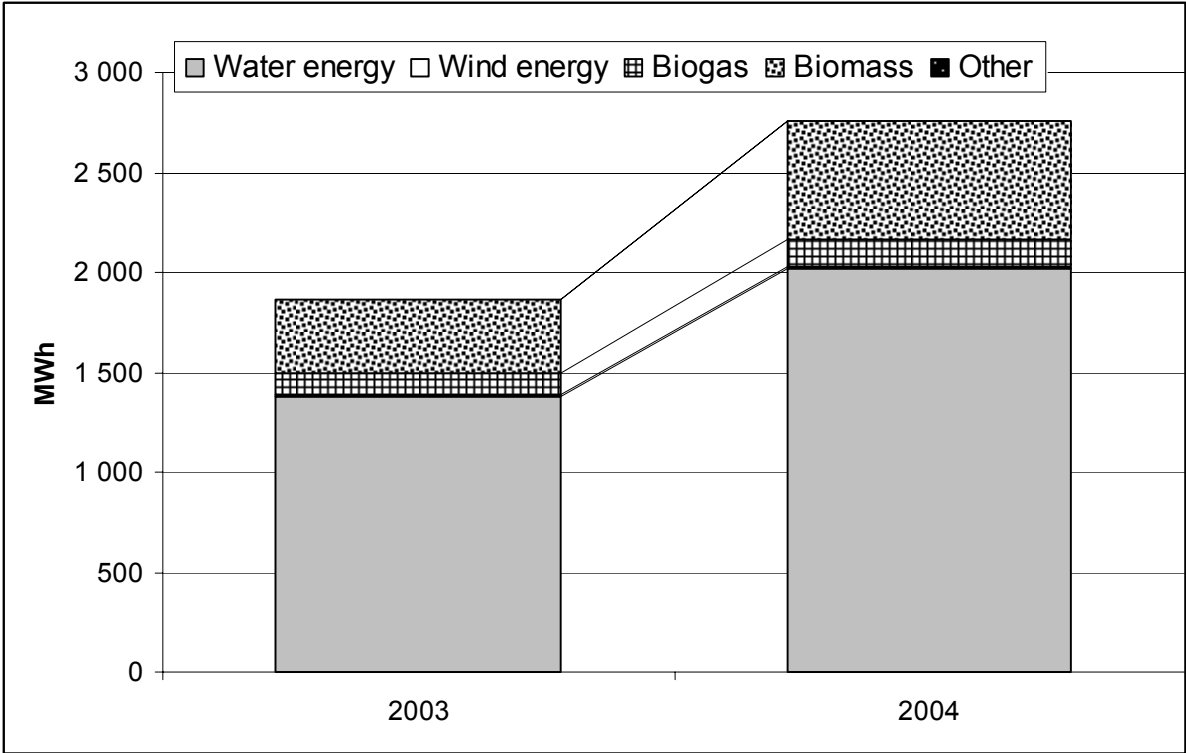
Source: Ministry of Industry and Trade of the Czech Republic, Energy Regulatory Office

International comparison

The international comparison of power generation from renewable sources indicates that the Czech Republic achieves lower levels than Germany, but is more successful than Hungary and Poland. In making this comparison it is necessary to take account of geographic conditions (hydro energy, geothermal energy) and of the prevailing climatic conditions (wind, biomass). Therefore, for illustration, the chart also shows the exceptional values of this indicator (Austria – hydro energy, Iceland – geothermal energy).

Chart 12.3: Renewable sources for electricity generation, international comparison, 2001
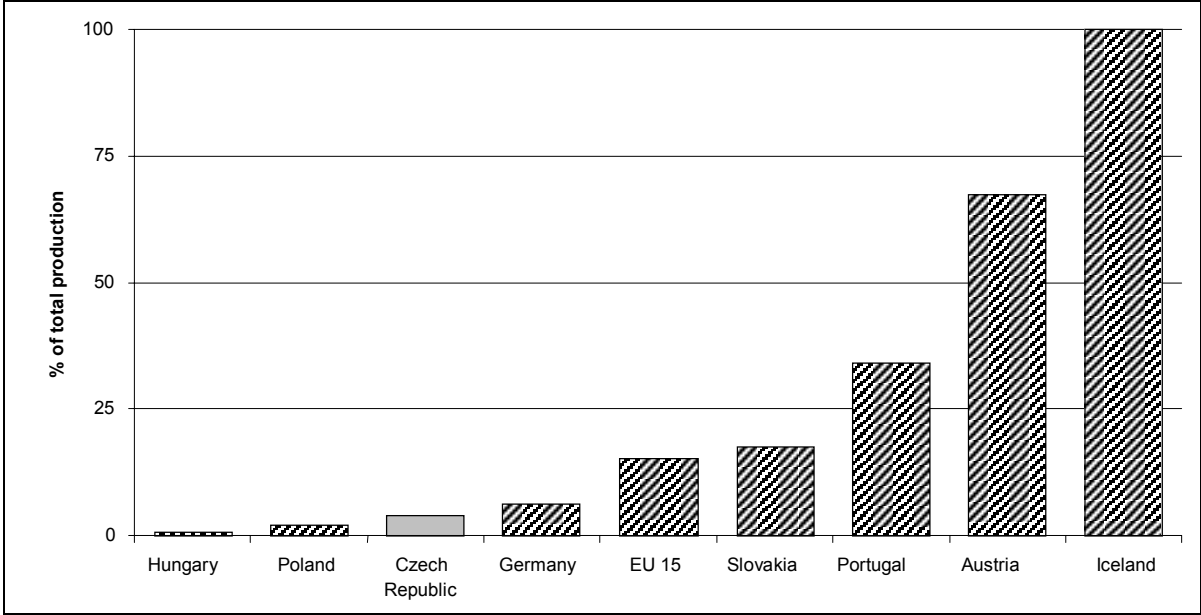
Note: In respect of the Czech Republic the estimates of Eurostat for 2001 are shown
Source: Eurostat

13. CO$_2$ emissions per capita

Meaning and context of the indicator

The indicator of *CO$_2$ emissions per capita* indicates the amount of emissions per inhabitant and allows for comparison between countries. The indicator illustrates by what amount inhabitants of individual countries contribute to the increasing concentration of the principal anthropogenic greenhouse gas in the atmosphere, and thus to global climatic changes. It also attests to the economic standard of any given country, its energy base and social and cultural conditions. Any decrease or increase of the indicator's value is associated with a change in the fuels and energy base or with savings and more economical use of energy.

Method of calculation of the indicator

This indicator expresses the proportion of CO$_2$ emissions to the number of inhabitants. The simple structure of the indicator allows the construction of longer time sequences. The indicator is denominated in tonnes of CO$_2$ per capita. The only problem is the choice of number of inhabitants, which is stated either as an average for the given year or the actual number as of 1 January of the given year. Using the average number of inhabitants is more appropriate. This indicator facilitates international comparison and is used in determining objectives of the national programme for mitigating the impacts of climate change in the Czech Republic.

Development of the indicator in the Czech Republic

Chart 13.1 illustrates the development of CO$_2$ emissions per capita in the Czech Republic between 1990 and 2003.

In the course of this period, emissions of CO$_2$ per capita decreased. This decrease occurred mainly in early 1990s and was caused by a decline in total emissions, which was due to the restructuring of industry and by the increasing share of trade and services and other measures in the decline of energy requirements.

Chart 13.1: CO$_2$ emissions per capita (average), Czech Republic, 1990 – 2003
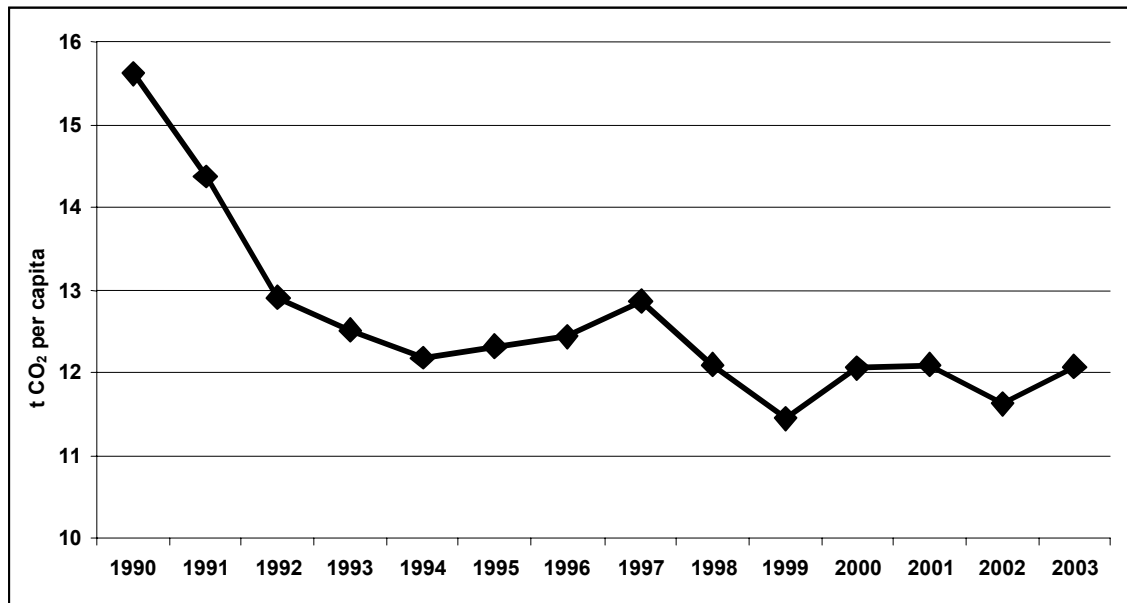
Source: Czech Hydrometeorological Institute, Czech Statistical Office

International comparison

Comparison of the development of CO$_2$ emissions per capita (t CO$_2$ per capita) between 1990 and 2002 is shown in Chart 13.2.

The international comparison is not favourable for the Czech Republic. Among the countries shown in Chart 13.2 it holds the first place in the size of this indicator, except the USA. In Europe we belong to countries with the highest emissions per capita. The high value of this indicator in the Czech Republic is due to the structure of primary energy sources (a large share of solid fuels) and the high energy requirements of the economy.

Chart 13.2: CO$_2$ emissions per capita, international comparison, 1990, 1995 and 2002
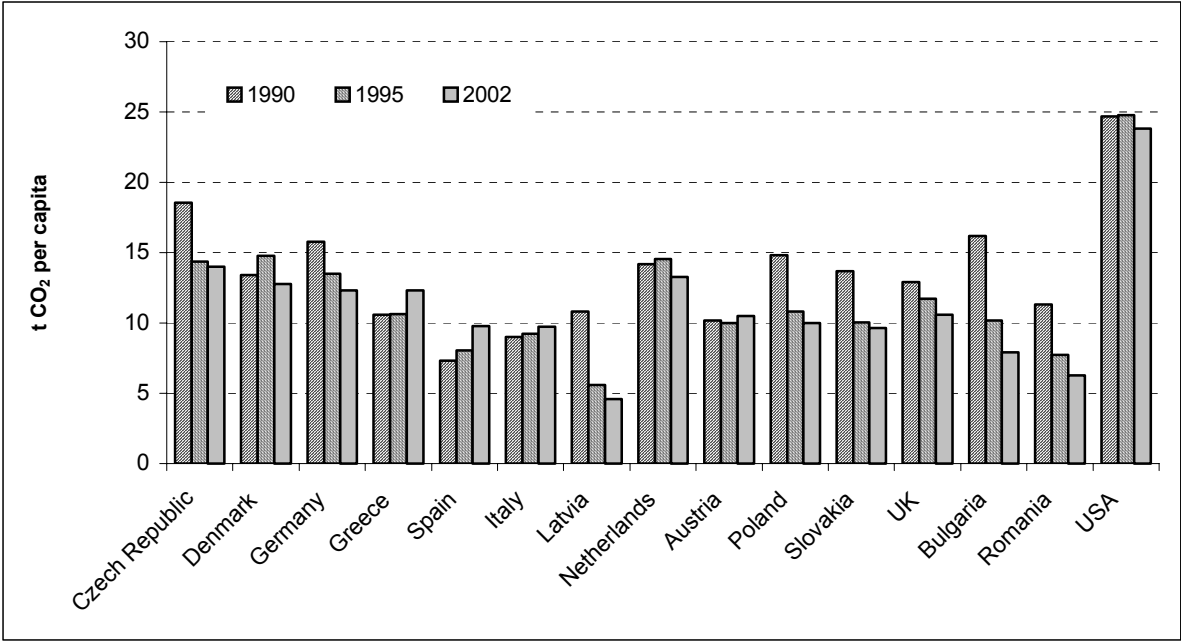
Source: Secretariat of the UN Framework Convention on Climate Change – data on national emissions; Eurostat and OECD – data on numbers of inhabitants

14. CO_2 emissions per GDP

Meaning and context of the indicator

The indicator of *CO_2 emissions per GDP* indicates the efficiency with which a country is capable of transforming PES and certain materials (such as lime stone) into economic performance. As opposed to the indicator of energy requirements, this indicator provides additional information about primary energy sources (not generating CO_2 – nuclear and hydro energy alternative sources; generating CO_2 – gaseous, liquid and solid fuels). In the case of the Czech Republic, the structure of primary energy sources with a high share of use of solid fuels negatively affects the value of this indicator. The decline in CO_2 emissions per GDP unit results from upgrade of technologies, innovation, savings of energy and materials, transition from energetically more demanding to less demanding types of economy – trade and services.

Method of calculation of the indicator

CO_2 emissions account for most national greenhouse gases emissions - 80% on average. In countries whose energy sector is based on fossil fuels this percentage is higher. For example, in the Czech Republic or Poland, this percentage amounts to 86% and 83%, respectively.

This indicator expresses the proportion of CO_2 emissions to GDP. The main problem of this indicator is the appropriate choice of denomination of GDP. GDP may be denominated in many ways (in purchasing prices, basic prices, current prices or constant prices related to given year, and in various currencies – typically CZK, EUR, USD). GDP in 1995 constant prices was chosen for the year-on-year comparison. The international comparison uses GDP indexed for the purchasing power parity, with the United States Dollar used as the relevant currency. The indicator is expressed in t CO_2 / relevant GDP units.

Chart 14.1: CO_2 emissions per GDP unit (GDP 1995 c. p.), Czech Republic, 1995 – 2003
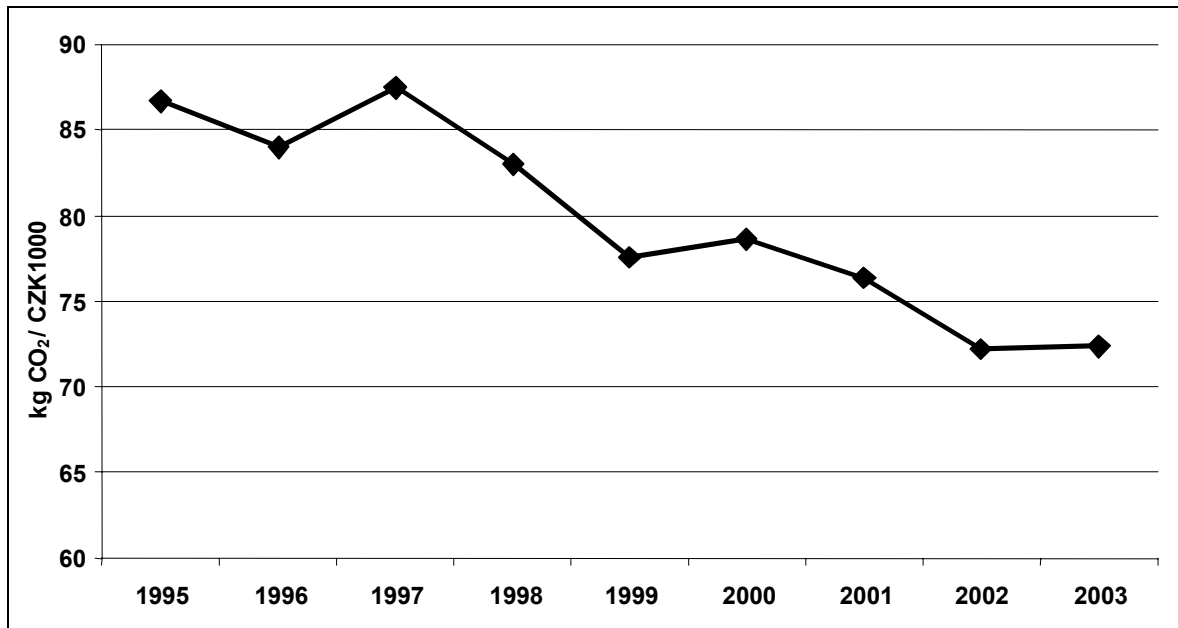
Source: Czech Hydrometeorological Institute, Czech Statistical Office

Development of the indicator in the Czech Republic

The development of CO_2 emissions per unit of GDP in the Czech Republic between 1995 and 2003 is shown in Chart 14.1. In the course of this period the level of CO_2 emissions per GDP unit declined. This decline was due to the significant increase in GDP and stagnation or moderate decrease of overall emissions. This decline had a stable trend throughout the period in question.

International comparison

Chart 14.2 shows the international comparison of the developments of CO_2 emissions per GDP unit (in USD, PPP) between 1990 and 2002.

Chart 14.2: CO$_2$ emissions per GDP unit (in USD, PPP), international comparison, 1990, 1995 and 2002
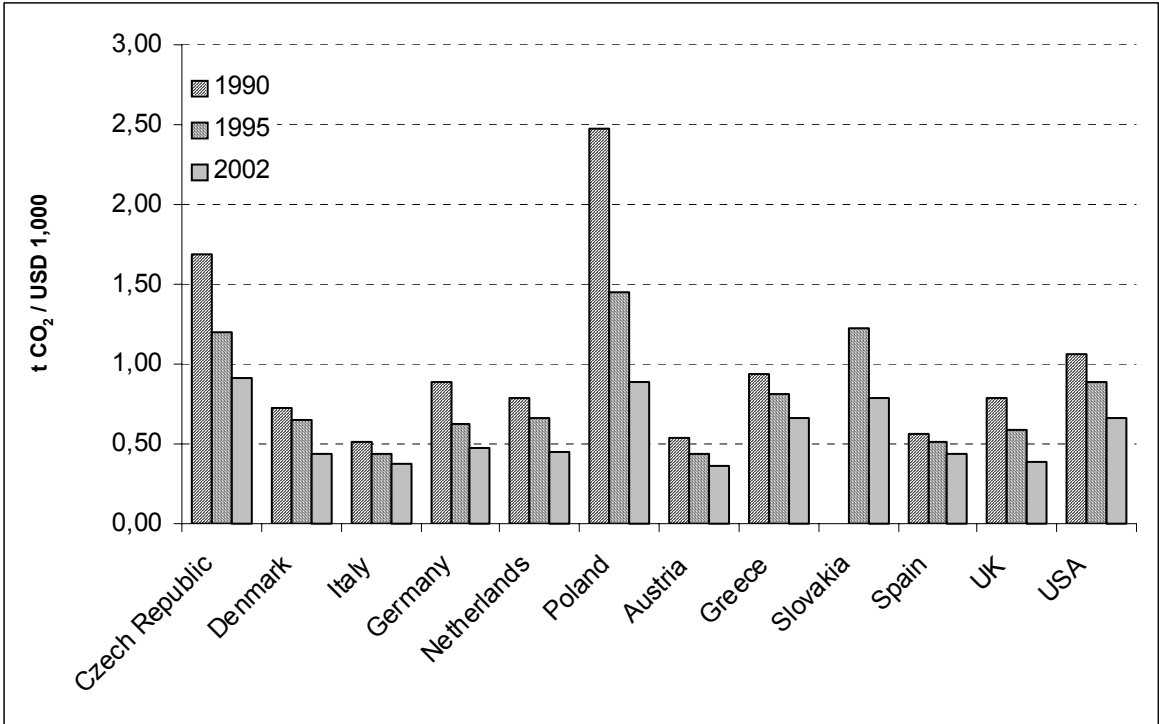
Source: Secretariat of the UN Framework Convention on Climate Change, OECD

The level and development of this indicator is similar in post-communist countries and in developed countries, where no remarkable differences exist between countries in these two groups. Despite a decline in the value of this indicator in post-communist countries, it is still more than double that achieved in developed countries. This value may be reduced by reducing total emissions and increasing economic performance. The curve of the indicator shows that its decline in the Czech Republic is slower as compared with other post-communist countries. The Czech Republic has been surpassed by Poland and Slovakia, both of which had a value of this indicator higher or the same at the start of the period in question. In respect of this indicator, the Czech Republic achieved one of the worst levels in Europe.

15. Material use of waste

Meaning and context of the indicator

Material use of waste is considered an appropriate indicator to measure the recycling of waste. Unlike recycling, material use of waste is defined in Act No185/2001 Coll. on waste, as amended, as "replacement of primary raw materials by substances obtained from waste that can be considered as secondary raw materials, or the use of the properties of waste for the original purpose or for other purposes, except for immediate generation of energy". This indicator forms a part of the Waste Management Indicators System of the Czech Republic, intended to evaluate the achievement of the objectives of the Waste Management Plan of the Czech Republic (Indicator I.6 – share of waste recoverable as material). The indicator expresses the percentage proportion of recovered/recycled waste to total waste produced.

Method of calculation of the indicator

The indicator expresses the proportion of all recoverable waste in the Czech Republic to total waste produced in the Czech Republic. It is defined by waste management codes R2 through R11 and N1 pursuant to Decree of the Ministry of the Environment No 383/2001 Coll. specifying details on waste management, as amended. (Note: Pursuant to Decree No 41/2005 Coll. this indicator will also involve codes N8, N10, N11, N12, N13 and N15, which will be reported in 2006 for 2005.) For the calculation of this indicator it is absolutely necessary to adopt a definition of the manners of disposal appropriate for recovery, which has not as yet been fully accepted across the EU.

Development of the indicator in the Czech Republic

Development of the share of recovered waste in the Czech Republic between 2000 and 2004 is shown in Chart 15.1. Over the period monitored, there was a continuous increase in the amount of recovered waste in proportion to the total waste produced. The lower levels in 2000 and 2001 were due to the different legislative acts than in force, pursuant to which a different waste management coding method was used, and individual waste management codes then in use cannot be unambiguously assigned to management codes used since 2002.

The share of recycled/recovered waste (R2-R11, N1) in the Czech Republic amounted to 52.8% in 2002 and 56.5% in 2003.

The Waste Management Plan of the Czech Republic envisages an increase in the use of waste, with preference given to recycling, to 55% of all waste generated

by 2012 and an increase in recovery of municipal waste to 50% by 2010 compared with 2000.

Chart 15.1: Recovery of waste, Czech Republic, 2000 – 2004
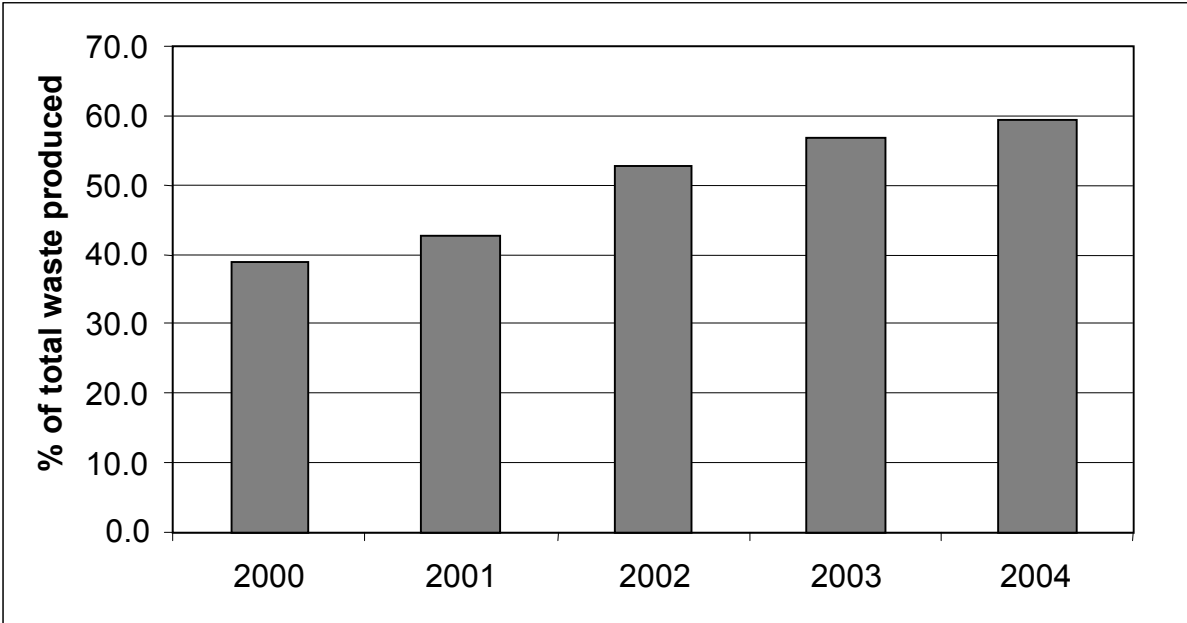
International comparison

This indicator has not as yet been monitored in OECD and Eurostat official statistics. The EU has not even standardised any methodology of calculation or methods of waste disposal and management to be considered as recovery/recycling. These statistics only indicate the share of recycling for selected waste flows, mainly packages and packaging waste or municipal waste. The Ministry of the Environment asked the European Commission and some EU Member States to provide an interpretation of the procedure of determining the level of recovery/recycling so as to facilitate an international comparison. Based on a recommendation of the OECD Council on material flows and resource productivity of April 2004, it is envisaged that methodology will finally be unified for internationally comparable monitoring of the indicator characterising the ratio of recoverable waste to total material inputs into the national economy, subject to acceptance of the Japanese proposal.

16. Consumption of basic nutrients in industrial fertilisers

Meaning and context of the indicator

Consumption of basic nutrients in industrial fertilisers is considered one of the key indicators of ecologisation of agriculture. Soil is the result of the erosion of minerals and the activity of live organisms. This process is so slow that soil may be regarded as a non-renewable resource. Agriculture often has a very adverse impact on soil. One of the factors diminishing the quality of soil is excessive use of mineral fertilisers, associated in particular with soil acidification and erosion, and consequently overall deterioration of fertility. The use of mineral fertilisers largely contributes to eutrophication of water and contamination of drinking water.

Method of calculation of the indicator

This indicator is calculated as the amount of fertilisers used (in kilograms of pure nutrients) per hectare of farmland. The higher the amount, the lower the level of sustainability.

Development of the indicator in the Czech Republic

The development of the use of basic nutrients in industrial fertilisers over time is shown in the table below:

Table 16.1: Consumption of fertilisers (in kg of net nutrients per ha), Czech Republic, 1986-2004

Year	N	P_2O_5	K_2O	Total nutrients
1986	88.7	69.2	74.2	232.1
1987	99.2	67.4	71.4	238.0
1988	98.8	68.4	66.5	233.7
1989	98.5	63.5	55.9	217.9
1990	89.8	56.8	50.8	197.4
1991	46.0	11.0	8.0	65.0
1992	48.2	10.5	7.1	65.8
1993	40.0	13.0	10.5	63.5
1994	57.6	10.2	13.0	80.8
1995	55.4	14.6	12.8	82.8
1996	61.3	11.8	8.0	81.1
1997	55.1	11.7	10.1	76.9
1998	53.3	12.6	7.3	73.2
1999	51.1	8.6	5.9	65.6
2000	58.9	10.8	6.2	75.9
2001	72.6	12.3	7.3	92.2

2002	72.3	12.3	7.6	92.2
2003	60.6	11.7	7.3.	79.6
2004	75.8	13.7	10.9	100.4

Source: Ministry of Agriculture of the Czech Republic

The rate of use of industrial fertilisers was significantly reduced after 1989, mainly due to their increasing price. The least significant drop in the use of fertilisers occurred in respect of nitrogen as nitrogen fertilisation influences crop yield the most.

The first remarkable increase of fertilisation with industrial fertilisers (by approximately 25%) occurred in 2004. This is mainly due to the Czech Republic's accession to the EU, as farmers now have more available funds to buy agricultural inputs, without undertaking any structural reform of farming methods or general transition to sufficiently regardful farming methods.

International comparison

Comparison of the consumption of industrial fertilisers in the Czech Republic with developed European countries indicates that the consumption of basic nutrients in all these countries is higher. The table below shows details for 2000:

Table 16.2: Consumption of fertilisers (in kg of pure nutrients per ha), international comparison, 2000

Country	N	P_2O_5	K_2O	Total nutrients
Ireland	127	79	105	311
Switzerland	131	54	88	273
United Kingdom	144	46	59	249
Netherlands	110	39	75	224
Germany	135	34	51	221
Belgium	111	32	71	214
France	122	45	45	213
Norway	107	33	64	204
Portugal	93	51	33	177
Spain	89	49	36	174
Austria	91	35	41	167
Denmark	103	17	41	161
Greece	98	35	21	154
Italy	75	44	29	147
Finland	74	27	31	132
Sweden	85	20	22	127

Source: Ministry of Agriculture of the Czech Republic

17. Consumption of pesticides

Meaning and context of the indicator

Consumption of pesticides is regarded as one of the most relevant indicators of the ecologisation of agriculture. Much like industrial fertilisers, pesticides too directly contaminate soil and food with extraneous substances harmful to human health.

Method of calculation of the indicator

This indicator is calculated as the amount of pesticides used in kilograms per hectare of farmland. The higher the amount, the lower the level of sustainability.

Development of the indicator in the Czech Republic

The table below shows the development of consumption of pesticides over time:

Table 17.1: Consumption of pesticides, Czech Republic, 1986-2004

Year	Consumption of substances (t)	Consumption of active ingredients (t)	Consumption of substances (kg/ha)	Consumption of active ingredients (kg/ha)
1986	23,610	9,740	5.45	2.25
1987	20,027	8,953	4.63	2.07
1988	20,445	8,710	4.73	2.01
1989	20,620	8,550	4.78	1.98
1990	20,888	8,620	4.86	2.01
1991	15,200	6,730	3.54	1.57
1992	11,150	4,682	2.60	1.09
1993	8,451	3,645	2.04	0.88
1994	8,692	3,680	2.08	0.88
1995	9,103	3,782	2.13	0.88
1996	9,196	3,908	2.15	0.91
1997	8,978	3,889	2.10	0.91
1998	10,152	4,136	2.37	0.97
1999	9,009	4,197	2.10	0.98
2000	9,675	4,303	2.26	1.01
2001	10,196	4,388	2.38	1.03
2002	10.684	4.689	2.93	1.28
2003	9,635	4,308	2.25	1.01
2004	9,062	4,177	2.12	0.99

Source: Ministry of Agriculture of the Czech Republic

A similar trend exists in respect of the consumption of pesticides as in respect of industrial fertilisers – significant decrease of consumption in early 1990s due to an increase in the prices of pesticides and overall transformation of agriculture. The decline in the use of pesticides was also caused by efforts to reduce the negative impact of pesticides on the environment. The use of pesticides has been very moderately increasing since 1993.

International comparison

The international comparison indicates that the Czech Republic belongs to countries with very low contamination of farmland by pesticides. A similar situation also exists in respect of sales of these substances, with France, Italy, United Kingdom, Germany and Spain being the countries with the most extensive sales of pesticides (counted in total tonnes of active ingredients in each country). Eurostat is currently elaborating an analysis of data concerning the sales and use of pesticides in all EU-25 member states.

Chart 17.1: Consumption of pesticides, international comparison, 1999
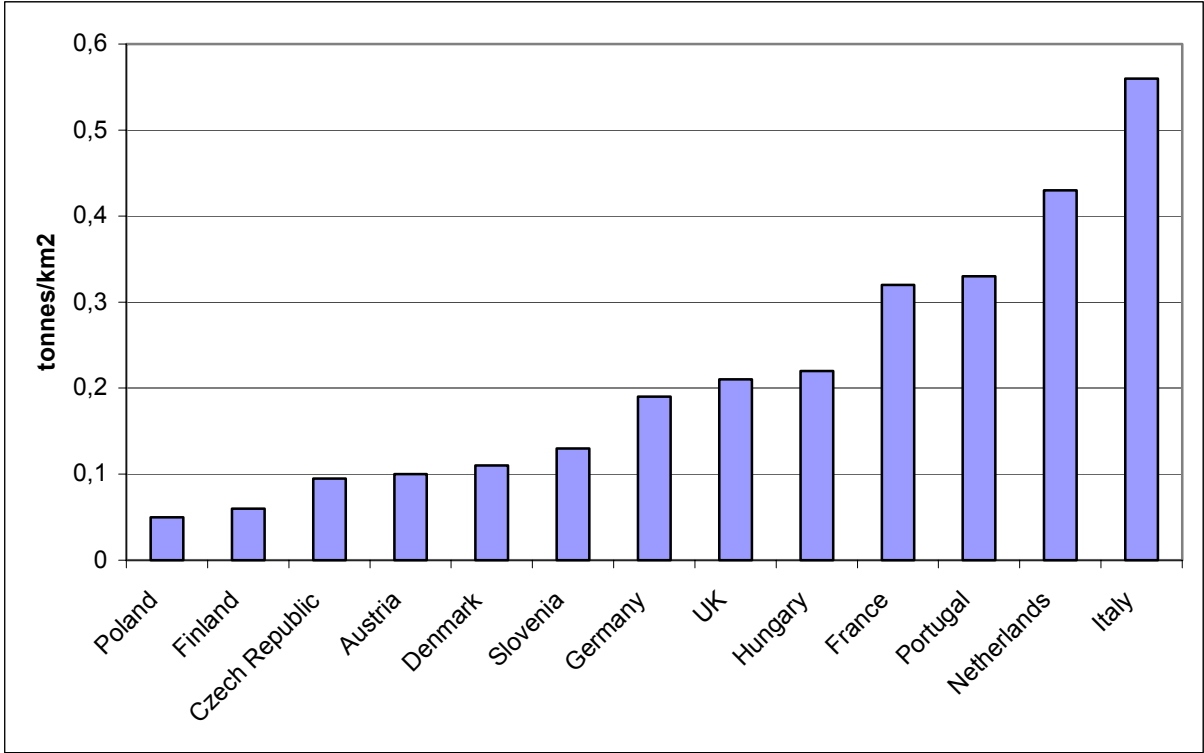
Source: Food and Agriculture Organization

18. Index of common species of wild birds

Meaning and context of the indicator

As a rule, indicators of biodiversity typically included data on the size of protected areas or the status of endangered species. However, these indicators have many drawbacks, and more indicators need to be added to the set of indicators concerning biodiversity. Therefore indicators of trends in individual taxonomic groups are being developed at a global level as well as at the national level of individual EU countries, and population trends in selected taxonomic groups belong to principal indicators selected under the Convention on Biological Diversity (CBD). The best-explored taxons include birds, in respect of which long-term data are available from most European countries, the Czech Republic included, concerning changes in the size of populations. Although not without exceptions, birds appear to be an appropriate indicator of biodiversity, albeit due to their popularity with the general public.

Method of calculation of the indicator

The results of the Breeding Bird Monitoring Programme in the Czech Republic (BBMP), which provides findings on a regular annual basis, were used as a source for compiling the indicator. The methodology used is a standard methodology for bird census and BBMP belongs to other generally accepted standard monitoring programmes applied in Europe. At present, BBMP monitors relative changes in the population of individual species in locations which are the subject of census, and aggregately for the entire territory of the Czech Republic. An improvement of the methodology is being planned for the near future, which will make it possible also to determine densities of individual species. Year-on-year changes in the size of populations of individual species are expressed as an index (in percent) in relation to the baseline year (100%) (as a rule the first year of a time sequence). An analysis of data is performed by the modern method of calculation of population trends the TRIM programme (TRends and Indices for Monitoring data), and is compatible with the methods used elsewhere in Europe. The indicator itself is a combined index comprised of indices of changes in the size of populations of individual species, generated as a geometric average of the species indices. The species that are indexed to make up the indicator are selected on the basis of the main types of their habitat in which they live and on which they are dependent. It is also possible in respect of the combined multi-species index (indicator) to compute reliability intervals. The index may also be analysed using the TrendSpotter, a programme for analysing time sequences. This procedure is compatible with the procedure of calculation of the indicator of common bird species in Europe. Any multi-species combined index may also be decompiled into indexes of individual

species, and thus it is possible to make a detailed analysis as to which species are responsible for the overall development of the indicator and, indirectly, identify the causes of changes in population size.

The combined index of changes in the size of populations of 66 species of birds is used as the main indicator of common species of birds, and its components, i.e. the combined indices of groups of species according to the type of habitat – the index of farmland species, the index of woodland species, and the index of other species – are presented separately.

Development of the indicator in the Czech Republic

The development of this index between 1982 and 2003 is shown in Chart 18.1. The index is presented as an aggregate index for all 66 selected bird species. Chart 18.2 shows the index of farmland species by way of example.

The overall value of the index indicates the decrease during the period monitored. The 2003 value of the index is by approximately 10% lower than the 1982 value. The trajectory of the chart shows the decline in the value of the index in 1980s with a subsequent moderate increase in the early 1990s, followed by another decline. The division of the index to groups according to main types of habitat shows differences between these groups. The population of birds in farmlands diminished in the early 1980s, then stabilised in late 1980s, and increased in the early 1990s, but after 1996 the index began declining again. This development is due to intensification of agribusiness, which slackened in the early 1990s and then probably intensified again.

On the other hand, the index of woodland bird species has had a moderately increasing tendency, with several significant fluctuations. Compared with farmland species, the causes of this trend are not so clear. Similarly unclear are the reasons for the relatively obvious decline in the value of the index in the group of other bird species, which largely includes species that are not strictly associated with one type of habitat.

In general, the index of common species of wild birds indicates that the populations of these species are diminishing, and one of the main known causes is intensification of agriculture.

Chart 18.1: Index of common species of wild birds, Czech Republic, 1982-2003
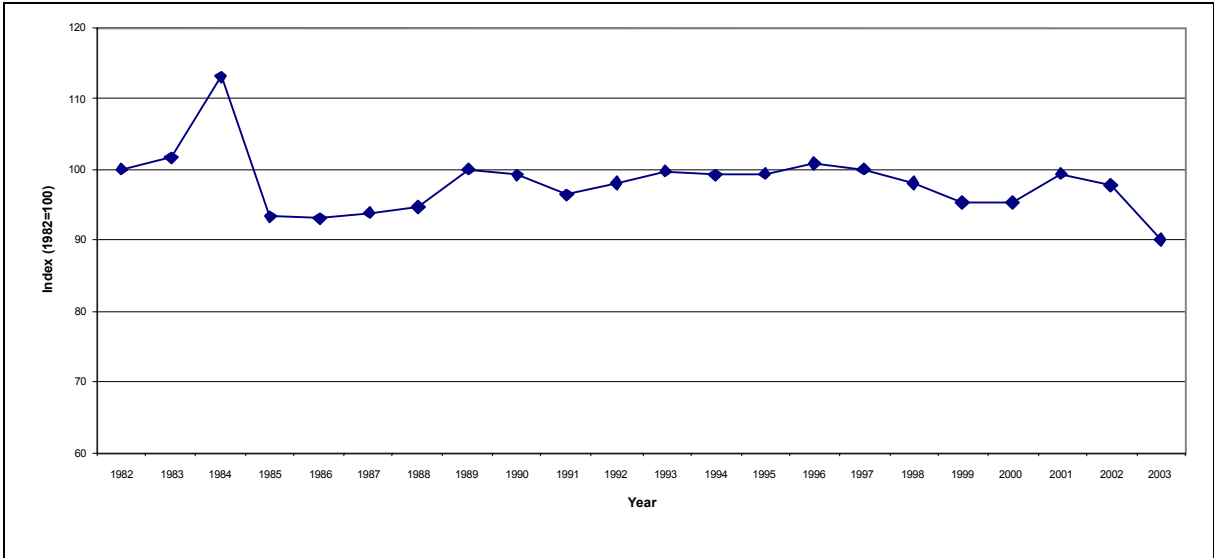
Source: Czech Society for Ornithology

Chart 18.2: Index of farmland bird species, Czech Republic, 1982-2003
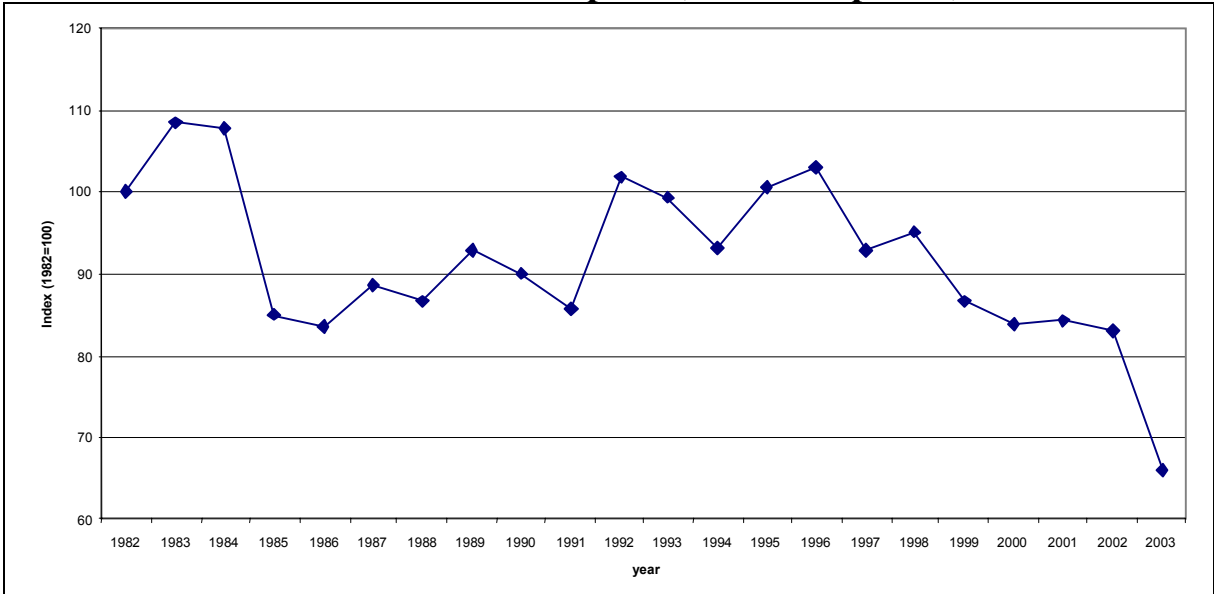
Source: Czech Society for Ornithology

International comparison

The Europe-wide index is based on data provided by old and some new (Czech Republic, Poland, Hungary, Latvia and Estonia) EU Member States, Norway and Switzerland. In the United Kingdom the index of bird populations is included in the "quality of life indicators" – i.e. indicators of sustainable development – as one of the principal indicators. The European and the UK indices follow a similar trend – a significant decline in populations of farmland

bird species and more or less stagnating or increasing populations of woodland ecosystem birds. The proposed indicator *Index of common species of wild birds* is, from a methodological point of view, consistent with indicators accepted at international level for similar purposes.

Chart 18.3: Index of farmland bird species, international comparison, 1999, 2001, 2003
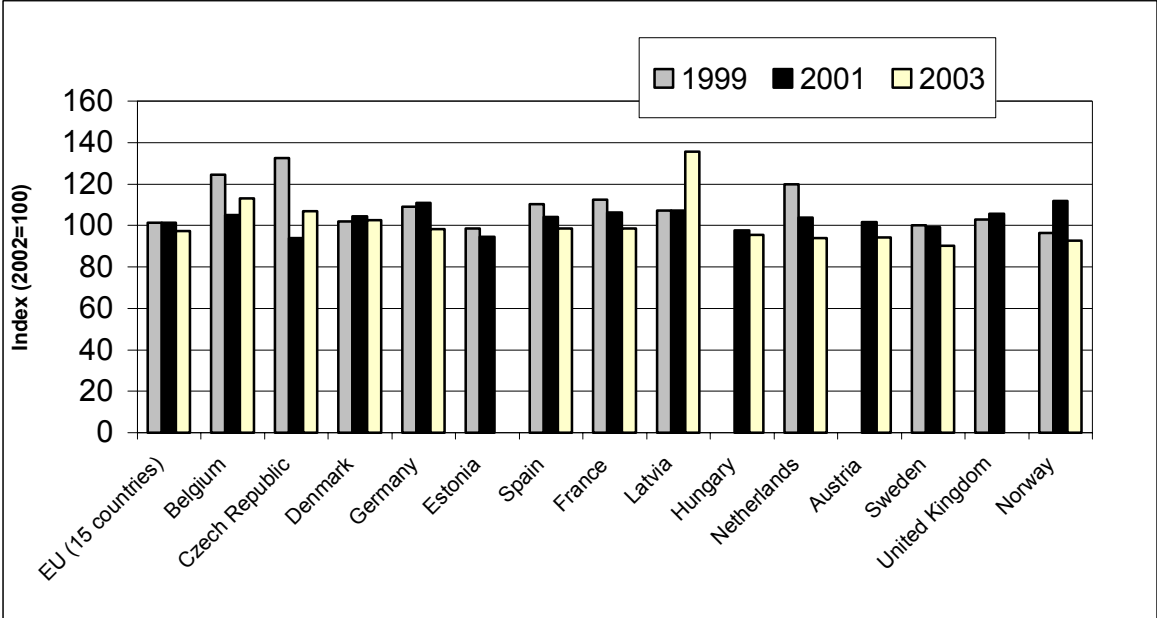
Source: Eurostat

19. Index of alien species of plants

Meaning and context of the indicator

The anthropogenic transfer of taxons across the boundaries of biogeographic areas is an inevitable phenomenon accompanying the increasing global exchange of goods and services. The spreading of alien taxons has significant environmental, economic and social consequences. The index also indicates the level of safety of the environment in relation to biodiversity. Annual losses at the level of states may amount to tens or even hundreds of billions of US Dollars, and one of the most recent studies estimates that biological invasions cost the human race up to 5% of global GDP. Alien species pose a risk not only to rare or endangered native species, but also, in the form of pests or diseases, to organisms important from an economic point of view. Alien and invasive species are perceived as one of the globally most significant driving forces of change in biodiversity. The non-native species are at different stages of the invasion cycle. When a species overcomes the environmental barriers and becomes spontaneously found, we speak of temporarily introduced alien species. An invasive alien species capable of forming viable populations in nature and propagating independently of man is referred to as naturalised (domesticated). Only after a species begins spreading over large distances from the source population do we speak of invasion. Although not all species are at the invasive stage, it appears that with the higher incidence of temporarily introduced alien species it becomes increasingly likely that they will proceed to the next stages of the invasive process. Plant invasions well document the level of change of biodiversity and environmental processes in an area. The index may also indicate the level of danger to biodiversity and effectiveness of prevention, control programmes and quarantine measures. The index of the number of invasive species is also recommended for adoption in the states parties to the Convention on Biological Diversity.

Method of calculation of the indicator

The source of data for the calculation of the *Index of alien species of plants* is the Catalogue of Alien Plants of the Czech Republic, compiled by the Institute of Botany of AV CR. The Catalogue summarises information about this group of plants in the Czech Republic from distant history to the present. In addition, a database of alien species was created, containing information about biological and ecological properties of the species and the geographical and historical aspects of their invasion; the database is administered by the Institute of Botany of AV CR and is continuously updated. The non-native flora of the Czech Republic includes, based on current knowledge, 1,378 taxons in 542 genera and 99 families, of which 184 are hybrids or hybridogenous taxons. The share of

alien taxons of flora in the Czech Republic thus amounts to 33.4%. Alien flora comprises 332 archaeophytes and 1,046 neophytes. Most taxons, 892 in total, are considered as temporarily introduced, 397 as naturalised and 90 as invasive. Of the total number of 1,046 neophytes 229 genera have become successfully naturalised (21.9%) and 69 (6.6% of the total number of introductions) have become invasive.

The calculation of the index is based on a selection of neophytes that comprise most of the genera contributing to the change of the biota. The baseline year for the calculation is 1980 (Index = 100). The indicator is based on all documented findings of non-native species in the time period in question. Although the index may also be calculated for longer time sequences, the developments over the last twenty years sufficiently illustrate the dynamics of invasions in the Czech Republic. The index is computed on the basis of cumulative data (Chart 19.1). An increase in the index means an additional annual increase in the number of alien species, which indicates an increased risk of the beginning of invasive process.

Chart 19.1: Index of alien species of plants
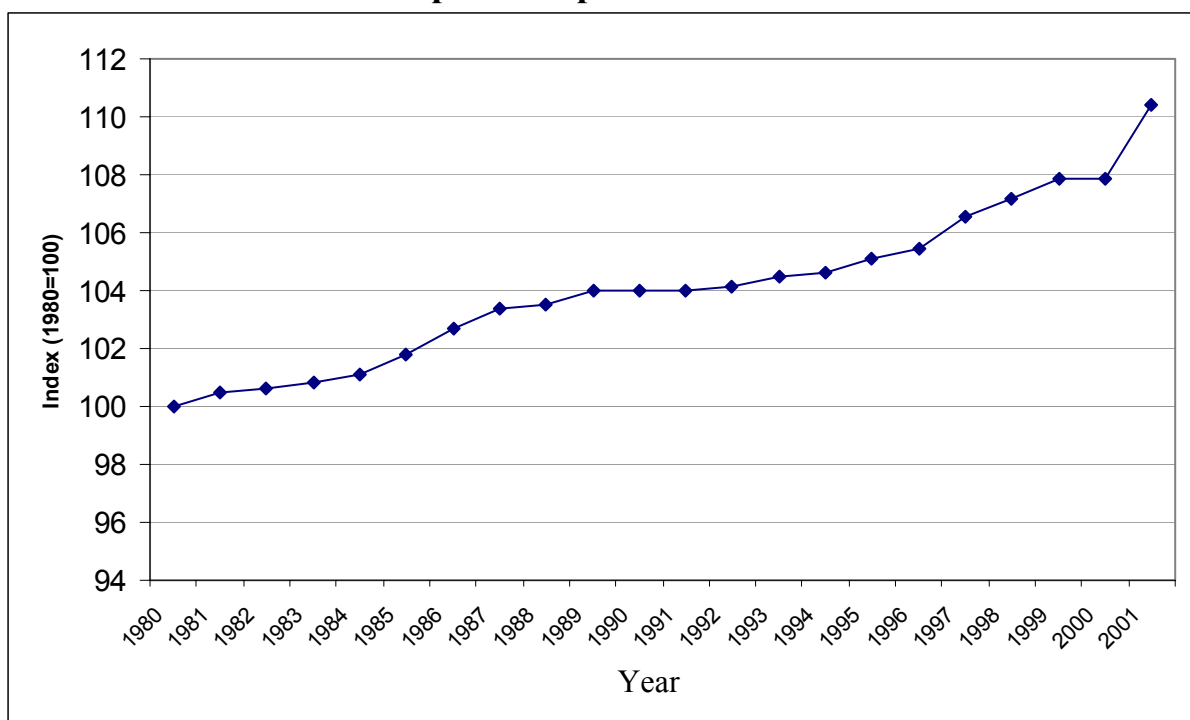
Source: Catalogue of alien plants of the Czech Republic, Institute of Botany, AV CR (Pyšek et al. 2002)

Development of the indicator in the Czech Republic

Information available in the Czech Republic about non-native flora belongs to the best of its sort in Europe and may provide interesting facts from the history of plant invasions in our territory. The available data indicate that invasions of

neophytes into the flora of the Czech Republic over the past 200 years occurred evenly, but the probability that a species would be introduced depended on many factors. On average, species from other parts of the Eurasian continent were introduced to our territory first, and the probability of importation was further influenced by their blooming time. The sooner a species blooms, the sooner it was introduced to the Czech Republic; in our latitudes, numerous non-native species are limited by the too short growing season and thus they fail to form seeds. The time of migration was demonstrably affected by the manner of importation. Species imported deliberately for utility reasons (crop plants) were, on average, introduced sooner than decorative plants, and unintentionally imported taxons were introduced the latest.

The integration of the time dynamics of importation of archaeophytes and neophytes into the common scheme provides an overall picture of the impact of plant invasions on the biodiversity of Czech and Moravian flora. The total number of taxons recorded in our territory exceeds 4,000. It is of course necessary to keep in mind that the cumulative nature of the indicator (Chart 19.1) does not account for any extinct native plants (4.5% of taxons). Nonetheless it clearly evidences that in terms of the total number of species, invasions significantly enrich local flora. However, this fact cannot be interpreted as a positive effect of invasions on biodiversity. As noted above, in assessing biodiversity, it is irrelevant how many species are present, but of importance are their identity, population size and level of endangerment. Hybrids and hybridogenous taxons account for 13.3% of the total number of non-native taxons; records are kept of a total of 66 hybrids of non-native species with representatives of native flora. Genetic changes often play an important role in the process of plant invasions; hybridisation may have a positive effect on invasive populations, but may also threaten native rare species which lose their genetic identity by hybridisation. The spreading of invasive species shows considerable dynamics and variability as to time and space. Examples of specific invasive species, in respect of which data exist that permit reconstruction of the course of invasion, indicate that the number of occupied fields of 11 × 12 km, comprising a network of the phytogeographic map of Central Europe, has doubled in the course of an invasion over 11 years on average.

International comparison

As regards sources of data in continental Europe, the situation is not too satisfactory. The most comprehensive source of data is Flora Europaea, providing information about naturalised species. Unfortunately, these data are at present rather obsolete and largely reflect the intensity of floristic research and the taxonomic levels in individual countries. They do provide relatively precise information about the total number of naturalised species in Europe – the total

number being 1,568 – but nonetheless this information is much less reliable at the level of individual countries.

Robust information about the total number of non-native species in Europe, including those temporarily introduced, exists only in respect of the United Kingdom, Austria and the Czech Republic, and also in respect of some other countries (Chart 19.2). Quality information about non-native species of the Czech Republic and an intensive research of plant invasions facilitated involvement in international cooperation under the 6th framework programme of the European Union. Two large-scale projects focused on biological invasions are being implemented at present. The ALARM integrated project (www.alarmproject.net) focuses on an assessment of large scale risks ensuing from certain aspects of human activities and interrelates biological invasions with climate change, environmental chemicals and pollinator loss. The project DAISIE under the STREP programme (http://www.daisie.ceh.ac.uk) is designed to fill in the gaps in information about invasive species of plants and animals in Europe. This will provide higher quality data for international comparison of the indicator.

Chart 19.2: International comparison of the number of alien plant species
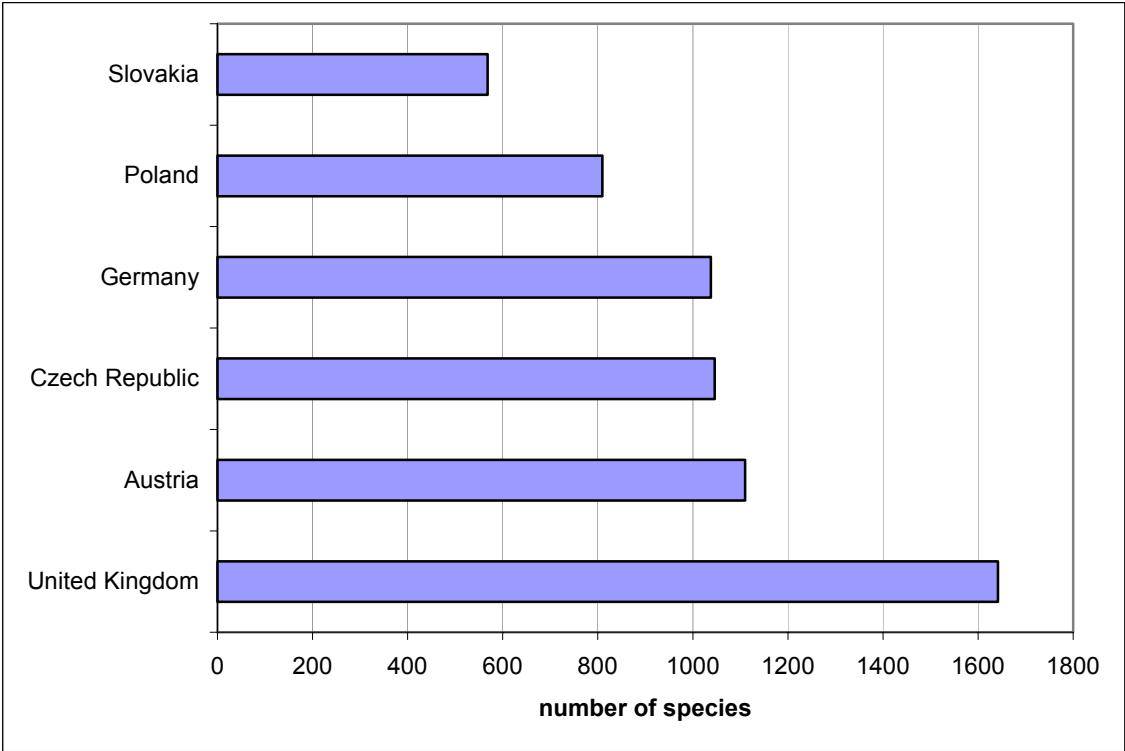
20. Share of organic farming in total farmland

Meaning and context of the indicator

Share of organic farming in the total area of farmland (%) is considered as a fundamental and unambiguously quantifiable indicator of the level of development of organic farming. Organic farming is friendly to the environment, improves biodiversity, and organic farmers and producers of organic food do not use chemicals (pesticides, industrial fertilisers, growth stimulators, preservatives or stabilisers). Organic farming and the production of organic food provide new business opportunities (agrotourism, production of regional specialties), and organic farming also offers an alternative in resolving the issue of the depopulation of rural areas.

Method of calculation of the indicator

The indicator is calculated as the proportion of the area of farmlands categorised as organic farmland to the total area of farmlands in the Czech Republic. The higher the proportion, the higher the sustainability.

Development of the indicator in the Czech Republic

The table below shows the development of organic farming in individual years:

Table 20.1: Organic farming, Czech Republic, 1989-2004

Year	Area of farmland in organic farming (ha)	Share of organic farming in total farmland (%)
1989	-	-
1990	480	-
1991	17,507	0.41
1992	15,371	0.36
1993	15,667	0.37
1994	15,818	0.37
1995	14,982	0.35
1996	17,022	0.40
1997	20,239	0.47
1998	71,621	1.67
1999	110,756	2.58
2000	165,699	3.86
2001	217,869	5.09
2002	235,136	5.50
2003	254,995	5.97
2004	263,299	6.16

Source: Ministry of Agriculture of the Czech Republic

The origins of organic farming in the Czech Republic date back to 1990. As early as the end of 1990, the first financial subsidies were made available to support the establishment of organic farming businesses. Subsidies continued until 1992 and probably were the main reason for an increase in organic farming areas up to approximately 15,000 ha, which accounted for some 0.4% of the total area of total farmlands. The decision of the Ministry of Agriculture of the Czech Republic to cancel subsidies caused stagnation of organic farming land in the period from 1993 to 1996, but also had a positive effect on the qualitative development of organic farming.

An important move was the resuming of financial subsidies to organic farmers in 1998, which resulted in further dynamic development of organic farming, continuing to the present, with expansion of organic farming to more than 6% of total farmlands (being approximately 4.2 mil. ha in the Czech Republic). However, the structure of these areas constitutes a structural problem as about 90% of them comprise meadows and pastures, while ecologically farmed arable land or orchards and vineyards are relatively scarce.

International comparison

The share of organic farming in the Czech Republic in 2004 exceeded the average of EU-15 countries, which amounted to approximately 4%. In the EU-15, the largest share of organic farming is in Austria (11%), Italy (8%), Denmark, Finland and Sweden (7%), Germany and the United Kingdom (4%). A share of approximately 3% is in the Netherlands, Spain and Portugal, 2% in Belgium, France and Luxembourg, and 1% in Greece and Ireland.

21. Life expectancy

Meaning and context of the indicator

The indicator of *Life expectancy* is a basic indicator describing the death rate in a population, thus also characterising the population's health condition. This indicator is well comparable internationally, disregards differences in terms of age specificities of mortality in the context of age structure of the population. It is broadly used and easy to interpret. The indicator expresses the average number of years that, subject to preservation of current mortality rates, remain for an individual of a given age to live.

Method of calculation of the indicator

The indicator is based on mortality tables characterising, with the use of specific functions, the order of a population's death rate. The mortality tables are derived from age-specific death probabilities, while medium life span is stated for a certain age (age categories), separately for both sexes. Most commonly used in practice is medium life expectancy at the age of 0, i.e. at birth, expressing the hypothetical life span of a person just born, providing that the order of death rate will remain the same during such individual's entire life. It is stated in years.

The indicator is calculated on an annual basis, and in the Czech Republic the responsibility for the calculation rests with the Czech Statistical Office on the basis of mortality data available to it. These source data (broken down by age and sex) are forwarded to the World Health Organisation (WHO), which processes them and then calculates, using its own methodology, the indicator of life expectancy used in international comparisons.

Development of the indicator in the Czech Republic

In the early 1960s the Czech Republic belonged among countries with favourable life expectancy rates, but then life expectancy began stagnating. On the other hand, its rate in Western European countries continuously increased. The situation in the Czech Republic began improving again in the late 1980s, and a remarkable acceleration of the rate of growth of life expectancy occurred after 1990. While between 1980 and 1990 life expectancy at birth increased by 0.8 year for males and 1.5 years for females, between 1990 and 2003 it increased by 4.4 years for males and 3.1 years for females, but the rates have stagnated in respect of both sexes in the last three years. Another spurt, by 0.5 year for both sexes, occurred in 2004, when a new-born boy had a chance of living up to 72.55 years of age, and a new-born girl to 79.04 years.

Table 21.1: Life expectancy (years), Czech Republic, 1955-2004

Year	at birth		at age of 15		at age of 45		at age of 65	
	men	women	men	women	men	women	men	women
1955	66.60	71.60	54.50	59.00	26.90	30.50	12.20	13.90
1960	67.90	73.40	55.10	60.10	27.50	31.40	12.50	14.50
1970	66.10	73.00	53.20	59.70	25.70	30.90	11.10	14.10
1980	66.80	73.90	53.50	60.30	25.70	31.20	11.20	14.30
1990	67.60	75.40	53.70	61.30	25.80	32.30	11.60	15.20
1995	69.70	76.60	55.60	62.40	27.60	33.30	12.70	16.00
2000	71.65	78.35	57.19	63.81	28.92	34.60	13.72	17.09
2001	72.07	78.41	57.58	63.82	29.29	34.63	13.95	17.09
2002	72.07	78.54	57.60	63.99	29.28	34.77	13.93	17.16
2003	72.03	78.51	57.53	63.93	29.19	34.68	13.84	17.14
2004	72.55	79.04	58.01	64.44	29.64	35.16	14.21	17.49

Source: Czech Statistical Office

Chart 21.1: Life expectancy at birth (years), Czech Republic, 1955-2004
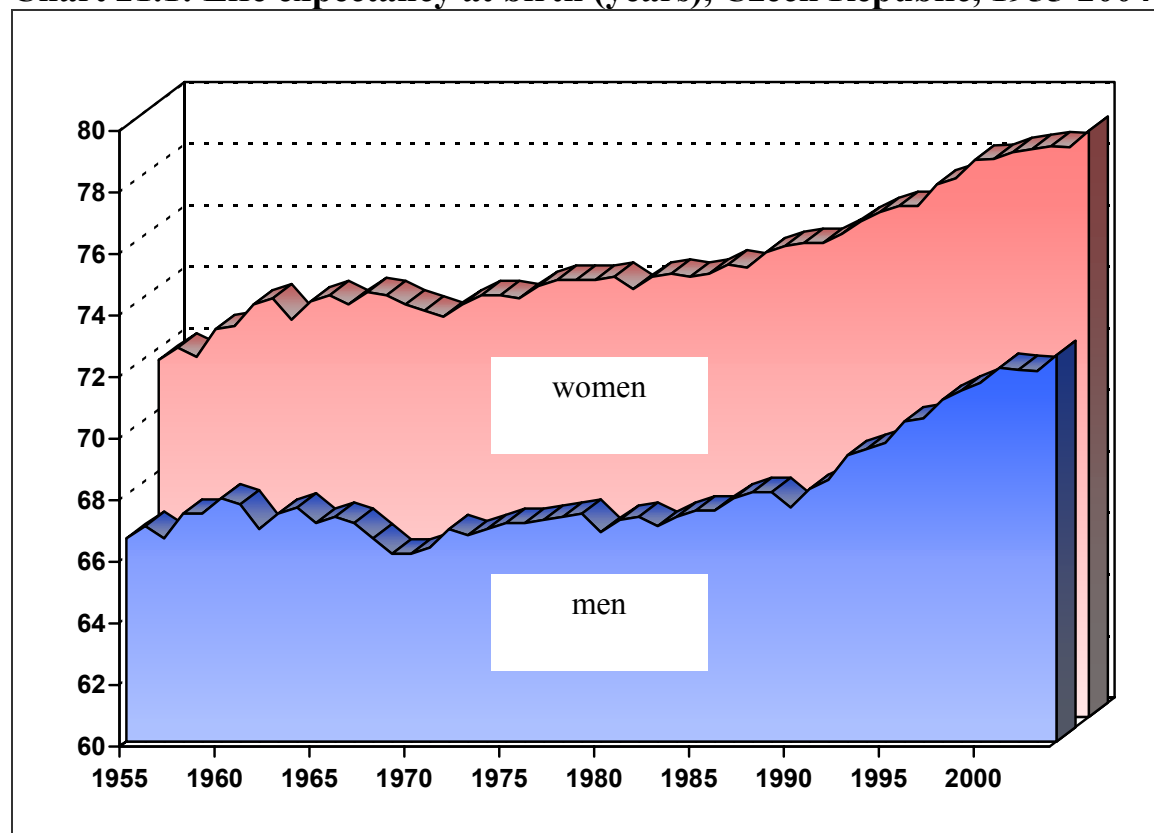
Source: Czech Statistical Office

International comparison

Despite the considerable increase of the life expectancy after 1990, unique in Europe, the position of the Czech Republic among European countries does not change. The Czech Republic still has not achieved the lowest value of the EU-15 countries, and lags behind countries with the highest life expectancy at birth by 5 to 6 years in respect of men and by 4.5 years in respect of women. Among the post-communist countries of Central and Eastern Europe, the Czech Republic holds second place after Slovenia.

Chart 21.2: Life expectancy at birth (years), international comparison, 2000-2003
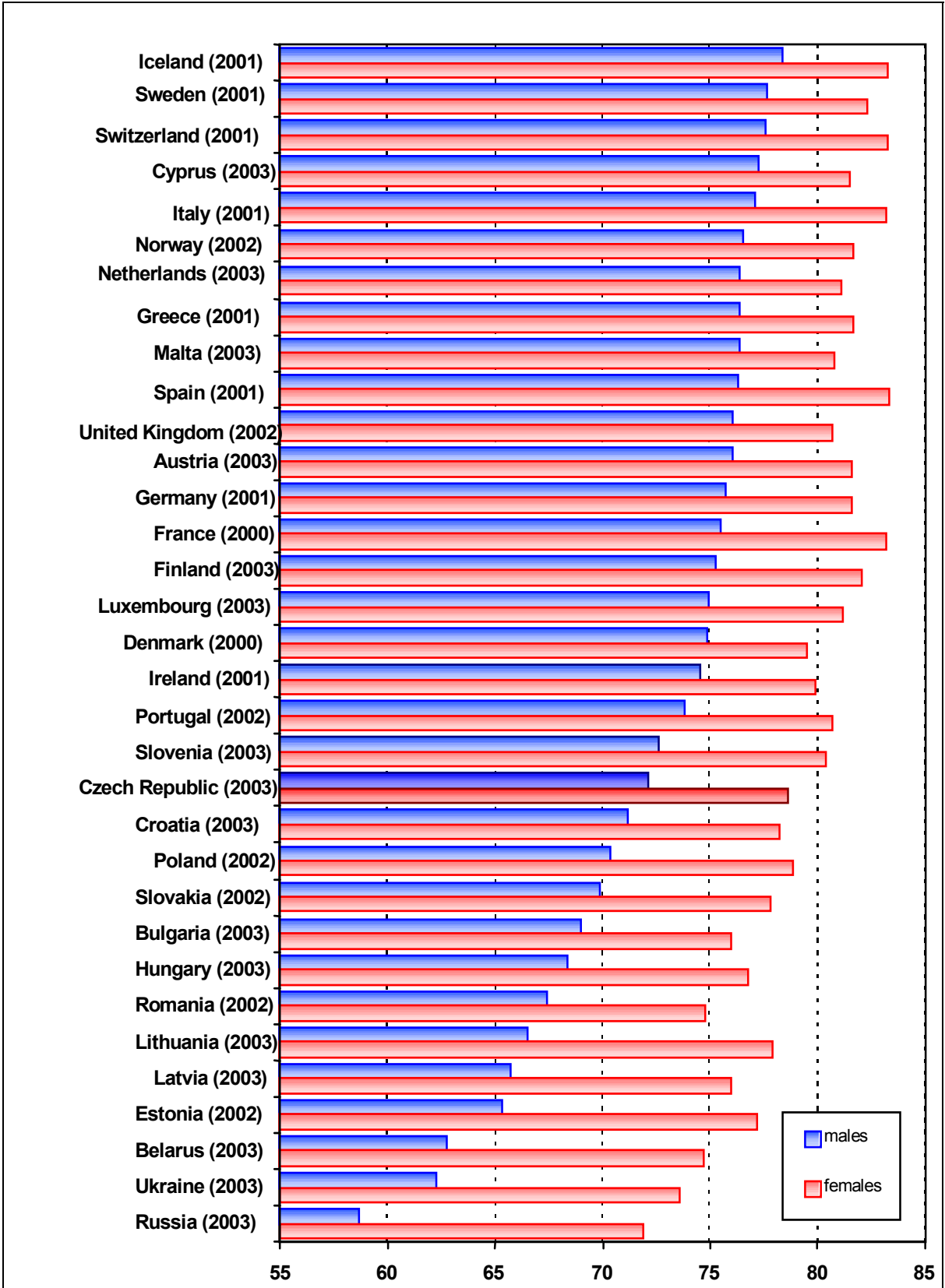
Source: World Health Organisation – Health for All database

22. Mortality

Meaning and context of the indicator

Mortality, together with morbidity, is one of the very important indicators of the health condition of the population and of the frequency and seriousness of certain diseases. The indicator of overall morbidity is affected by differences between populations in terms of the age structure. In cases comparing populations with different age structures it is therefore appropriate to use an indicator that eliminates these drawbacks, i.e. mortality standardised by age. This indicator expresses the number of deaths related to the number of inhabitants provided that the age structure of the population monitored would be consistent with the age structure of the selected standard population.

Method of calculation of the indicator

The indicator is based on normally available data on deaths and on population categorised by age. The calculation is typically performed using the method of direct standardisation, where the age-specific rates of mortality in the actual population are applied to the standard population. The most frequently used standard population is the "global" or "European" standard (the age structure of the model population as determined by WHO).

By making a calculation according to the applicable formula, we will obtain a rate of mortality that would occur in the actual population if its age structure corresponded with the age structure of the standard population. Standardised mortality is normally stated in deaths per 100,000 population.

Development of the indicator in the Czech Republic

In 1970, the standardised mortality of males was in the region of 1,650 deaths per 100,000 of the standard population, while in respect of females the indicator slightly exceeded 1,000 deaths per 100,000 of the population. After a period of temporary stagnation of mortality in the 1960s and 1970s the indicator declined, initially at a moderate rate and after 1987 significantly, until 2001 when the indicator reached 1,132 deaths per 100,000 of the population for males and 685 for females. In several recent years the decline in mortality has stagnated, not only in terms of total mortality where the number of deaths increases as the population grows older, but also in terms of standardised mortality. In 2004, after three years of stagnation, the indicator again slightly declined to the current level of 1,107 for males and 662 for females. Overall, standardised mortality for both sexes declined by approximately 35% compared with 1970.

Chart 22.1: Standardised mortality (European standard) (deaths per 100,000 population), Czech Republic, 1970-2004
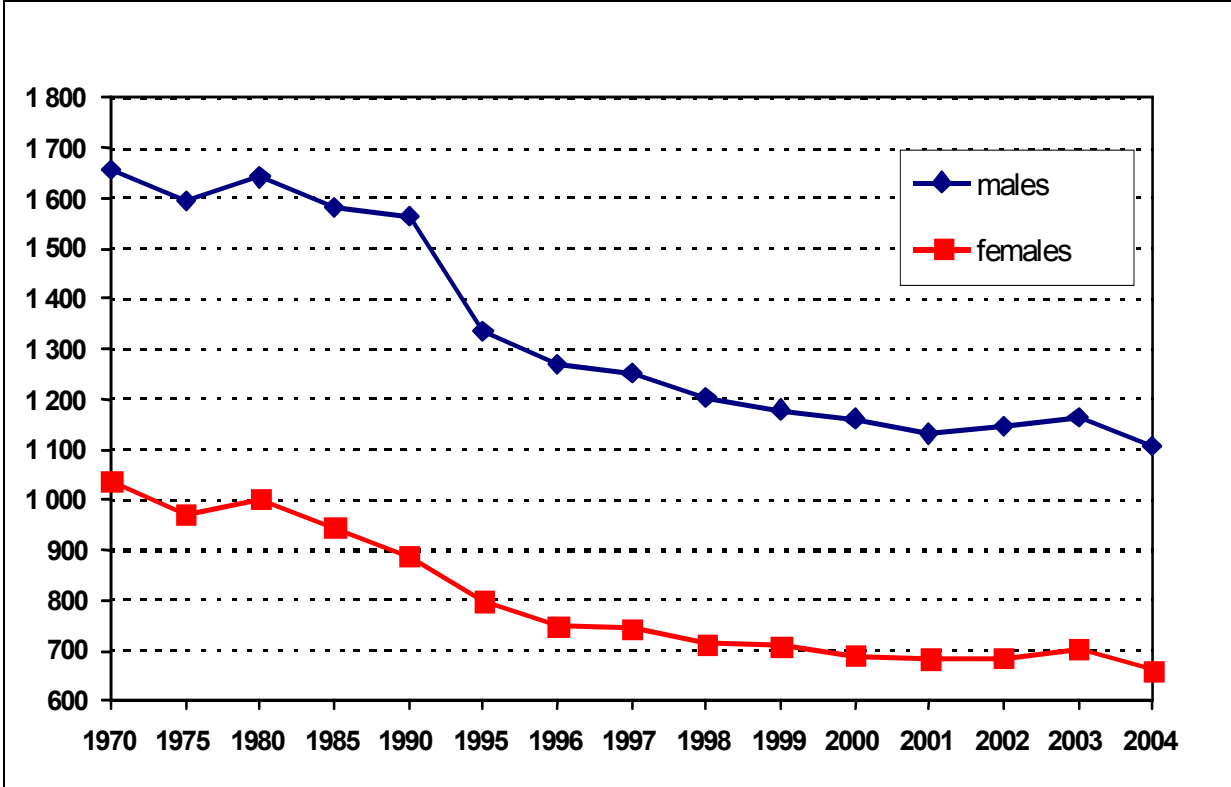
Source: Czech Statistical Office

International comparison

Despite the considerable improvement in mortality rates in the 1990s, the Czech Republic still lags behind Western European countries. Standardised mortality in the Czech Republic in 2001 exceeded the EU-15 average by nearly 40%. Among post-communist countries, the Czech Republic achieved the second lowest rate of this indicator after Slovenia.

Chart 22.2: Standardised mortality (European standard) (deaths per 100,000 of the population), international comparison, 2000-2003
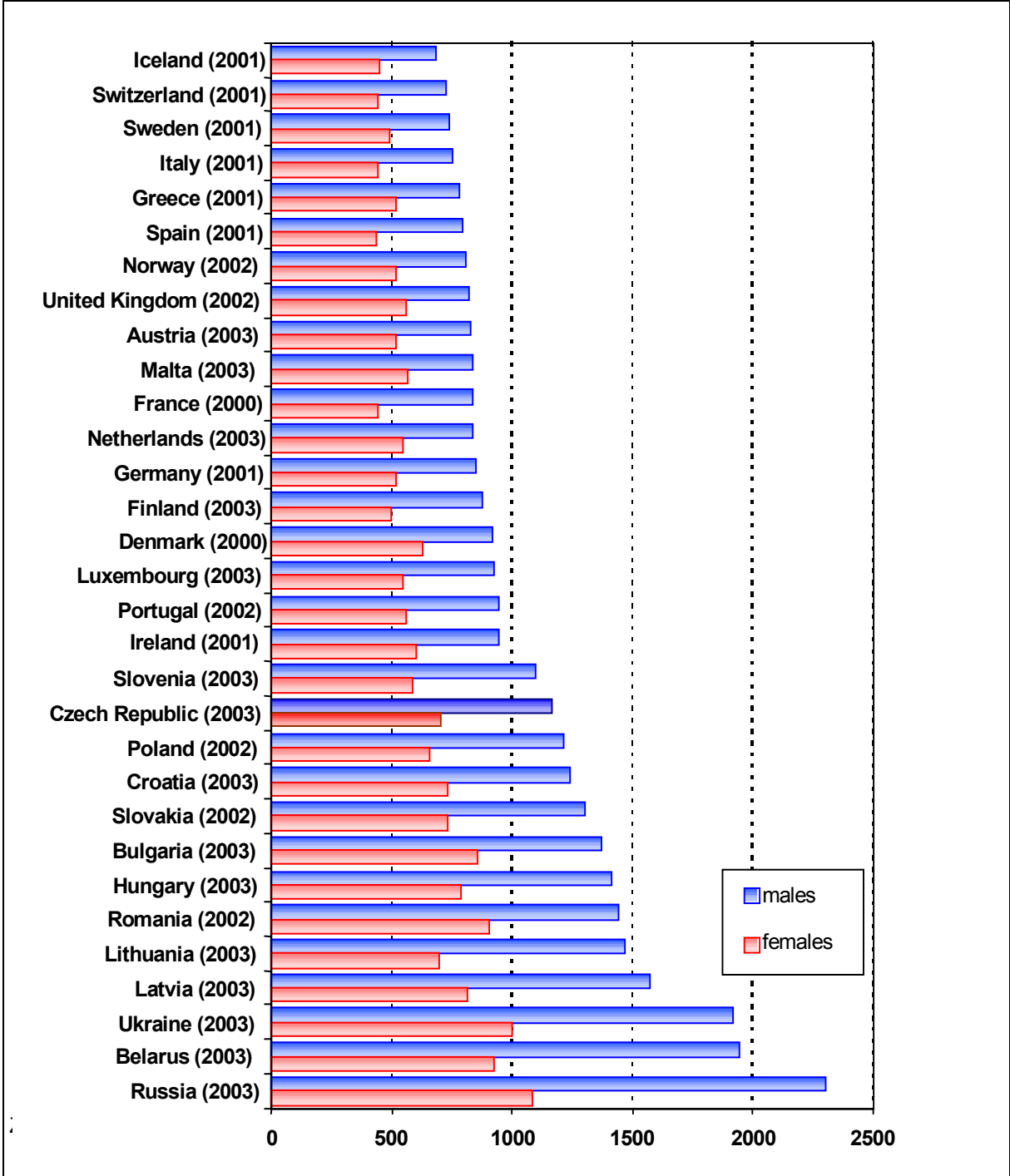
Source: World Health Organisation – Health for All database

23. General unemployment rate

Meaning and context of the indicator

General unemployment rate is the basic indicator for assessing the situation in the labour market. It is based on the findings of the selective labour force survey carried out in all EU Member States in accordance with the methodology developed by Eurostat and the International Labour Organisation (ILO), and guarantees full international comparability of the results.

Method of compilation of the indicator

The general unemployment rate is defined as the proportion of unemployed persons to the labour force in %. According to Eurostat's methodology, the calculation of the rate applies to the age category of 15-74 years.

The definition of unemployed according to ILO applies to persons who were without work or other gainful activity during the reference period, actively looked for a job and were available to start work within 14 days.

The labour force is composed of people employed or unemployed. A person employed is a person who worked at least one hour in the reference week for pay or with a view to making a profit, or had a job where he was not present. The employed category does not include people on parental leave.

Development of the indicator in the Czech Republic

After the culmination of unemployment in 2000 the development in this decade has not been consistent. After two years of a significant decline, the rate of unemployment was lower in 2002 than in the EU-15, but from 2003 unemployment grew to 8.3% in 2004, the eleventh highest rate in the EU-25.

The Czech Republic is a country with unemployment rate of women continuously higher than unemployment of men. Fluctuations in the development of unemployment in recent years have been similar with both sexes, only in 2004 the increase in overall unemployment was caused solely by the increase of unemployment among males. Based on the development to date, the results of the selective survey indicate a decline in unemployment in 2005.

Chart 23.1: General unemployment, males and females, Czech Republic, 1998-2004

Source: Eurostat-New Cronos
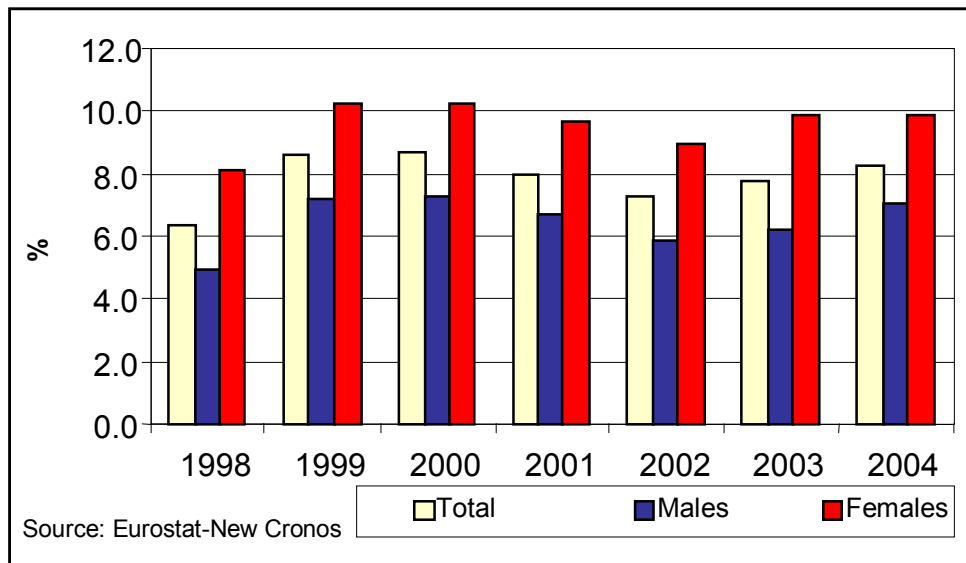
International comparison

The uniform methodology used in respect of general unemployment permits, where necessary, an immediate comparison of the values of the indicator in individual EU Member States. General unemployment in the EU-25 reached 9.0% in 2004, and was 0.5% lower than in 1998. This decrease was apparent mainly in the EU-15, where unemployment dropped in this period by 1.2 percentage points to 8.1%. Unlike in the Czech Republic, the unemployment rate decreased in most member states. In 2004, the unemployment rate in the Czech Republic was lower than the average rate in the EU-25, which was significantly affected by the high rate of unemployment in Poland and Slovakia, but on the other hand was higher than the average rate in the EU-15.

Table 23.1: General unemployment rate (in %), international comparison, 1998, 2000 and 2004

Country	1998	2000	2004	Difference 2004 - 1998	Difference 2004 - 2000
EU-25	9.5	8.6	9.0	-0.5	0.4
EU-15	9.3	7.6	8.1	-1.2	0.5
Eurozone	10.0	8.1	8.9	-1.1	0.8
Belgium	9.3	6.9	7.8	-1.5	0.9
Czech Republic	6.4	8.7	8.3	1.9	-0.4
Denmark	4.9	4.4	5.4	0.5	1.0
Estonia	9.2	12.5	9.2	0.0	-3.3
Finland	11.4	9.8	8.8	-2.6	-1.0
France	11.1	9.1	9.7	-1.4	0.6
Ireland	7.5	4.3	4.5	-3.0	0.2

Italy	11.3	10.1	8.0	-3.3	-2.1
Cyprus	:	5.2	5.0	:	-0.2
Lithuania	13.2	16.4	10.8	-2.4	-5.6
Latvia	14.3	13.7	9.8	-4.5	-3.9
Luxembourg	2.7	2.3	4.2	1.5	1.9
Hungary	8.4	6.3	5.9	-2.5	-0.4
Malta	:	6.8	7.3	:	0.5
Germany	8.8	7.2	9.5	0.7	2.3
Netherlands	3.8	2.8	4.6	0.8	1.8
Poland	10.2	16.4	18.8	8.6	2.4
Portugal	5.1	4.1	6.7	1.6	2.6
Austria	4.5	3.7	4.5	0.0	0.8
Greece	10.9	11.3	10.5	-0.4	-0.8
Slovakia	:	18.7	18.0	:	-0.7
Slovenia	7.4	6.6	6.0	-1.4	-0.6
United Kingdom	6.2	5.4	4.7	-1.5	-0.7
Spain	15.3	11.4	11.0	-4.3	-0.4
Sweden	8.2	5.6	6.3	-1.9	0.7

In most EU Member States the general rate of unemployment of females is higher than that of males; however, this is not the case in Estonia, Ireland, Sweden and the United Kingdom. These countries, with the exception of Estonia, generally have a lower rate of unemployment, and Estonia belongs to countries with the most rapid decrease in unemployment over the last four years.

Note: BE – Belgium, CZ – Czech Republic, DK – Denmark, EE - Estonia, FI – Finland, FR – France, IE - Ireland, IT – Italy, CY – Cyprus, LV - Latvia, LT – Lithuania, LU – Luxembourg

Chart 23.2: General unemployment rate, males and females, international comparison, 2004

Zdroi: Eurostat-New Cronos
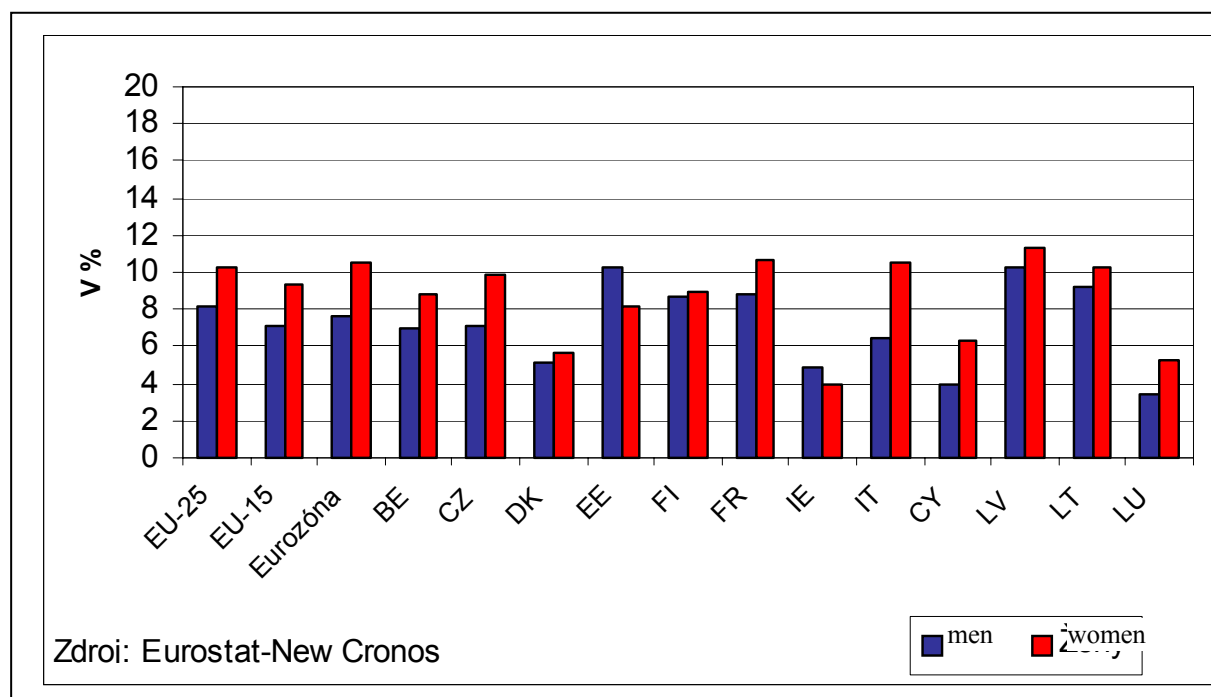
Chart 23.3: General unemployment rate, males and females, international comparison, 2004 (cont.)
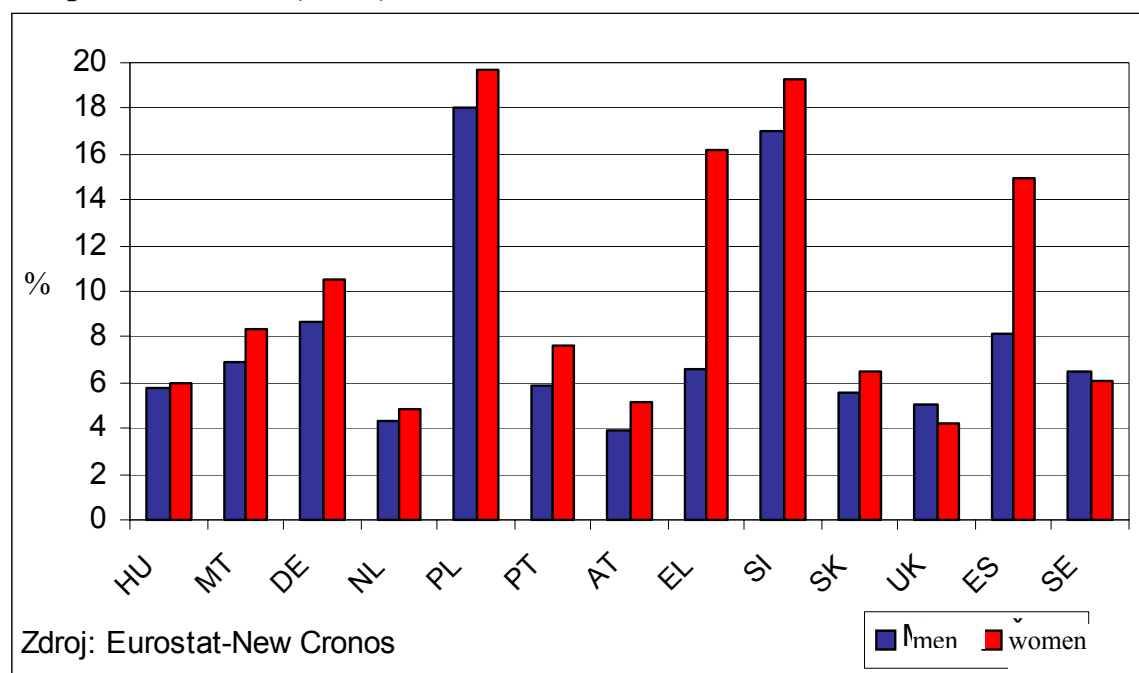
Zdroj: Eurostat-New Cronos

Note: HU – Hungary, MT – Malta, DE – Germany, NL – Netherlands, PL – Poland, PT – Portugal, AT – Austria, SI - Slovenia, SK – Slovak Republic, UK – United Kingdom, ES – Spain, SE - Sweden

24. Registered rate of unemployment

Meaning and context of the indicator

This indicator shows, as a percentage, the proportion of job seekers (numerator) to total labour force (denominator). The term "job seeker" is defined in Act No 435/2004 Sb. on employment.

Pursuant to § 24 of the Act, a job seeker may be an individual who in person seeks the procurement of an appropriate job through the employment authority in whose catchment area the job seeker is resident, and subject to compliance with conditions set out by law this person may be included in the list of job seekers. A job seeker is not a person who works under employment or a similar arrangement, is self-employed or is consistently preparing for an occupation (for details see § 25 of the Act).

The Ministry of Labour and Social Affairs of the Czech Republic, in an endeavour to bring the methodology of registered unemployment as close as possible to the ILO methodology of general unemployment, has introduced an indicator of "available job seekers". These are job seekers who are able to start work immediately if a suitable job is offered, i.e. no objective obstacle prevents their undertaking a job. Available job seekers do not include job seekers in custody or prison, those incapable of work, job seekers assigned to retraining courses or undertaking short-term employment, and job seekers who draw pecuniary maternity benefits or who receive material support during maternity leave.

Method of calculation of the indicator

The following methodology for calculating *Registered unemployment rate* indicator was in effect until 30 June 2004:

registered unemployment rate (in %) = job seekers / labour force

Numerator: number of job seekers registered by employment authorities at the end of month.

Denominator (labour force): number of persons employed in the national economy, with one or two main employments, as stated by selective labour force surveys – SLFS (sliding average for the last four quarters) + the average number of registered job seekers in the same time period (sliding average for the last 12 months).

The sum in the denominator represented labour force that did not change in the course of individual calendar quarters.

In connection with changes in the labour market caused by accession of the Czech Republic to the EU and in connection with the efforts to bring the registered unemployment rate closer to the internationally comparable general rate of unemployment as indicated by the Czech Statistical Office, the Ministry of Labour and Social Affairs of the Czech Republic introduced, effective from 1 April 2004, a new methodology for calculation of registered unemployment rate.

The indicator is based on the number of available job seekers, and now also includes any job seekers from EU and EEA (the European Economic Area)[6] countries. At the same time, labour force is extended to include foreigners legally working in the Czech Republic who are not included in SLFS or are included to a limited extent only:

Numerator: exact records of registered – available, unplaced job seekers, citizens of the Czech Republic and EU citizens, maintained by employment authorities according to the job seekers' residence[7] as at the end of the month in question.

Denominator: number of persons employed in the national economy, with one or two main employments, as stated by selective labour force surveys – SLFS (sliding average for the last four quarters) + the number of employed foreigners from third countries with a valid work permit, employed EU citizens registered with employment authorities (sliding average for the last 12 months) and foreigners with a valid trade licence (sliding average for the last 2 six-month periods) + exact records of registered – available, unplaced job seekers, citizens of the Czech Republic and EU citizens, maintained by employment authorities according to the job seekers' residence (sliding average for the last 12 months).

The sum in the denominator represents labour force that does not change in the course of the calendar quarter.

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[6] EEA – EU countries (Belgium, Denmark, Finland, France, Ireland, Italy, Luxembourg, Netherlands, Germany, Portugal, Austria, United Kingdom, Spain, Sweden, Greece and since 1 May 2004 – Czech Rep., Slovak Rep., Poland, Hungary, Slovenia, Estonia, Lithuania, Latvia, Cyprus, Malta) plus Norway, Liechtenstein and Iceland

[7] Residence
  - if a citizen of the Czech Republic, address of permanent residence in the Czech Republic,
  - if a foreigner - citizen of the European Union, or his family member, address of permanent or temporary residence in the Czech Republic; if no such residence exists, address of the place where he usually stays in the Czech Republic,
  - if a foreigner – non-EU citizen, or his family member, address of permanent residence in the Czech Republic.

Development of the indicator in the Czech Republic

At the beginning of economic and social transformation, unemployment was an unheard-of phenomenon. Following the jump growth of unemployment from zero in 1989 to 4.1% in 1991 the rate of unemployment remained between 3 and 4% in the years 1992 to 1996. The development took a turn at the time of recession in 1997 when unemployment rate began growing up to 9.8% in January 2000. Then unemployment slightly declined in connection with the economic revival, and subsequently stagnated. This relatively favourable development continued until December 2001, when unemployment began increasing again due to the global recession and deteriorating sale opportunities of Czech producers. Positive development resumed in 2004 when, after the highest ever rates at the beginning of the year, the unemployment rate decreased and in the second half of 2004 dropped to the 2003 level. These positive developments, due largely to the economic revival, inflow of foreign investments and the implementation of instruments of active employment policy, have continued in 2005 as unemployment remains under the 2004 level.

Chart 24.1: Registered unemployment rate, annual averages, Czech Republic, 1991-2004
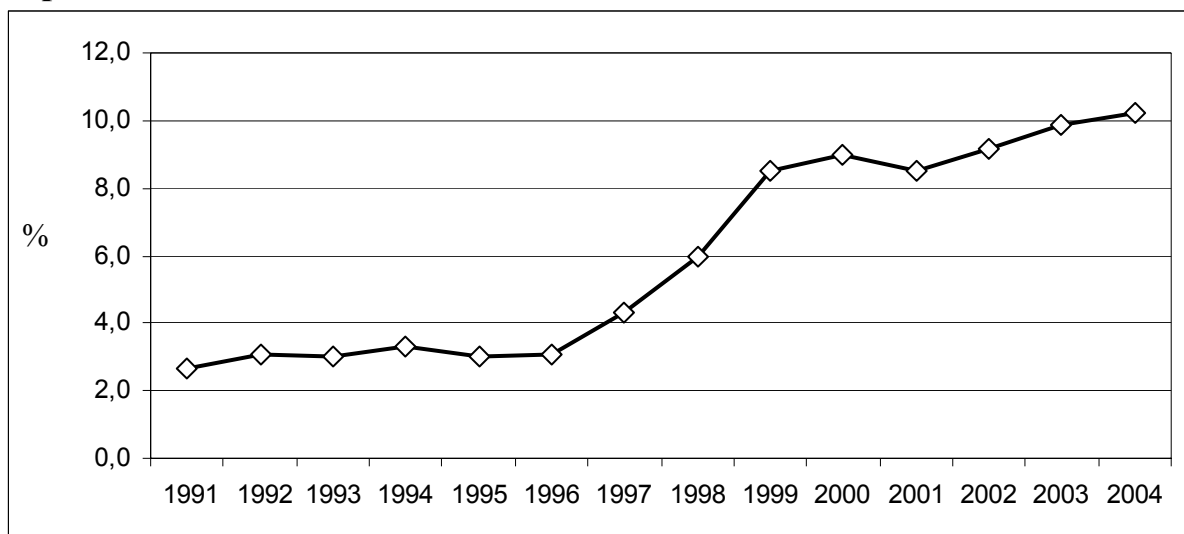
Source: Ministry of Labour and Social Affairs of the Czech Republic

Chart 24.2: Registered unemployment rate, monthly levels, comparison of the previous and new methodologies, Czech Republic, 1991-2005
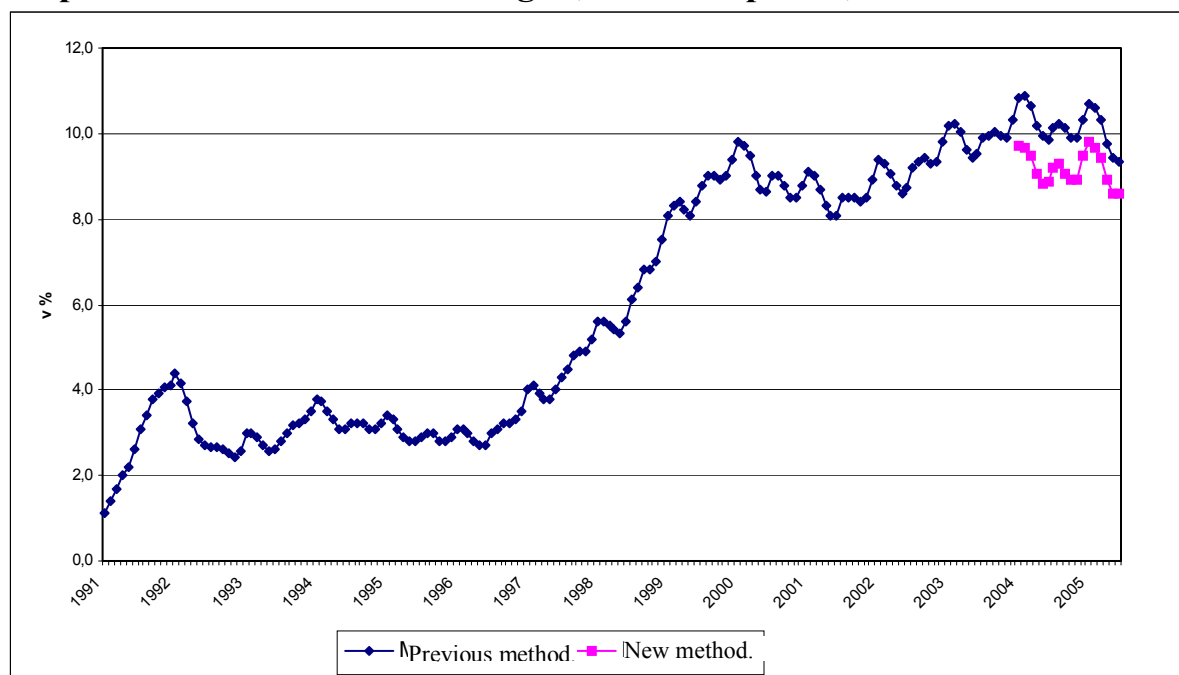
Source: Ministry of labour and Social Affairs of the Czech Republic

International comparison

The international comparison uses the general rate of unemployment determined by SLFS (conducted by the Czech Statistical Office) based on recommendations of ILO and Eurostat that are binding on EU member States. Data obtained by SLFS are complemented by data from administrative sources – in the Czech Republic, from records of employment authorities, which serve as the basis for decision-making concerning the employment policy.

Registered job seekers are defined by applicable national laws. Therefore, considerable differences exist in many countries between general employment rate and registered employment rate, which are due mainly to legislative differences, but also to the level of active employment policy and other areas of social policy achieved by individual countries.

25. Employment of older people

Meaning and context of the indicator

This indicator describes the situation in the labour market regarding persons between 55 and 64 years of age. It is based on the findings of the selective labour force survey carried out in all EU member states in accordance with the methodology developed by Eurostat and guarantees full international comparability of the results.

Method of calculation of the indicator

Rate of employment of older people is defined as the proportion of employed persons between 55 and 64 years of age to the number of all persons in this age category. The data are harmonised with the data of demographic statistics and national accounts.

An employed person in the age category of 55 to 64 years is a person between 55 and 64 years of age who worked at least one hour in the reference week for pay or compensation or with a view to making a profit, or had a job at which he was not present.

Development of the indicator in the Czech Republic

The rate of employment of males and females between 55 and 64 years of age constantly increased between 1998 and 2004, with the exception of 2000, while the employment of females grew relatively faster (by 6.5 percentage points) than the employment of males (by 4.0 percentage points). Nonetheless, the Czech Republic still belongs to countries where the rate of employment of males in this age category is substantially higher than the rate of employment of females of the same age. The difference reached 27.8 percentage points in the Czech Republic in 2004 (male rate of 57.2%, female rate of 29.4%), and thus the Czech Republic ranked among six EU countries with the highest differentiation of employment rate based on sex. This difference is primarily the consequence of a difference in the age limit for retirement, but also of the difficulty in maintaining the employment of women of pre-retirement age. A difference in the sex-based employment rates greater than in the Czech Republic exists only in Greece, Spain, Cyprus, Malta, Slovakia and Ireland.

Chart 25.1: Employment of older people between 55 and 64 years of age, Czech Republic, 1998-2004

Source: Eurostat-New Cronos
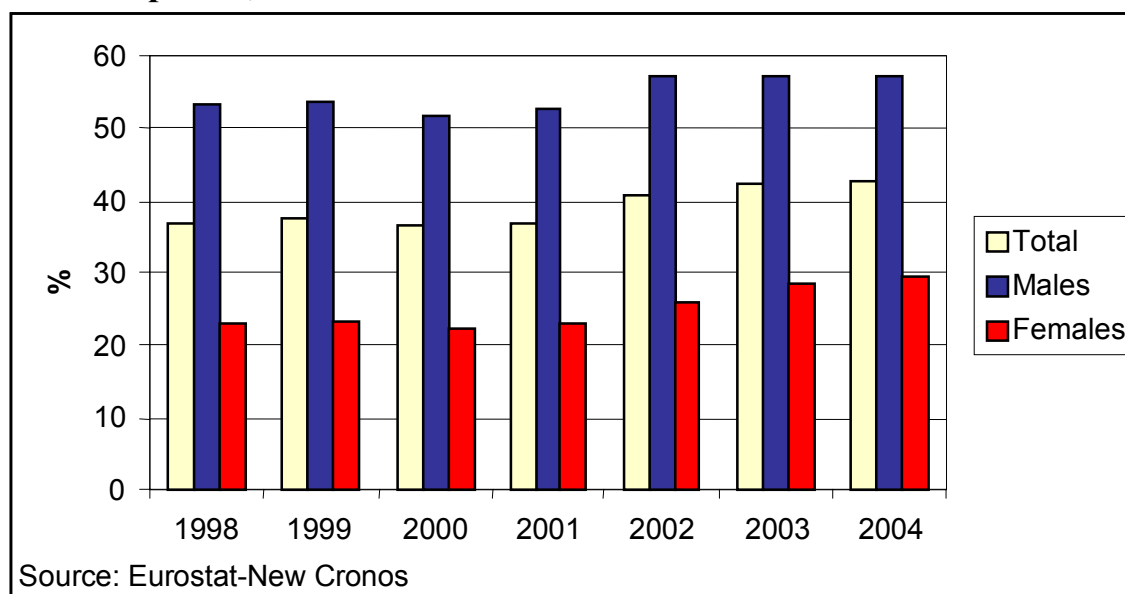
International comparison

The aggregate rate of employment of older people in EU Member States is consistently rising. Since 1998, the EU-25 aggregate rate increased from 35.8% to 40.5% in 2004. The employment rate is relatively higher in the EU-15, where it increased during this period by 5.3 percentage points to 41.9% in 2004.

Differences between countries are considerable. On the one hand, the employment rate in this age category in nine countries does not even amount to one-third of the total number of these persons (Belgium, Italy, Luxembourg, Hungary, Malta, Austria, Poland, Slovakia and Slovenia), while on the other hand in seven countries more than one-half of persons in this age category worked in 2004 (Denmark, Estonia, Cyprus, Portugal, Finland, Sweden – 69.1%! and the United Kingdom).

Chart 25.2: Employment of older people between 55 and 64 years of age, international comparison, 2004
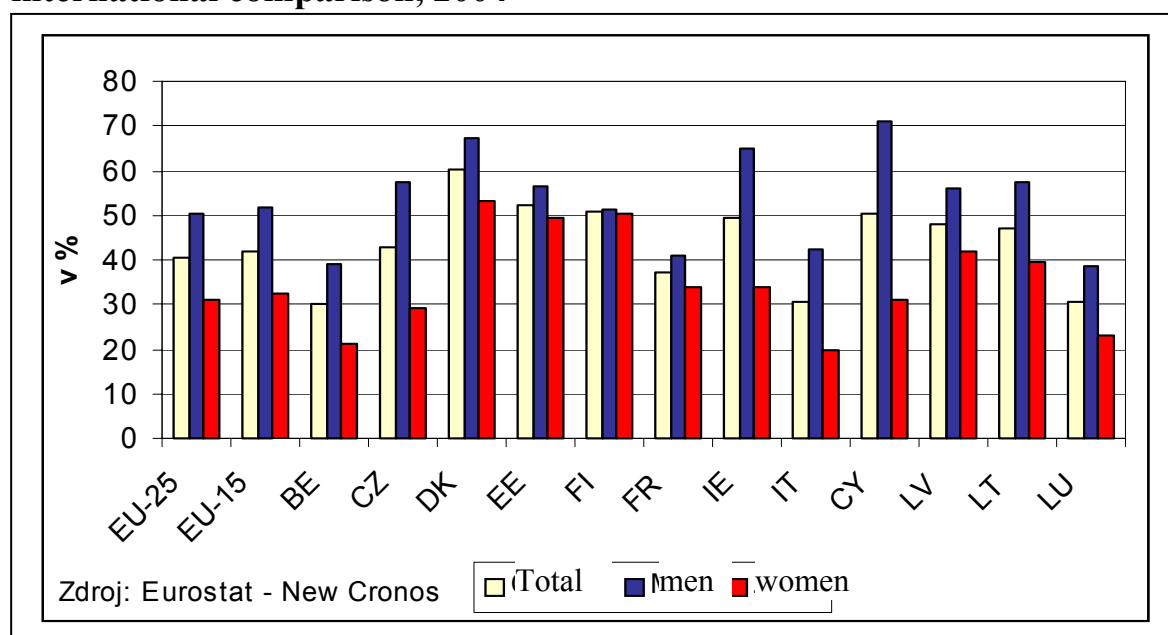
Zdroj: Eurostat - New Cronos   Total   men   women

Note: BE – Belgium, CZ – Czech Republic, DK – Denmark, EE - Estonia, FI – Finland, FR – France, IE - Ireland, IT – Italy, CY – Cyprus, LV - Latvia, LT – Lithuania, LU – Luxembourg

Chart 25.3: Employment of older people between 55 and 64 years of age, international comparison, 2004 (continued)
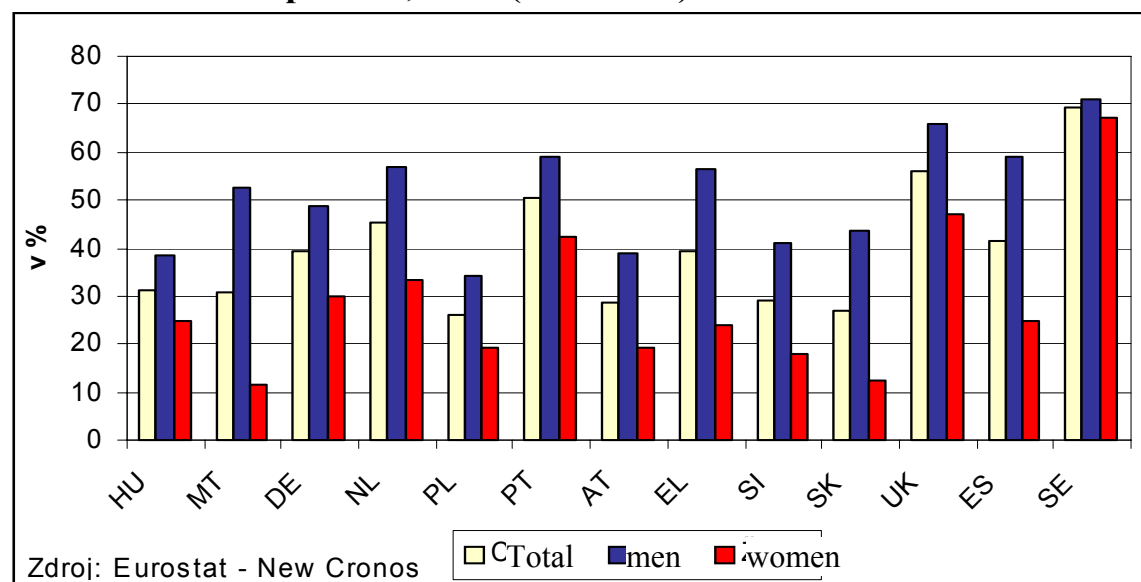
Zdroj: Eurostat - New Cronos   CTotal   men   women

Note: HU – Hungary, MT – Malta, DE – Germany, NL – Netherlands, PL – Poland, PT – Portugal, AT – Austria, SI - Slovenia, SK – Slovak Republic, UK – United Kingdom, ES – Spain, SE - Sweden

The employment rate in this age category in the Czech Republic (42.7%) is above the average and is higher than in Germany, and substantially higher than in the other three neighbouring countries. This higher rate of employment is

mostly due to the employment of males while the employment of females in this age category is below the EU-15 and even EU-25 average.

The employment rate in the Czech Republic grew faster than in the EU-25 or EU-15 (after 1998 by 5.6 percentage points in the Czech Republic, 4.7 percentage points in the EU-25, and 5.3 percentage points in the EU-15); however, the increment in the employment rate in some countries was considerably higher than that in the Czech Republic (e.g. in Finland by 14.7 percentage points or in Hungary by 13.8 percentage points).

Table 24.1: Employment of older people between 55 and 64 years of age (in %), international comparison, 1998, 2004

Country	1998	2004	Difference 2004-1998
EU-25	35.8	40.5	4.7
EU-15	36.6	41.9	5.3
Eurozone	:	:	:
Belgium	22.9	30.0	7.1
Czech Republic	37.1	42.7	5.6
Denmark	52.0	60.3	8.3
Estonia	50.2	52.4	2.2
Finland	36.2	50.9	14.7
France	28.3	37.3	9.0
Ireland	41.7	49.5	7.8
Italy	27.7	30.5	2.8
Cyprus	:	50.4	:
Lithuania	39.5	47.1	7.6
Latvia	36.3	47.9	11.6
Luxembourg	25.1	30.8	5.7
Hungary	17.3	31.1	13.8
Malta	:	30.9	:
Germany	37.7	39.2	1.5
Netherlands	33.9	45.2	11.3
Poland	32.1	26.2	-5.9
Portugal	49.6	50.3	0.7
Austria	28.4	28.8	0.4
Greece	39.0	39.4	0.4
Slovakia	22.8	26.8	4.0
Slovenia	23.9	29.0	5.1
United Kingdom	49.0	56.2	7.2
Spain	35.1	41.3	6.2
Sweden	63.0	69.1	6.1

Source: Eurostat - New Cronos

26. Population living below the poverty line before and after social transfers

Meaning and context of the indicator

The indicator *Population living below the poverty line before and after social transfers* indicates the effectiveness of social transfers, or their impact on persons threatened by poverty. Persons threatened by poverty are persons whose annual adjusted disposable income is less than 60% of the country's annual adjusted median disposable income per consumption unit. This indicator expresses the proportion of individuals (males, females) threatened by poverty in the relevant age categories to the total number of individuals (males, females) in the relevant age categories. The advantage of this relative measurement by the median (and not the average) is that it is not overly affected by extremities; the disadvantage is the considerable difference in thresholds of threatened poverty in different countries.

Method of calculation of the indicator

Persons threatened by poverty (living below the poverty line) are persons whose annual adjusted disposable income (before and after all social transfers) is less than 60% of the country's adjusted annual median disposable income per consumption unit. Adjusted median income is defined as total disposable household income divided by its "equivalent size" (in relation to a given consumption unit) reflecting the size and structure of the household, and is assigned to each member of the household.

The limit/threshold of income-based poverty is 60% of annual national adjusted median income per EU consumption unit. The consumption unit according to the EU-equivalent scale (an OECD-equivalent scale also exists) is defined as follows: the first adult in the household counts as 1 unit, each next adult (older than 13 years) in the household counts as 0.5 units, and each child (under or at the age of 13) counts as 0.3 units. Income in new member states includes also income in kind.

The indicator of the threat of poverty (the proportion of persons threatened by poverty to the total number of persons) may be further differentiated not only by age and sex, but also by the type of household or economic activities of household members.

Development of the indicator in the Czech Republic

The data for the Czech Republic are based on the Mikrocensus 2002 survey, carried out by the Czech Statistical Office in 2003. The purpose of this survey was to determine incomes of individuals and households in 2002.

The limit/threshold of income-based poverty (after accounting for all social transfers) in 2002 was CZK 123,130 at 100% level and CZK 73,878 at 60% level. A total of 822,200 persons were below this limit, which accounted for 8.13% of the total population of the Czech Republic.

In terms of gender, women are threatened by poverty more (9%) than men (7%). The sex-based difference intensifies with increasing age. In the category above 65 years of age, the share of females below the poverty line was 6% and the share of males was 1%.

The level of threat of poverty in households with children was 11%, and 4% in households without children. The highest rate of threat was in incomplete families (30%) and in families with 3 and more children (20%). A total of 15% of children up to 15 years of age lived in poor households.

In the age category above 16 years, 2% of employed persons and 7% of self-employed persons were threatened by poverty. On the other hand, a high proportion of poor was found among the unemployed (36%) and other economically inactive persons with the exception of pensioners (13%). A relatively low proportion of threat of poverty was in the group of non-working pensioners (4%).

Social transfers significantly affected the overall level of poverty in the Czech Republic. Without pensions and other social transfers, 39% of people in the Czech Republic would live below the threshold of threat of poverty. The pensions paid out reduced this rate to 21%, and the other social transfers to the resulting 8%. Social transfers reduced the poverty rate by 31 percentage points. The greatest effect came from pensions, other benefits paid under the Act on state social assistance, sickness insurance benefits and unemployment benefits. Pensions included in incomes, the other social transfers reduced poverty by 13 percentage points.

Compared with other countries, however, the Czech Republic has a relatively high concentration of persons just above the poverty threshold. About 8% of the population were in the range of 60% to 70% of the national adjusted median income, who form a group of the potential future poor.

International comparison

The Czech Republic is the country with the lowest rate of threat of poverty (social transfers accounted for) among all EU-25 countries.

On average, 15% of the population in the EU-15 were classified in 2000 as threatened by poverty (based on data provided by the European Community Household Panel, ECHP). This rate differs considerably between individual EU countries, ranging from 9% in Sweden to 21% in Ireland. Countries with the highest rate of child poverty (up to 15 years of age) include the southern countries: Spain, Italy and Portugal (27%), together with the United Kingdom and Ireland; on the other hand, this rate is the lowest in Denmark (5%), Finland and Sweden.

In the EU-10, the highest rate of the threat of poverty in 2002 was in Slovakia (21%); low rates, besides the Czech Republic, were achieved by Hungary and Slovenia (10% each). The lowest rate of child poverty was in Slovenia (7%), while the highest rate was in Slovakia (30%).

The assessment of the effect of social transfers on the final rate of threat of poverty from the perspective of age is influenced to a great extent by pensions, the inclusion of which dramatically improves the results for the age group of 65 years and above (EU-15 average from 85% to 25%, EU-10 average from 85% to 16%). The overall effect of transfers in the EU-15 reduces the base rate of the threat of poverty from 39% to 15%, and in the EU-10 from 44% to 15%.

Table 26.1: Population living below the poverty line before and after social transfers by age categories (in %), international comparison (EU-15 countries), 2000

Country	Net of all social transfers				Pensions included				All social transfers included			
	Total	0-15	16-64	65+	Total	0-15	16-64	65+	Total	0-15	16-64	65+
EU-15	39	32	41	85	24	31	21	25	15	19	14	19
Belgium	38	26	28	91	23	26	21	29	13	12	10	26
Denmark	31	18	20	93	21	18	17	44	11	5	8	29
Germany	39	31	28	86	21	31	20	16	11	14	10	12
Greece	39	24	29	81	23	21	19	35	20	18	17	33
Spain	37	33	29	71	23	30	21	26	19	26	16	22
France	40	32	30	93	24	32	22	23	15	18	14	19
Ireland	36	36	29	77	30	36	25	48	21	26	16	44
Italy	42	30	34	81	22	27	21	22	19	25	18	17
Luxembourg	40	38	31	88	23	36	22	10	12	18	12	7
Netherlands	36	28	27	94	21	27	22	6	11	16	11	4
Austria	38	35	28	84	22	31	18	29	12	13	9	24
Portugal	37	39	28	74	24	31	21	33	20	27	16	30
Finland	30	18	21	87	19	17	18	22	11	6	10	23
Sweden	34	22	37		17	20	17		9	7	10	
United Kingdom	40	40	41	89	29	39	22	40	17	24	13	24

Note: Sweden's data for the age group 65+ years are integrated in the 16-64 years of age category
Source: European Household Community Panel

Table 26.2: Population living below the poverty line before and after social transfers by age categories (in %), international comparison (EU-10 countries), 2002

Country	Net of all social transfers				Pensions included				All social transfers included			
	Total	0-15	16-64	65+	Total	0-15	16-64	65+	Total	0-15	16-64	65+
EU-10	44	38	38	85	26	34	25	16	15	20	14	8
Czech Republic	39	35	30	89	21	33	19	9	8	15	7	4
Estonia	42	32	34	86	25	29	25	20	18	18	18	16
Cyprus	24	16	17	81	18	15	12	59	16	12	18	58
Latvia	43	37	36	81	24	33	24	14	16	19	16	10
Lithuania	40	34	33	84	24	30	24	17	17	20	16	12
Hungary	32	22	24	84	15	27	12	7	10	13	9	8
Malta	30	29	24	70	20	28	17	27	15	21	13	20
Poland	50	44	45	86	32	37	32	18	17	23	15	7
Slovenia	36	24	30	81	16	18	15	21	10	7	10	19
Slovak Republic	43	47	37	79	28	41	26	16	21	30	19	13

Note: Cyprus – data for 1997, Malta – data for 2000, Slovakia – preliminary data
Source: National surveys in individual countries

27. Research & development expenditure

Meaning and context of the indicator

The amount of expenditure on science and research characterises the scientific and technological development in every country and is also associated with the level of education of the population and the country's human potential. The principal goal of the Czech Republic in the area of research and development is to provide its international competitiveness as a knowledge-based society. With its accession to the European Union, the Czech Republic will become fully involved in the R&D-related decision-making processes in the European context.

Research and development in the Czech Republic is funded from numerous sources – domestic public and private sources, foreign sources and by the private non-profit sector. In recent years there has been an increasing pressure towards social "utility" of research, chiefly in respect of the benefits and efficiency of the resources expended, both by the public and private sectors.

The objective of the Czech Republic is to increase the level of financing of research and development from public sources to 0.7% of GDP.

Method of calculation of the indicator

The methodology of calculation is based on the methodology used by Eurostat. The total gross domestic expenditure on R&D (GERD) comprises business sector expenditure (BERD), higher education sector expenditure (HERD), government sector expenditure (GOVERD) and private non-profit expenditure (PNPERD). All data are expressed as a percentage of GDP, and are based on data stated annually in an EUROSTAT report and categorised by the source of financing.

Development of the indicator in the Czech Republic

The following chart describes the development of R&D expenditure in the Czech Republic as a percentage of GDP.

Chart 27.1: R&D expenditure (% of GDP), Czech Republic, 1995-2003
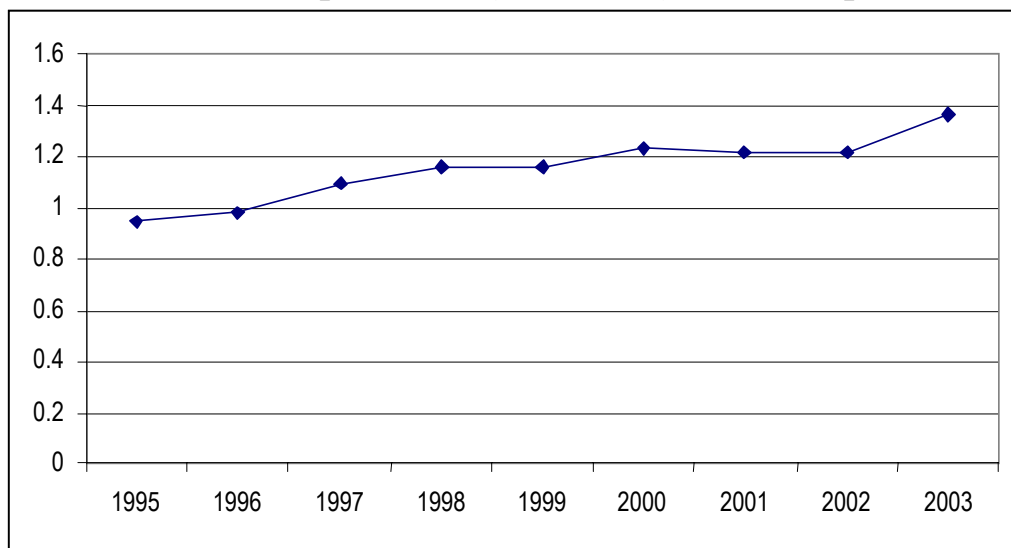
Source: Eurostat

Expenditure on R&D in the Czech Republic as % of GDP increases every year. Stagnation occurred only between 1998 and 1999, and there was a moderate decrease between 2000 and 2001. In the following years, R&D expenditure increased year on year, with the most significant increase between 2002 and 2003, by 0.14 percentage points.

From the point of view of the structure of R&D expenditure, the largest amounts are expended in the Czech Republic by the corporate sector (0.82% of GDP in 2003), while expenditure by state schools and from the state budget amounted in 2003 to 0.52% of GDP (of which 0.31% of GDP comprised expenditure from the state budget and 0.21% of GDP comprised expenditure of the higher education sector).

Expenditure of the business sector has had an increasing or stagnating tendency since 1999, with the highest increase between 2002 and 2003 (by approximately 0.7 percentage point). A similar trend exists with expenditure of the higher education sector, which, however, has been increasing since 1996, with the highest increase occurring between 2002 and 2003 (by approximately 0.2 percentage point).

Chart 27.2: Structure of R&D expenditure by source of financing (% of GDP), Czech Republic, 1995-2003
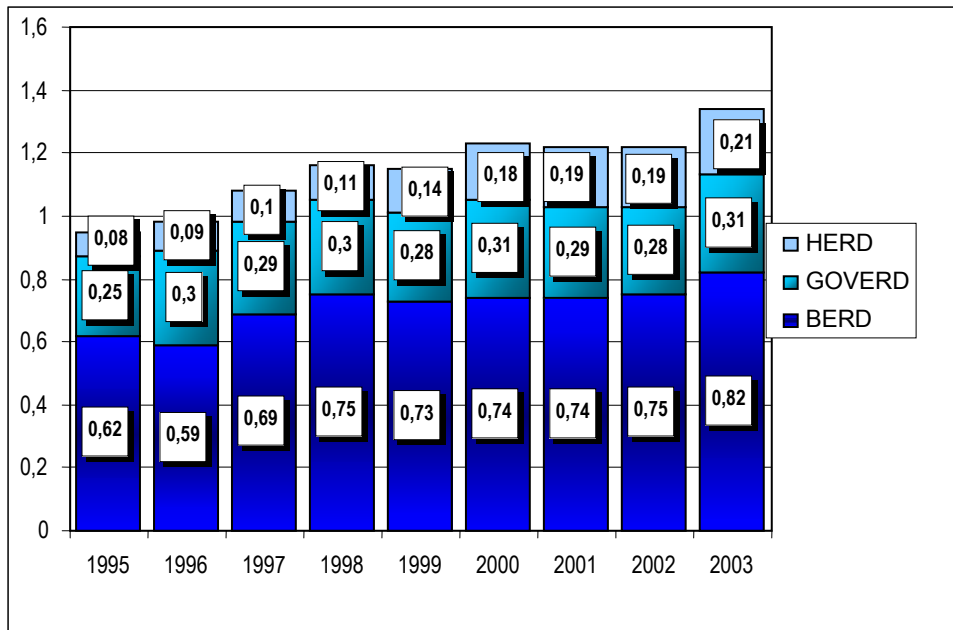
Note: HERD – expenditure in the higher education sector; GOVERD – public "government" expenditure; BERD – business sector expenditure
Source: Eurostat

R&D expenditure from the state budget depends directly on the general financial standing of the state and on the aggregate amount of the state budget. Therefore, this category of R&D expenditure reflects any "swings" in the country's economic situation to a much greater extent. Related to GDP, R&D expenditure from the state budget (net of expenditure of the higher education sector) amounted on aggregate to 0.25–0.31% of all expenditures. A considerable decrease occurred in 1999 when expenditure in this category declined by approximately 0.2 percentage points to 0.28% of GDP.

International comparison

The international comparison shows that the Czech Republic expends lower amounts related to GDP than the European average. It should also be noted, however, that expenditures in practically all new EU Member States and some other countries are lower than in the Czech Republic – for example in Estonia, Spain, Ireland, Cyprus, Lithuania, Latvia, Hungary, Poland, Portugal or Slovakia.

While the proportion of R&D expenditure to GDP has been increasing very moderately in the EU in recent years, the rate of increase in the Czech Republic was relatively high in 2003.

Chart 27.3: Expenditure on R&D (% of GDP), international comparison, 1995-2003
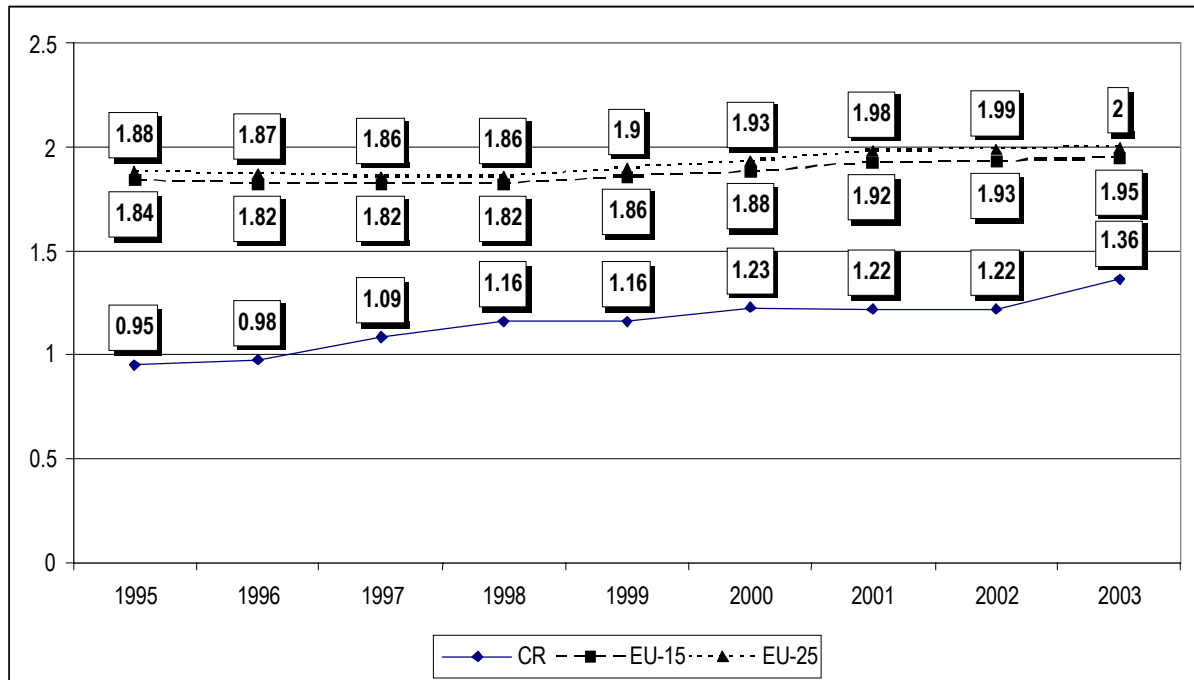
Source: Eurostat

While EU countries expend much more funds on research and development from private sources than the Czech Republic, the Czech Republic's expenditure from the state budget (net of expenditure of the higher education sector) is higher than elsewhere. Nonetheless, the situation in the Czech Republic should progressively change due to the intensifying tendency towards financing science and R&D from private sources.

Chart 27.4: Expenditure on R&D by sources of financing (% of GDP), international comparison, 1995-2003
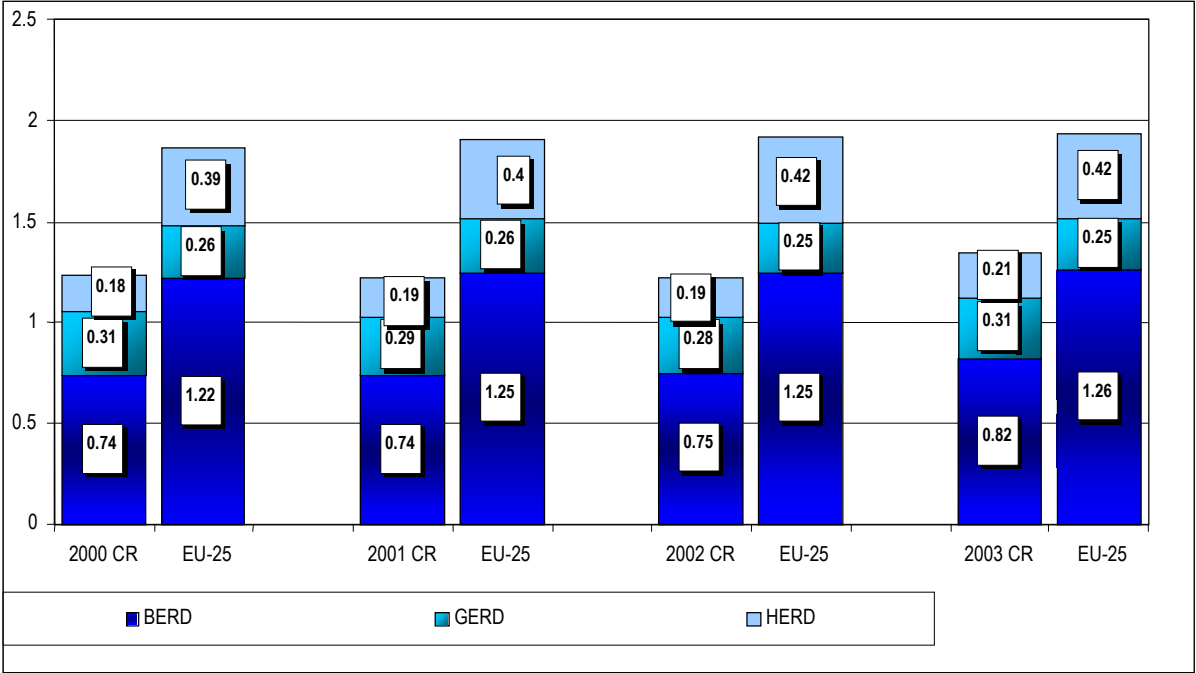
Note: HERD – expenditure in the higher education sector; GOVERD – public "government" expenditure; BERD – business sector expenditure
Source: Eurostat

28. Highest level of education attained

Meaning and context of the indicator

Highest level of education attained is an indicator of the overall education of the population. The education level belongs to factors which, on the one hand, participate in forming the profile of an individual's success, while on the other hand the level of education significantly affects the quality of human resources of a society. High-quality human resources are a basic precondition for further successful development of the whole economy and contribute to the country's general prosperity. This indicator is one of the basic indicators of a country's future potential.

Of importance in this context is the need to know the education level attained by the young population that will enter the labour market and will influence the prosperity of society in the future. Therefore this Report focuses on the young population between 20 and 24 years of age.

Method of calculation of the indicator

The highest level of education attained is an indicator that is based on the methodology of the Czech Statistical Office and on the methodology of OECD and Eurostat. The highest level of education attained is reported in categories under ISCED-97 (International Standard Classification of Education). In respect of the population between 20 and 24 years it is reasonable to state that the share of population with at least upper secondary education (ISCED 3 and higher – in the context of the Czech Republic this includes general secondary education, secondary vocational education or training, upper vocational education or training and higher education, i.e. all levels of education up from the level of certificate of apprenticeship and studies at secondary vocational schools completed by final examinations), which best characterises this population. In respect of older population groups the share of population with higher (tertiary) education is also stated, which it is pointless to indicate in respect of the young population as a part of it is still in the educational process and has not yet completed university studies.

All data, both in the context of the Czech Republic and in international comparison, are based on the Labour Force Survey.

Development of the indicator in the Czech Republic

The following chart describes the level of education in young population between 20 and 24 years of age.

Chart 28.1: Share of population between 20 and 24 years of age with at least upper secondary education, Czech Republic, 1998-2004
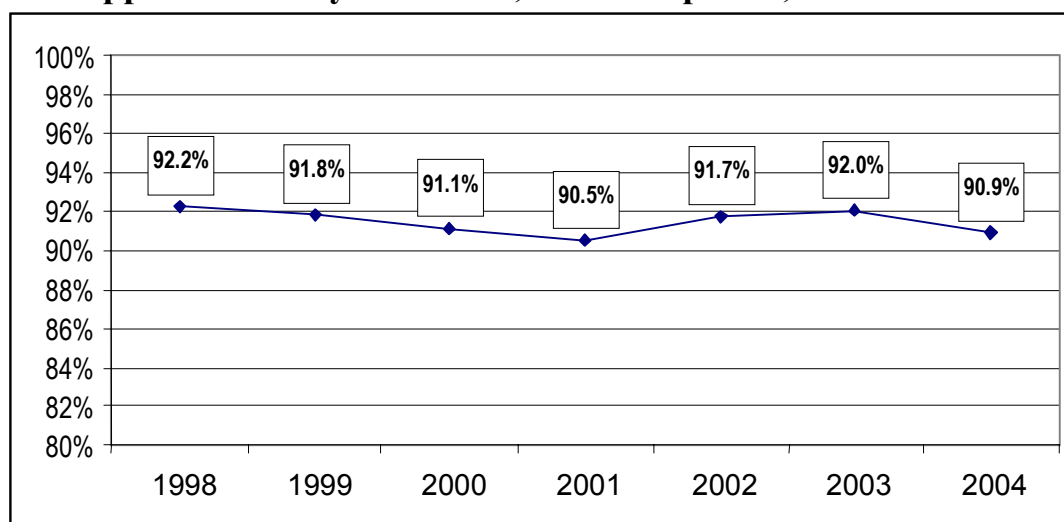
Source: Eurostat

The level of education of the Czech population is relatively high – the value of the indicator did not drop at any point in the period of time monitored below 90%. Between 1998 and 2004 the proportion of individuals between 20 and 24 years of age with at least upper secondary education ranged between 90.5% and 92.2%. This does not mean, however, that the remaining population has only primary education – the Czech educational system also comprises programmes for students that completed schools for the mentally handicapped (special schools), or for pupils that quit elementary school before the last grade – these programmes had been categorised as ISCED 2 and thus had not been included under upper secondary education for the purposes of international comparison. In addition, the age category of 20 to 24 years also comprises students of secondary schools who have not completed studies for various reasons – had a postponement of compulsory school attendance in the past, repeated a grade, changed schools to a lower grade, etc.

The slight variations in individual years (as the variations are relatively minor, they cannot be referred to as a trend) were due to changes in the educational system – a progressive increase in the number of children that are granted postponement of commencement of compulsory school attendance and the changing structure of students of secondary schools (with a higher share of students of "longer – GCSE" programmes as opposed to "shorter – non-GCSE" programmes) and, last but not least, to the trend making ground in recent years – extending the duration of secondary school attendance mostly by changing educational programmes.

For comparison, in the next age category (25 to 34 years), the share of individuals with at least upper secondary education is higher and has been in the

region of 94% for the last three years, including those who have gradually completed their education level.

Chart 28.2: Share of population in the age categories of 20-24 and 25-34 years with at least upper secondary education, Czech Republic, 2002-2004
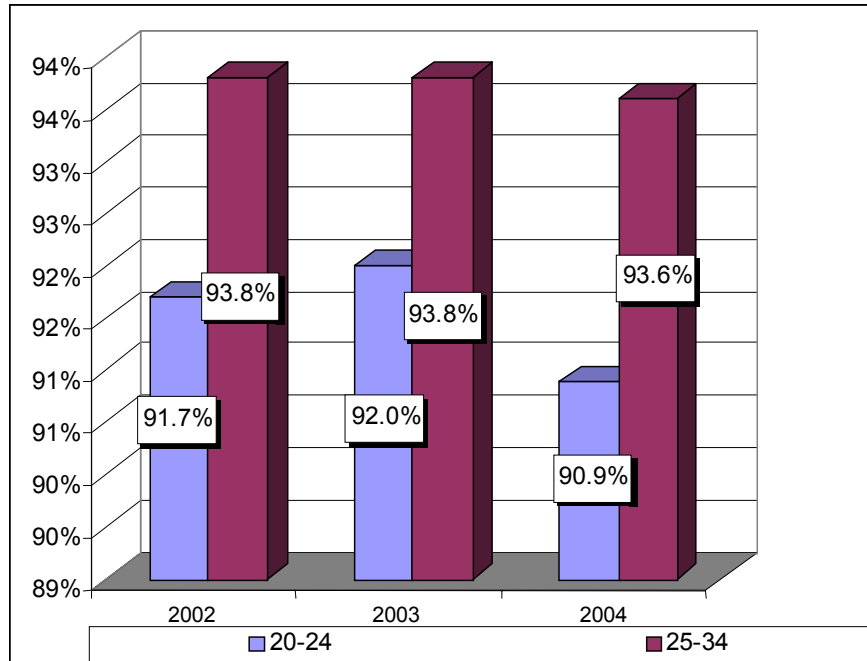
Source: Czech Statistical Office – selective labour force survey

International comparison

In the international comparison, the Czech Republic achieved very good results in respect of this indicator – a higher share of population with upper secondary education in 2004 was reached only by Slovakia (91.3%), and values near the limit of 90% only by Slovenia (89.7%). In some countries, for example Portugal or Malta, less than 50% of population in the age category of 20 to 24 years has upper secondary education.

The chart below shows that, compared with average values in the EU, the Czech Republic achieves highly above-average values. It is also obvious that the accession of post-communist countries has favourably affected the value of this indicator, as the share of population with at least upper secondary education has increased by approximately 3 percentage points.

Chart 28.3: Share of population between 20 and 24 years of age with at least upper secondary education, international comparison, 1999-2004
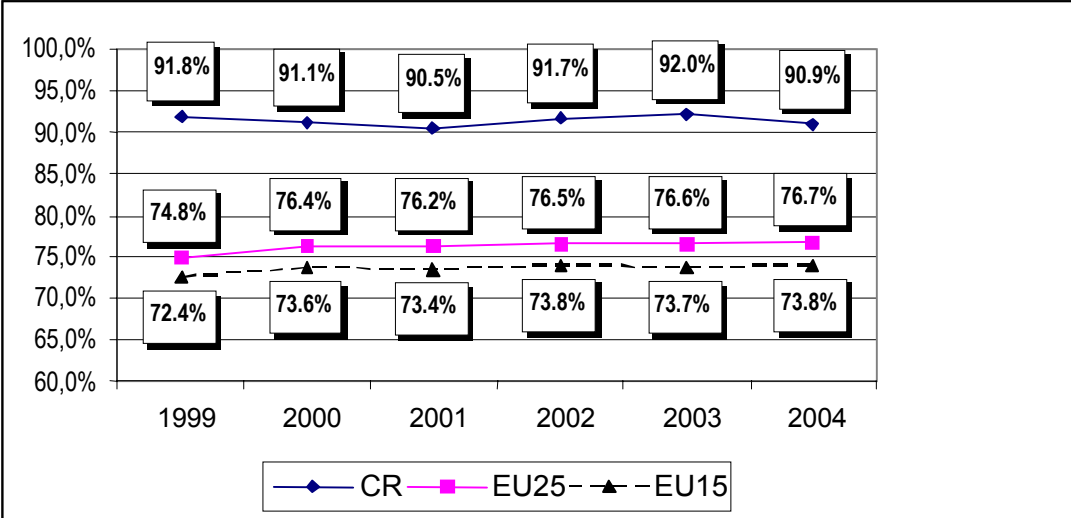
Source: Eurostat

29. Access to the Internet

Meaning and context of the indicator

At its base level, this indicator correlates with the level of information society. *Access to the Internet* is one of the conditions that need to be fulfilled on the way to the information society.

Method of calculation of the indicator

The methodology is based on the document Information Society Statistics[8] of the Czech Statistical Office. Surveys performed by the CSO cover the entire width of this issue (households, business sector and the public administration) and are underscored by statistical researches based on the Act on state statistical service. The main categories monitored are: ICT infrastructure, ICT penetration, use of ICT and consequences of use.

Development of the indicator in the Czech Republic

In the fourth quarter of 2004, an average of 30% households had a personal computer (i.e. approximately 1,200,000 households), most of which were in Prague (42%), and the least in Olomouc (18%) and Ústí nad Labem (22%) regions. Approximately two households out of every three households with a personal computer had a connection to the Internet. Thus, approximately 19% of households in the Czech Republic (approximately 800,000 households) were connected to the Internet in the fourth quarter of 2004, of which one-fourth had a high-speed connection (approximately 180,000 households). The highest percentage of households with Internet access was in Prague (35%), while the lowest percentage was in Olomouc (13%) and Zlín (14%) regions.

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[8] www.czso.cz/csu/redakce.nsf/i/information_society_statistics_pocketbooks_edition_2003

Chart 29.1: Percentage of households furnished with selected information and communication technologies, Czech Republic, 2003-4
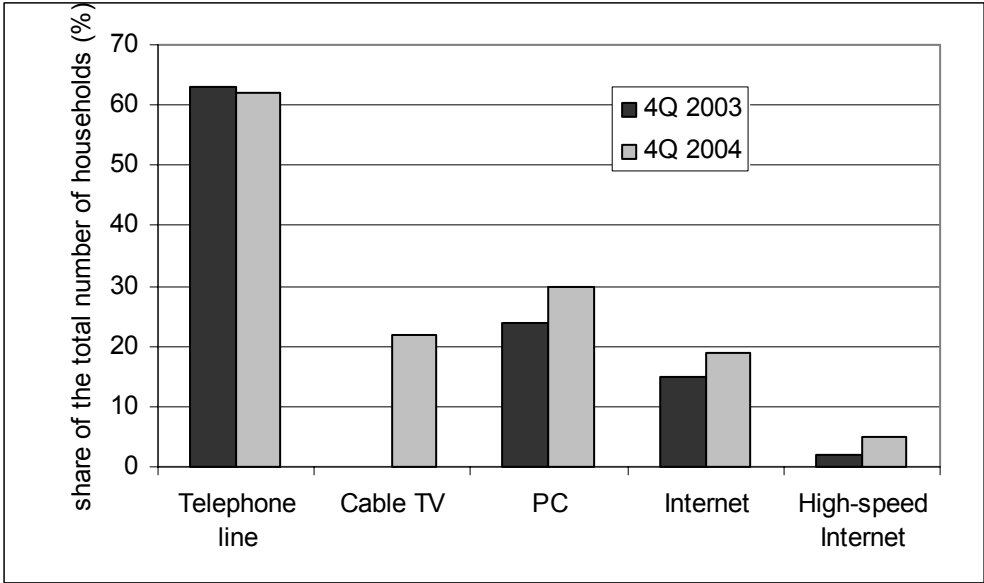
Source: Czech Statistical Office

More than one-third of all employees of Czech undertakings and companies work with a computer, and approximately one-fourth of them have access to the Internet.

Chart 29.2: Percentage of employees using computer at work (at least once a week) in business entities with 10 or more employees, by industry, Czech Republic, 2002
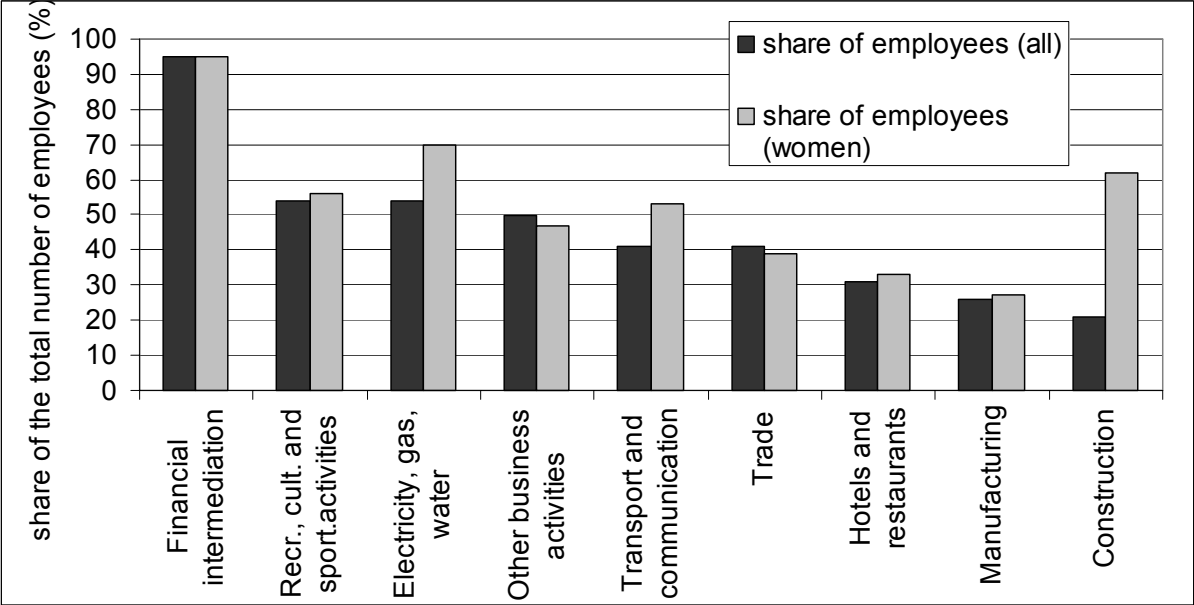
Source: Czech Statistical Office

It is possible to state that an overwhelming majority of public administration institutions has access to the Internet. The worst situation in respect of access to

the Internet was in municipalities with a population of 499 and under, where 86.6% of such municipalities were not connected to the Internet.

Chart 29.3: Percentage of public administration agencies connected to the Internet, by legal form, Czech Republic, 2003
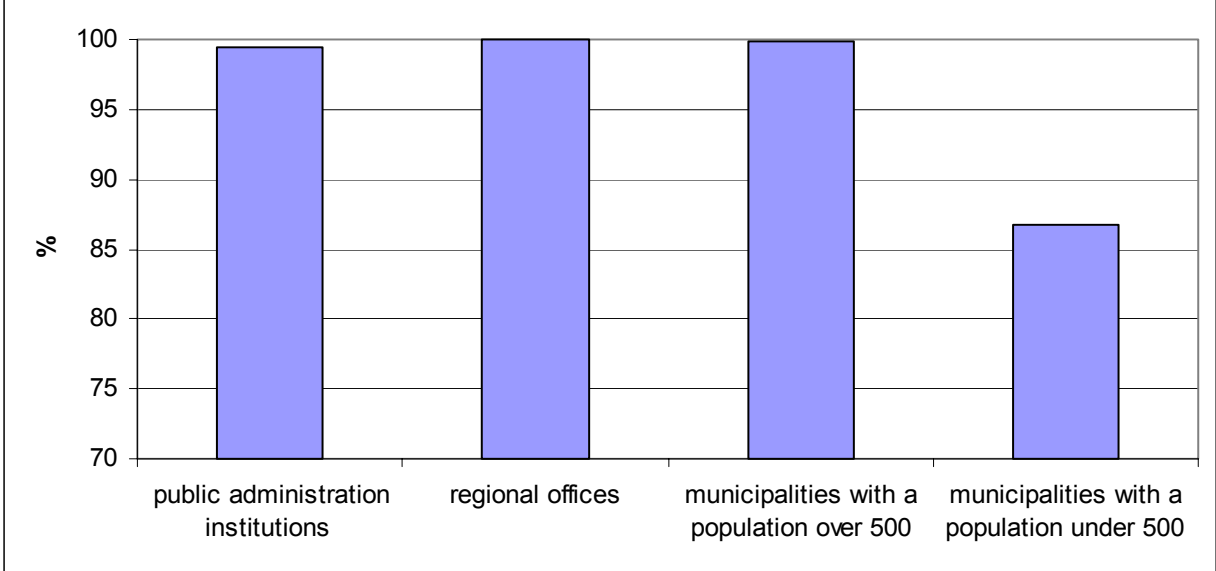
Source: Czech Statistical Office

International comparison

Compared with the EU, the Czech Republic is still far below the average as about 42% of households in the EU have access to the Internet.

Chart 29.4: Percentage of households with access to the Internet and with high-speed Internet connection, international comparison, 2004
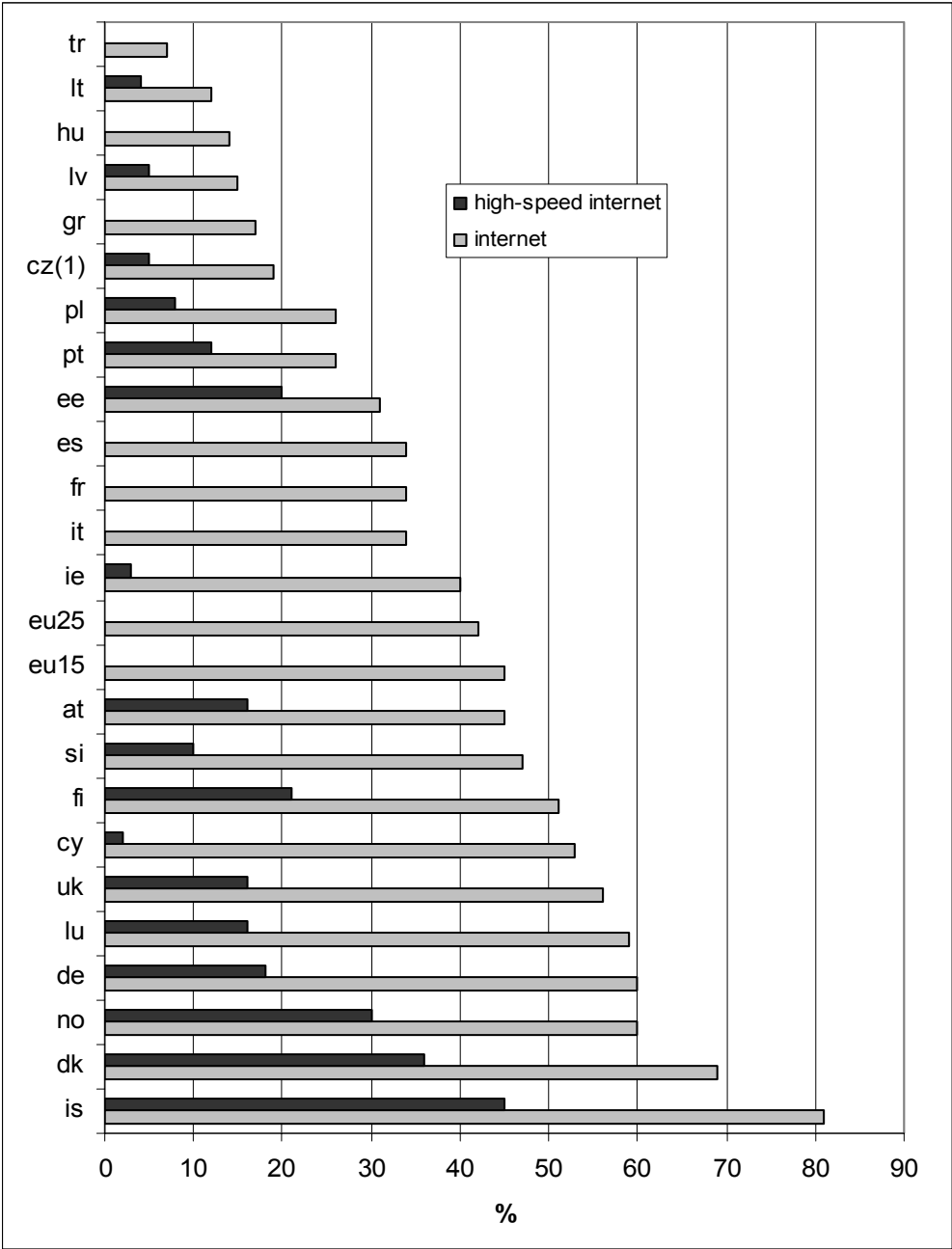
Note: is – Iceland, dk – Denmark, no – Norway, de – Germany, lu – Luxembourg, uk – United Kingdom, cy – Cyprus, fi – Finland, si – Slovenia, at – Austria, ie – Ireland, it – Italy, fr – France, es – Spain, ee – Estonia, pt – Portugal, pl – Poland, cz – Czech Republic, gr – Greece, lv – Latvia, hu – Hungary, lt – Lithuania, tr - Turkey
Source: Eurostat

As regards the use of web sites and the Internet, Czech companies and undertakings belong to the EU average.

Chart 29.5: Share of business entities with ten or more employees with Internet connection, broadband, web presentation, and using intranet and extranet, international comparison, 2003
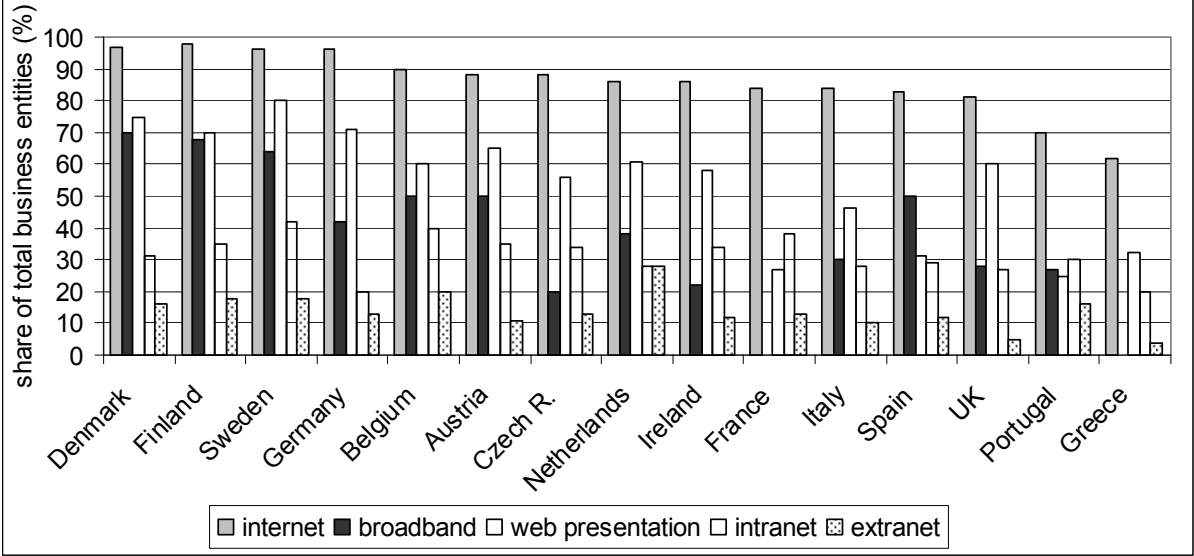
Source: Eurostat

The percentage of Internet users who used the Internet in relation to public administration is very low in the Czech Republic.

Chart 29.6: Percentage of Internet users (individuals) who use the Internet in relation to public administration, by purpose of use, international comparison, 2003
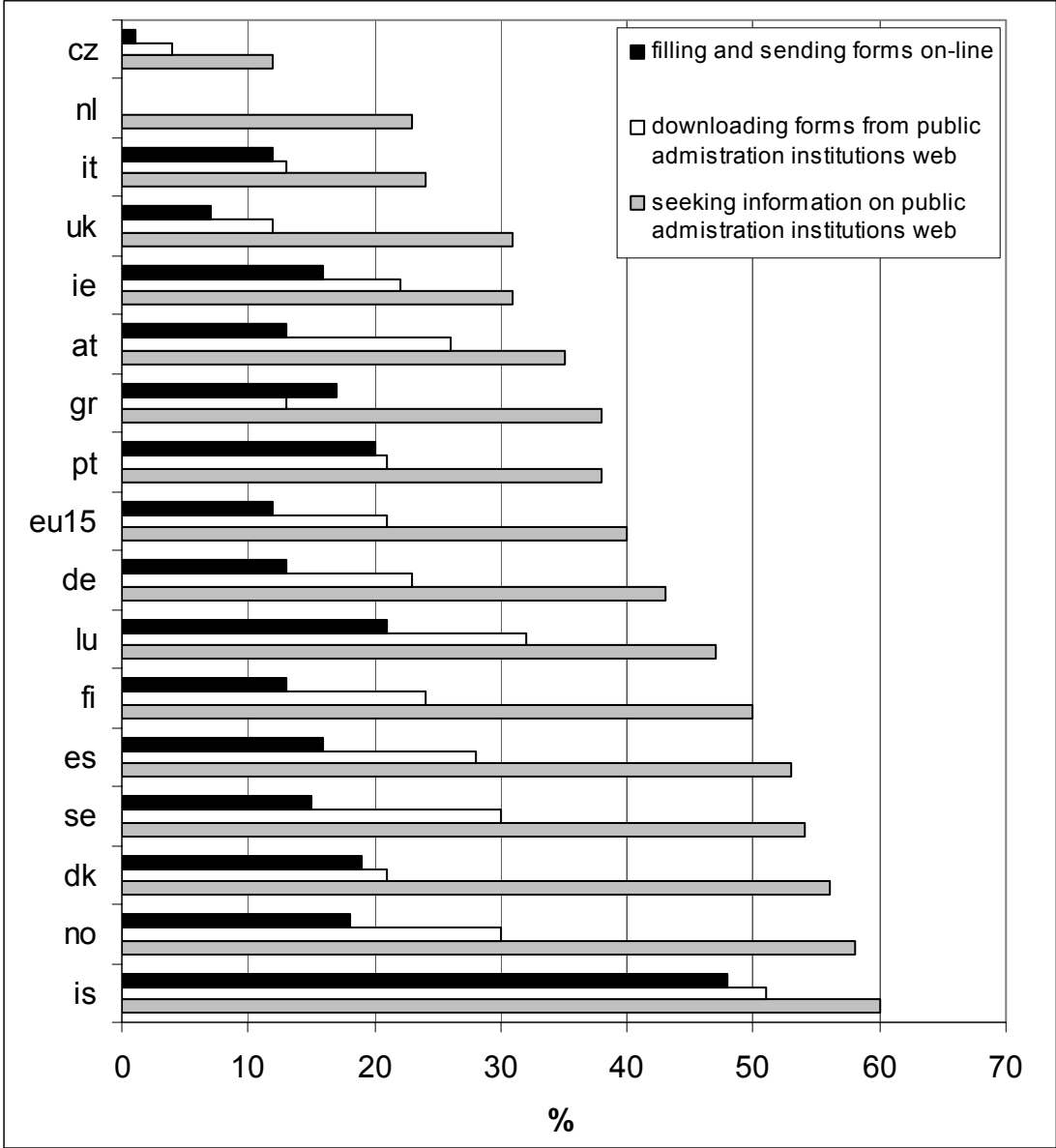
Note: is – Iceland, dk – Denmark, no – Norway, de – Germany, lu – Luxembourg, uk – United Kingdom, fi – Finland, at – Austria, ie – Ireland, es – Spain, pt – Portugal, pl – Poland, cz – Czech Republic, gr – Greece, It – Italy, nl - Netherlands
Source: Eurostat

30. Total international development cooperation

Meaning and context of the indicator

The involvement of a country into international development cooperation is characterised by its preparedness to assist in dealing with global issues faced by the World and in establishing sustainable development in accordance with programmes and commitments stemming from the conclusions of major UN international conferences regarding this issue. The Czech Republic, as a member state of the EU and OECD, has the status of an observer in the OECD Development Assistance Committee (DAC), which plays the role of a key coordinator of global major providers of development assistance. The level of involvement of the country in the international development cooperation is quantified by means of the indicator *Official development assistance* related to *Gross national income* (ODA/GNI). This indicator is clearly defined and is broadly internationally recognised as the key parameter (for comparison and evaluation) of developed (donor) economies for the purposes of development assistance.

Based on the type of the recipient of funds, the official development assistance provided by the Czech Republic is characterised as bilateral assistance (provided directly to the developing country) or multilateral (provided via the relevant international organisation). Of the total amount of ODA provided by the Czech Republic in 2003 and 2004, bilateral assistance (57%) prevailed over multilateral assistance (37%).

Method of calculation of the indicator

According to OECD methodology, *Total international development cooperation* (IDC) is composed of: development projects, humanitarian aid, aid to refugees, discharge from debt, payments to the United Nations and other international organisations, payments to international financial institutions and payments to the EU, whether in the full amount of the contribution to the relevant organisation or in a prorated amount characterising the developmental dimension of the relevant international organisation.

In accordance with international standards, IDC involves assistance provided to developing countries (referred to as ODA – official development assistance) and assistance to transforming countries (referred to as OA – official assistance). Due to the prevailing importance of ODA and due also to the fact that many countries are completing the transformation process, OA is no longer reflected in statistics and is integrated in ODA. Thus, the proportionate indicator ODA/GNI serves as the aggregate indicator of IDC.

Development of the indicator in the Czech Republic

The IDC of the Czech Republic has followed a continuously increasing trend in recent years. This trend is in line with the "Concept of the Czech Republic International Development Assistance Programme for the 2002–2007 period" and the ensuing role of an emerging donor. Motivation to increase IDC also follows from the Czech Republic's membership of the EU and from the obligations assumed in this respect within the European Union. In addition to increasing the amount of funds made available for development assistance in the Czech Republic, progress has also been made in handling the international methodology of statistically reporting of the assistance.

Table 30.1: Amounts expended in IDC during the 2002–2004 period and an estimate for 2005 – 2008 (in mil. CZK), Czech Republic

	2002	2003	2004	2005	2006	2007	2008
ODA	1485	2556	2814	3051	3302	3423	3779
GNI*	2284615	2532400	2611500	277000	2957000	3157000	3381000
ODA/GNI	0.065 %	0.101 %	0.11 %	0.11 %	0.11 %	0.11 %	0.11 %

Note: * based on a forecast by the Ministry of Finance

The Czech Republic's official development assistance in 2004 amounted to CZK 2.8 bil., which corresponds approximately to 0.108% of GNI. The Czech Republic as an EU member state is subject to the conclusions of the General Affairs and External Relations Council (GAERC) of May 2005 and of the European Council (June 2005), defining new targets concerning the amount of ODA. New member states should "endeavour to increase development assistance to the level of 0.17% of gross national income by 2010 and then to 0.33% of gross national income by 2015". This is a very ambitious target.

International comparison

In 2003, for the first time the Czech Republic achieved an ODA to GNI rate of 0.10%, which is the highest level of all emerging donors (for example, Slovakia achieved 0.05%) and a level coming near to the levels of Italy (0.17% in 2003) or Austria (0.19% in 2002).

The charts below, taken from OECD statistics of 11 April 2005, indicate the ODA/GNI rate and the amounts of ODA in leading donors – DAC members (EU-15, USA, Canada, Switzerland, Australia and New Zealand) in 2004.

Chart 30.1: Level of ODA, international comparison (EU Member States), 2003

% ODA/GNI

Country	Value
Denmark	0.84
Luxembourg	0.805
Netherlands	0.805
Sweden	0.79
Belgium	0.60
France	0.41
Ireland	0.395
Finland	0.35
United Kingdom	0.345
Germany	0.295
Spain	0.225
Portugal	0.21
Greece	0.21
Austria	0.19
Italy	0.17
Czech R.	0.11
New EU Members	0.03
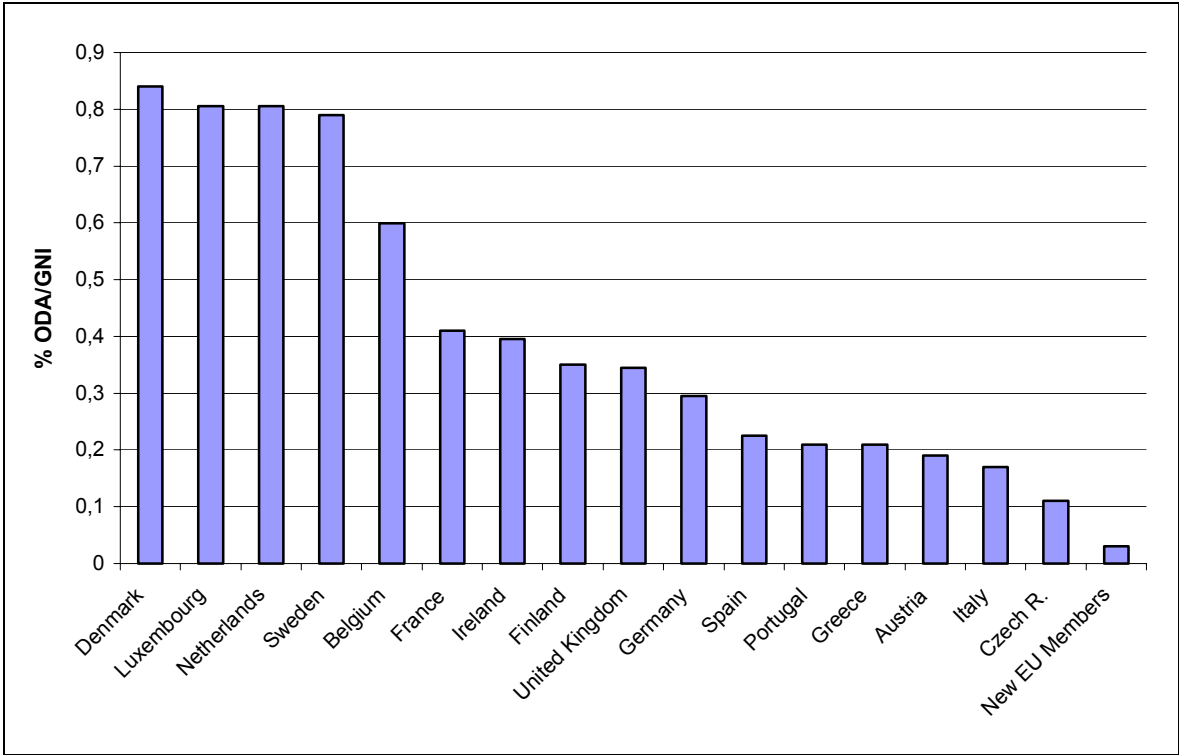
Note: new member states – EU-10
Source: OECD/DAC 2004 Annual Report, statistical annexes

Chart 30.2: Level of ODA (bil. USD), international comparison (DAC members), 2004

USD billion

Net ODA in 2004 - amounts

Country	Value
United States	19.00
Japan	8.86
France	8.47
United Kingdom	7.84
Germany	7.50
Netherlands	4.23
Sweden	2.70
Spain	2.55
Canada	2.54
Italy	2.48
Norway	2.20
Denmark	2.03
Australia	1.46
Belgium	1.45
Switzerland	1.38
Portugal	1.03
Austria	0.69
Finland	0.66
Ireland	0.59
Greece	0.46
Luxembourg	0.24
New Zealand	0.21
TOTAL DAC	78.57
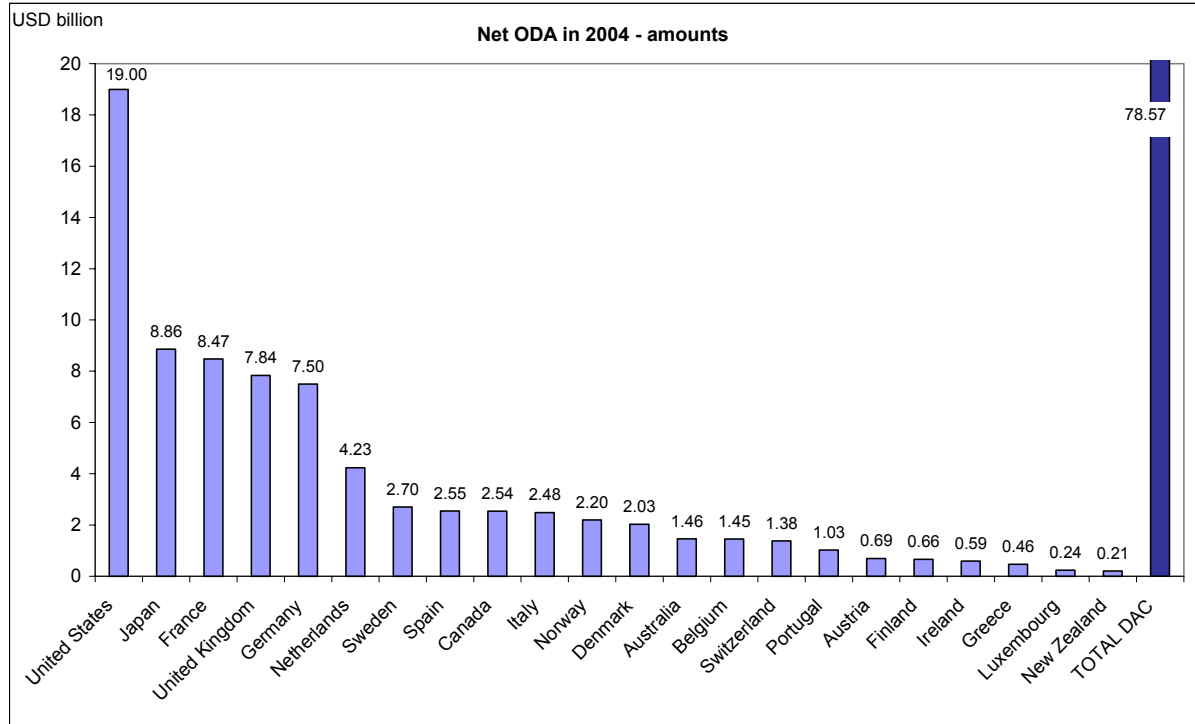
Source: OECD/DAC 2004 Annual Report, statistical annexes

Chart 30.3: Level of ODA (% GDP), international comparison (DAC members), 2004

Net ODA in 2004 - as a percentage of GNI

As % of GNI

Country	Value
Norway	0.87
Luxembourg	0.85
Denmark	0.84
Sweden	0.77
Netherlands	0.74
Portugal	0.63
France	0.42
Belgium	0.41
Ireland	0.39
Switzerland	0.37
United Kingdom	0.36
Finland	0.35
Germany	0.28
Canada	0.26
Spain	0.26
Australia	0.25
Austria	0.24
New Zealand	0.23
Greece	0.23
Japan	0.19
United States	0.16
Italy	0.15
TOTAL DAC	0.25

UN Target 0.7

Average country effort 0.42
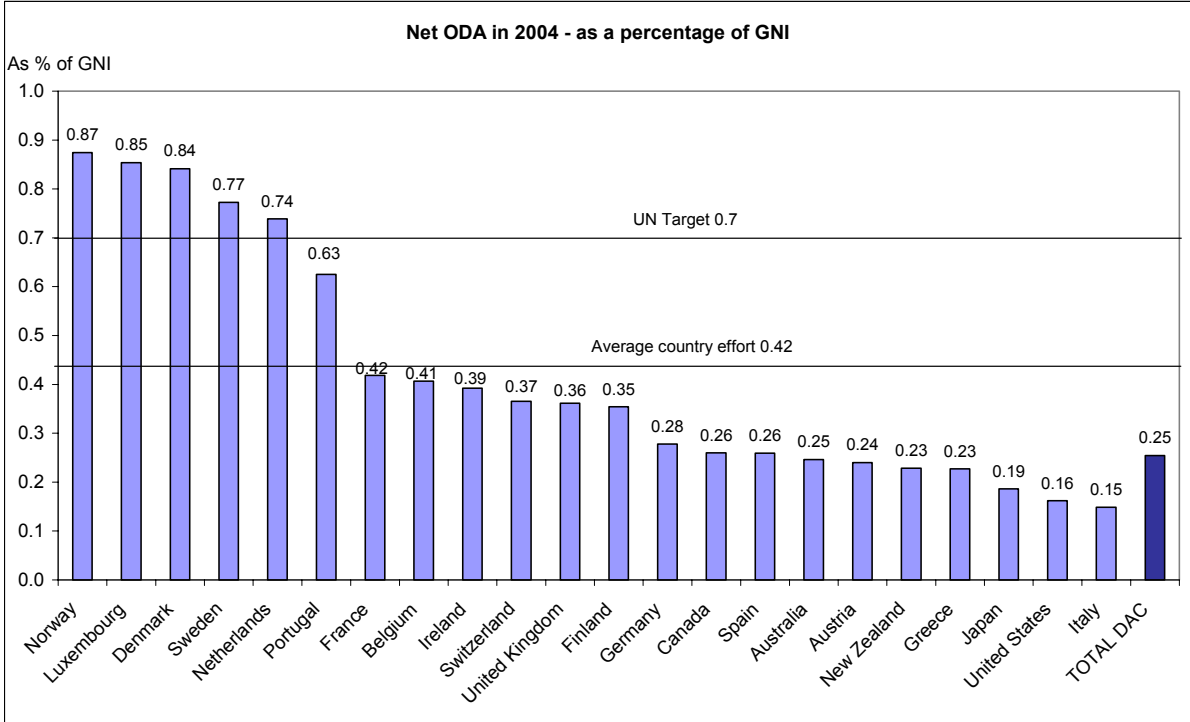
Source: OECD/DAC 2004 Annual Report, statistical annexes

31. Availability of public cultural services

Meaning and context of the indicator

Historical development in the territory of the present Czech Republic resulted in the fact that the term "culture" is perceived to comprise not only artistic activities or their results, but also educational, informative and similar activities of museums, galleries and libraries, publicly accessible monuments, and also activities in associations, traditions and customs, and even the natural and urbanised environment of individual life. Culture is thus a complexly structured set of diverse individual, collective and society-wide interests and activities that substantially facilitates the identification and development of the individual and also the integration of civil society. Its social and communication functions are important as well.

It is a matter of course that the actually declared needs and interests of people in the cultural sector are considerably influenced by the general character (economic, demographic, geographic and historical) of the settlement or region – including the rate of employment (job opportunities), the economic standard of households and the structure of their expenditures, the condition of technical infrastructure in the location, accessibility of cultural venues, etc.

The cultural sector thus delimited by far exceeds the limits of statutory powers and responsibilities of ministries or other administrative authorities or local governments; it is also difficult to reduce it to the sector of the economy.

The reform of the public administration and the reform of public budgets after 2000 has dramatically changed the responsibility of individual agencies of public administrations for culture, and also the system of financing culture from public budgets. The promulgation of new laws has gradually resulted in a principal separation of the monies of the state budget and of the budgets of local governments. Changes have also been introduced to the system of decision-making regarding the expenditures of the state budget and budgets of local governments. The public administration reform also modified the system, and approach to the role, of the state and local government within the system of responsibility for the public cultural service. These developments were accompanied by the dissolution of unnecessary cultural institutions (mainly those that were of a methodological nature), as well as by a reduction of expenditures on cultural institutions established by the public administration. In small municipalities, as a result of privatisation and economic transformation, the opportunities to use non-residential premises for culture became limited or ceased to exist altogether (e.g. ballrooms in restaurants, cinemas, etc.).

In view of the political and economic aspects of historical developments, the Czech Republic currently lacks private sources of funding in an amount substantial enough to permit a reduction in the participation of public budgets in the financing of public cultural services. The parameters of the economic standard of households in the Czech Republic do not allow us the assumption that expenditure in support of culture or public cultural services can be covered largely by increasing the prices charged to their users. In the context of the economic circumstances of individual life it is also impossible to believe that where the need for participation in culture is not expressly declared by the people, then such a need does not exist.

Unless the Czech Republic intends to resign itself to the support of culture or the protection of cultural heritage, to the support of public cultural services and to the support of art, it will be necessary to provide more dynamics in respect of the expenditure of public budgets on culture. For example, this should not be a problem in the relation of actual total expenditures of the state budget to the expenditures allocated to Chapter 334 (administered by the Ministry of Culture of the Czech Republic). Current expenditures of the state budget on culture are stagnant in the region of 0.5 to 0.7% of total expenditures. Budgets of ATU show greater dynamics of expenditure on culture. This increase in expenditure on culture is only illusory – it should be kept in mind that in the course of the past ten years ATU has been the transferee of managerial (including economic) obligations in relation to legal entities providing public cultural services (e.g. museums and libraries), the operating expenses of which are not negligible, but their activities are significant. It is necessary to note that current aggregate expenditures of public budgets on culture (reflecting the increased prices of inputs etc.) in principle only suffice to cover the absolutely necessary costs, but are insufficient to cover the cost of the necessary development of the structure and quality of cultural services. In addition, the internal debt of cultural institutions increases as a result of the mechanism of accounting depreciations, mainly of immovable property.

Method of calculation of the indicator

The percentage of expenditure recorded as expenditure on culture (according to the applicable budget structure) out of the total expenditures of public budgets is an important piece of information that allows an assessment of the extent to which the public administration pays attention to creating conditions for the availability of public cultural services, care of tangible and intangible cultural heritage, and creating conditions for the generation of new cultural values. Culture is an integral part of the constituents of social stability, constitutes a principal part of tourism, and the social functions of culture help to revitalise rural settlements. By monitoring this indicator it will also be possible to react to

Council Resolutions (EU) on culture – for example 96/C 242/01; 2002/C 32/01; 2002/C 32/02; or 2003/C 13/03.

The sources of information for the purposes of this indicator are the data on expenditure on culture from public budgets pursuant to Decree No 323/2002 Sb. on the structure of Chapter 334 of the state budget (administered by the Ministry of Culture of the Czech Republic), and data provided by local governments (Chapter 700).

Development of the indicator in the Czech Republic

The transfer of responsibility for the provision and financing of public cultural services from the state (and the National Committees) to municipalities and cities began by the operation of Act No 367/1990 Sb. on municipalities, or in connection with other laws constituting the new shape of the public administration in Czechoslovakia, and later in the Czech Republic. Municipalities and towns had an opportunity to cope with this responsibility during the past years and to find their own way to finance and support culture – according to their specific circumstances and of course according to the capacity of their budgets. It is noteworthy that the organisation of the decision-making process concerning the relevant portion of the budgets of district offices, in particular the institute of district assembly, played a positive role in maintaining the material and financial conditions for the provision of (local) public cultural services after 1990. The importance of the budgets of district offices in this respect was demonstrated in 2001 and 2002 when OkU had no authority to provide financial assistance; district offices were dissolved as of 31 December 2002. Of course, the amounts initially contributed by the state (through OkU as founders) towards maintaining the existence and activity of organisations established by the state (in particular libraries and museums) were substantial.

The public administration reform also resulted in a change of the system and in the approach to the role of the state and local governments in the organisation of responsibility for public cultural services. In the course of 2001, some organisations were transferred from the remit of the Ministry of Culture of the Czech Republic to the regions by the operation of Act No 157/2000 Sb. (e.g. state scientific libraries, galleries and certain museums – see annex to the Act). In 2002, another law (Act No 290/2002 Sb.) was promulgated, pursuant to which most of the contributory organisations and organisational units established by district offices were transferred to municipalities and regions with effect from 1 January 2003. Thus, 2002 was a year in which responsibility for the provision of public cultural services was transferred with final effect to local governments.

In 2001, the state began drafting a policy of organisational and financial provision for activities of regions in the cultural sector. The regions have competently and responsibly coped with their responsibility towards organisations that were transferred to their remit at first from the Ministry of Culture of the Czech Republic (in 2001), and later from OkU (after 1 January 2003). However, the own incomes of regional budgets still are not in direct proportion to the scope of powers and responsibilities that have been and are being transferred to the regions.

Since 2001, the participation of the state in the financing of local and regional culture has been limited by the provisions of applicable law. District offices were already in 2002 practically unable to provide direct financial contributions to local (regional) culture from their own budgets; expenditures in this respect were limited to the financing of the operations and activities of organisations established by district offices. The Ministry of Culture, as the administrator of Chapter 334 of the state budget, is in respect of expenditures in support of local (regional) culture bound by the provisions of Act No 218/2000 Sb., and by the budget authorised by law. The Ministry of Culture pays, from the budget of Chapter 334, inter alia the cost of operations and activities of organisations established by the Ministry. At present, this includes the financing of activities and functions of key national cultural institutions, or institutions whose activities can be referred to as indirect support to (local and regional) culture financed from the state budget. Chapter 334 contributes substantial amounts also to monument conservation – not only from the funds allocated to separate programmes, but also by financing specialised conservation organisations, such as the National Monument Conservation Institute. A part of the budget of Chapter 334 is designated for the support of cultural activities in various spheres of local culture – from support provided to theatres and publishing activities to grants in support of cultural activities of civic associations. A significant portion of expenditures under Chapter 334 is allocated to churches and religious societies.

The proportion of expenditure under Chapter 334 to total expenditures of the state budget has a continuously stagnating tendency or, if expenditure on churches and religious societies are not accounted for as part of expenditure on culture under Chapter 334, keeps decreasing. Looking at the overall level of expenditures in the cultural sector, it is necessary to take account of the inflation rate, fluctuations in the amounts of wages paid and the associated statutory charges. In the absence of any change, it may be assumed that the budget of Chapter 334 will not, in the near future, be sufficient to cover the requirements of the tasks of the state in the cultural sector and the care of the state property, let alone provide support to the cultural activities of other entities. In addition, the probability increases that tangible and intangible cultural heritage and

immovable monuments managed as state-owned property would be at a risk. In the event of continued unfavourable development of allocation of funds to Chapter 334, the Ministry of Culture may fail to fulfil its duties set out in the adopted Cultural Policy of the Czech Republic, and to meet the requirements and needs of territorial subdivisions (mainly self-governed regions) related to the function of the Ministry as a supporter of culture.

Table 31.1: Proportion of total expenditure under Chapter 334 to the state budget (bil. CZK), Czech Republic, 1993-2004

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
State budget Total expenditures	329.89	350.81	432.74	484.38	524.67	566.74	596.91	632.27	693.92	750.76	808.72	869.05
Chapter 334	2.4	2.97	3.32	3.53	3.78	4.4	5.24	5.37	4.76	4.81	6.23	6.55
Chapter 334 net of CRS *)						*3.7*	*4.57*	*4.58*	*3.81*	*3.8*	*5.03*	*5.24*
% of the state budget						*0.65*	*0.77*	*0.72*	*0.55*	*0.51*	*0.62*	*0.61*

Note: * CRS = churches and registered religious societies
Source: National Information and Consulting Centre for Culture, specialised section Regis

Table 31.2: Proportion of total expenditure on culture to total expenditures of public budgets (bil. CZK), Czech Republic, 1993-2004

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Chapter 334	2.4	2.97	3.32	3.53	3.78	4.4	4.06	4.02	3.98	4.1	6.23	6.55
Expenditures of local budgets **) (Chapters 700 and 380)	3.96	5.19	6.9	7.52	7.64	8.02	8.58	9.1	10.44	11.46	11.18	12.74
Total expenditures on culture	6.36	8.16	10.22	11.05	11.42	12.42	12.64	13.12	14.42	15.56	17.41	19.29

Note: ** Up to 2000 including expenditures of District Offices (OkU); in 2001 and 2002 expenditures of OkU – Chapter 380; since 2003 (inclusive) only the expenditures of municipalities and regions
Source: National Information and Consulting Centre for Culture, specialised section Regis

Chart 31.1: Proportion of total expenditure under Chapter 334 to the state budget, Czech Republic, 1993–2004
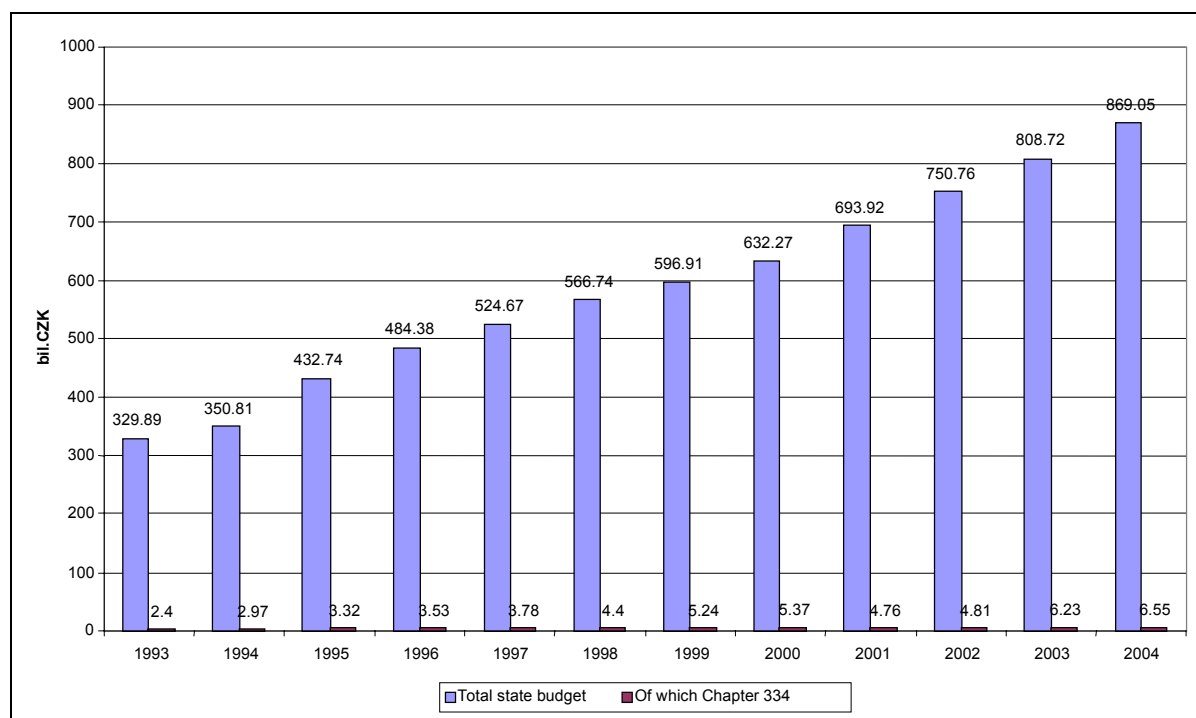
Source: National Information and Consulting Centre for Culture, specialised section Regis

Chart 31.2: Proportion of total expenditure on culture to total expenditures of public budgets, Czech Republic, 1993-2004
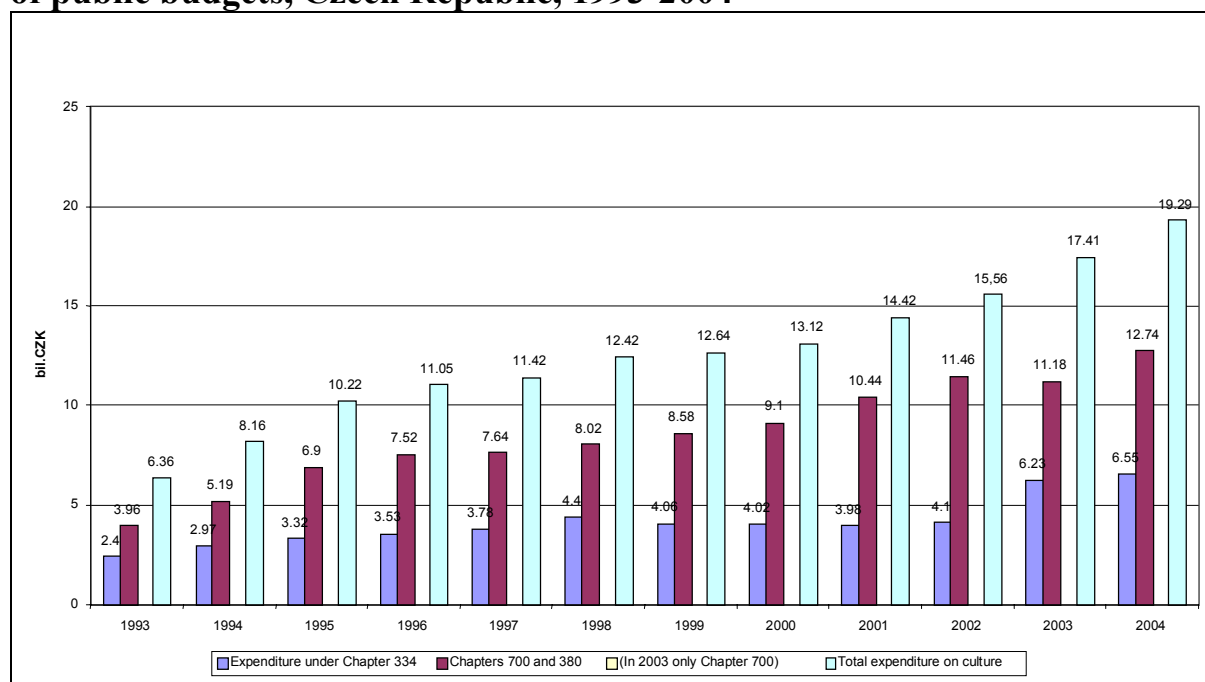
Source: National Information and Consulting Centre for Culture, specialised section Regis

International comparison

The international comparison of the data comprising this indicator is impracticable and, given the completely different structures of public administration, public budgets and practices related to the participation (in terms of both organisation and financing) of the public administration (the state and local governments) in the financing of culture would not have any rational basis. Comparable countries have completely different structures of public cultural services, consisting in differences between the legal entities providing such services and between the types, kinds and forms of cultural services rendered. Not least, individual (albeit comparable) countries considerably differ in respect of the priorities of users of public cultural services and their requirements concerning the structure of public cultural services supplied.

32. Average duration of court proceedings

Meaning and context of the indicator

One of the conditions of a well-functioning state administration is a well-functioning judiciary. Since the early 1990s, the judicial system in the Czech Republic has been faced by numerous problems, which are cumulative; the developments cannot as yet be referred to as stabilised. As a result of political and economic change after 1989, the cases in traditional court agenda became more numerous and complex and, in line with the principles of the rule of law, court protection has become the fundamental method for the protection of subjective rights (new agendas concerning restitutions, rehabilitations, or the inheritance agenda following the privatisation of notary's offices; the emergence of commercial law and the commercial judiciary; the gradual emergence of the administrative judiciary); in criminal law, besides the steep growth of crime and gross violence, new forms of unfair conduct emerged, whether in business or organised crime (in addition, general courts had to take over the agenda of the dissolved military courts). Along with the qualitative and quantitative changes in court agendas, the entire legal system is undergoing dynamic transformation, which has not been completed yet (due to protracted recodification of the fundamental codes) and the development of which may be described as rash, hardly systematic, and non-transparent even for the professional public, which places increased demands on the court application and interpretation of law; these trends intensified after the Czech republic's entry into the EU legal environment. The disproportion between the agenda and the staffing capacity of courts increased dramatically in the early 1990s when approximately 50% of all judges resigned, some of them for political reasons, but most left of their own will by transferring to the private sector, which during the whole of the 1990s experienced a boom of legal professions intensified by the privatisation of attorneys and notaries, and most recently court restrainers (the Ministry of Justice then had to deal with the situation by replenishing the number of judges with young graduates).

All this resulted in the long-lasting overburdening of all segments of the judicial system and in assessments of the judiciary as ineffective; the Czech Republic has on several occasions been criticised in international forums for the inadequate duration of court proceedings. The situation is still unstable, questions are raised as to the structure of the judicial system, the number of judges or prosecutors and other judicial staff, and their professional standard. Stabilisation of the judicial system will be a long-term process, and thus it is proposed to use the indicators of the average length of court proceedings for the purposes of monitoring its development. These indicators cover most of the court agenda, are comparable with the past, and allow an immediate comparison

of whether the average duration of proceedings in basic agendas is becoming shorter or longer. Given the current unsatisfactory condition of the judicial system, the shortening average length of court proceedings can be interpreted as a positive development. Although this indicator appears to be purely quantitative, it indicates not only the number and duration of court proceedings, but also the quality of organisation of work of the courts. These values are also well comparable with foreign countries.

Method of calculation of the indicator

The average *Length of court proceedings* is undoubtedly an appropriate indicator for the assessment of the performance of the judicial system. Based on the current reporting practice in the justice sector, court proceedings are initiated upon the receipt by the court of the action, and concluded upon registration of the legal force of the court verdict. The length of proceedings thus includes not only the time during which the court of first instance conducted the proceedings, but also the time during which an appellate court conducted appellate proceedings, as the case may be, and the time necessary for the delivery of the court verdict to all parties with the statutory period of fifteen days for appeal.

The time of court proceedings is thus often adversely affected by external influences, namely the substandard work of the mailing service which fails to deliver court verdicts to the parties (for example, the service of the process abroad affects the length of proceedings very significantly). The length of court proceedings is further affected by an appeal to the verdict of the court of first instance. The statistics of the Ministry of Justice indicate that about 20.5% of all persons sentenced in criminal proceedings filed an appeal, while in commercial cases appeals were filed in approximately 10% of cases, and in civil cases in about 6.9% of disputes.

The *criminal agenda indicator* (Chart 32.1) is stated in days as the average length of all criminal proceedings concluded with final effected by district, regional or high courts in given year.

The *civil agenda indicator* (Chart 32.2) is stated in days as the average length of all civil proceedings and proceedings in curatorial agenda concluded with final effect by district, regional or high courts in a given year.

The *commercial agenda indicator* (Chart 32.3) is also stated in days as the average length of all disputed commercial proceedings concluded with final effect by regional or high courts in a given year. This indicator does not comprise data on the length of processing applications for registration in the Commercial register. At present, initial registration takes about 75 days and changes to or the dissolution of a business take 125 days. Act No 216/2005 Sb.,

amending Act No 513/1991 Sb. (the Commercial Code) and other related laws, changes the method of registration in the Commercial Register and adjusts the deadline by which the court must effect the registration. We therefore do not find it reasonable to have the time of processing applications for registration in the Commercial Register influence the indicator of commercial agenda.

The indicator does not comprise the bankruptcy and composition agenda as the Ministry of Justice does not keep records of the data relating to the duration of bankruptcy proceedings from the filing of petition in bankruptcy until the legal force of the final verdict. The Ministry of Justice, while monitoring the agenda of bankruptcy and composition, focuses on information of operational nature (how many new petitions were filed, how many were processed, how many are pending, and how long a case is pending).

Development of the indicator in the Czech Republic

The criminal agenda has been monitored on a long-term basis and the Ministry of Justice has a sufficient amount of statistical information. The chart below shows development in the length of the handling of criminal agenda by district and regional courts between 1995 and 2004.

Chart 32.1: Length of criminal proceedings (in days) before district and regional courts, Czech Republic, 1995-2004
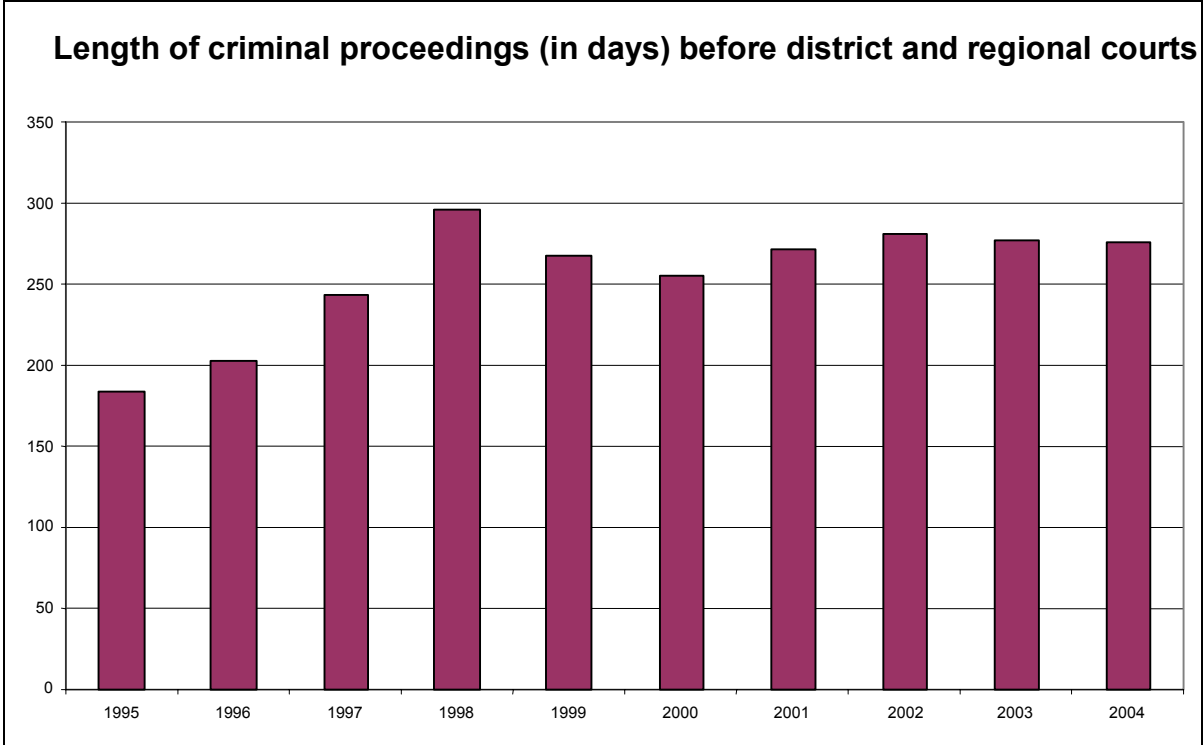
Source: Ministry of Justice of the Czech Republic

The handling of civil agenda has also been monitored on a long-term basis. The chart below shows the development of the indicator of civil agenda between

1995 and 2004. The indicator is calculated as the average length of all civil proceedings and proceedings under the curatorial agenda, which the district or regional courts or the high court conclude with final effect in the relevant year.

Chart 32.2: Length of court proceedings (in days) in civil cases before district and regional courts, Czech Republic, 1995-2004

Length of court proceedings (in days) in civil cases before district and regional courts

Year	Days
1995	363
1996	346
1997	379
1998	378
1999	394
2000	442
2001	439
2002	441
2003	448
2004	450
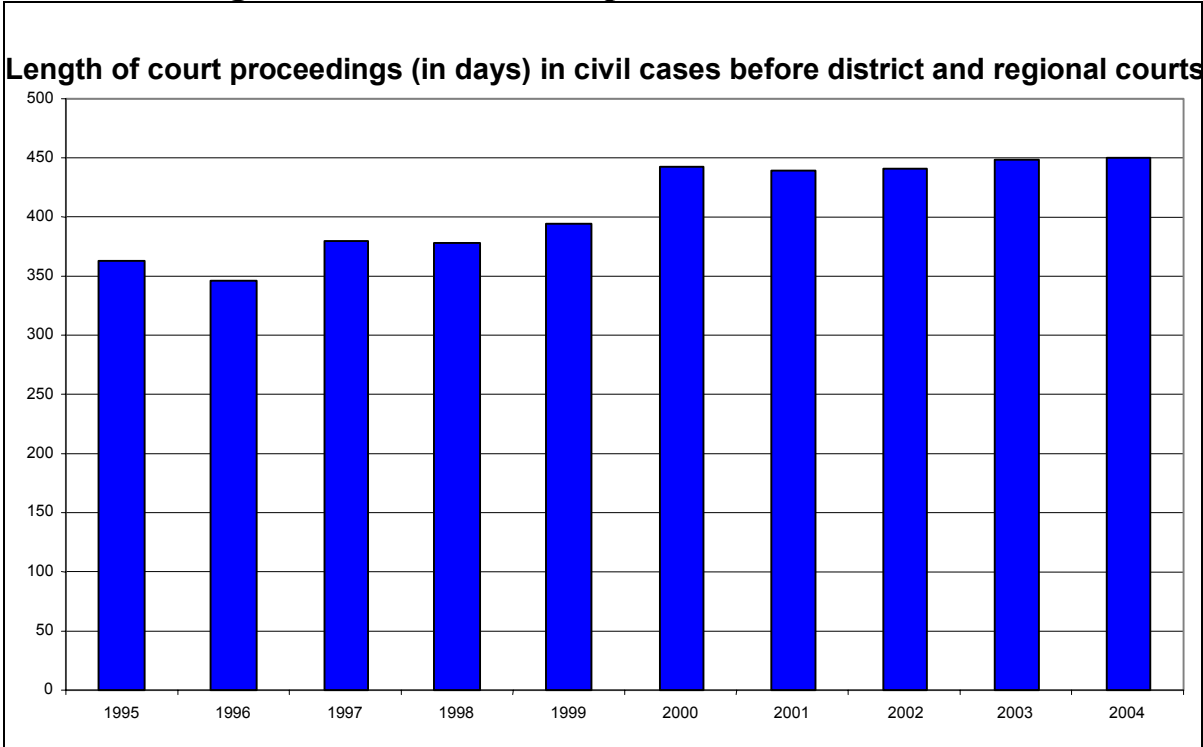
Source: Ministry of Justice of the Czech Republic

The commercial agenda was included in the jurisdiction of general courts in 1992, following the dissolution of state arbitration. The Ministry of Justice has monitored the development of this agenda only in respect of operative proceedings. The conditions of statistical monitoring were adjusted in 2001 so that it is possible to indicate the average length of commercial proceedings handled by regional courts. Despite the relatively short time sequence it is obvious that commercial disputes handled by Czech regional courts take excessively long. In 2004, the average duration of proceedings before the commercial sections of regional courts was 1,401 days.

Chart 32.3: Length of court proceedings (in days) in commercial cases before regional courts, Czech Republic, 2002-2004

Source: Ministry of Justice of the Czech Republic

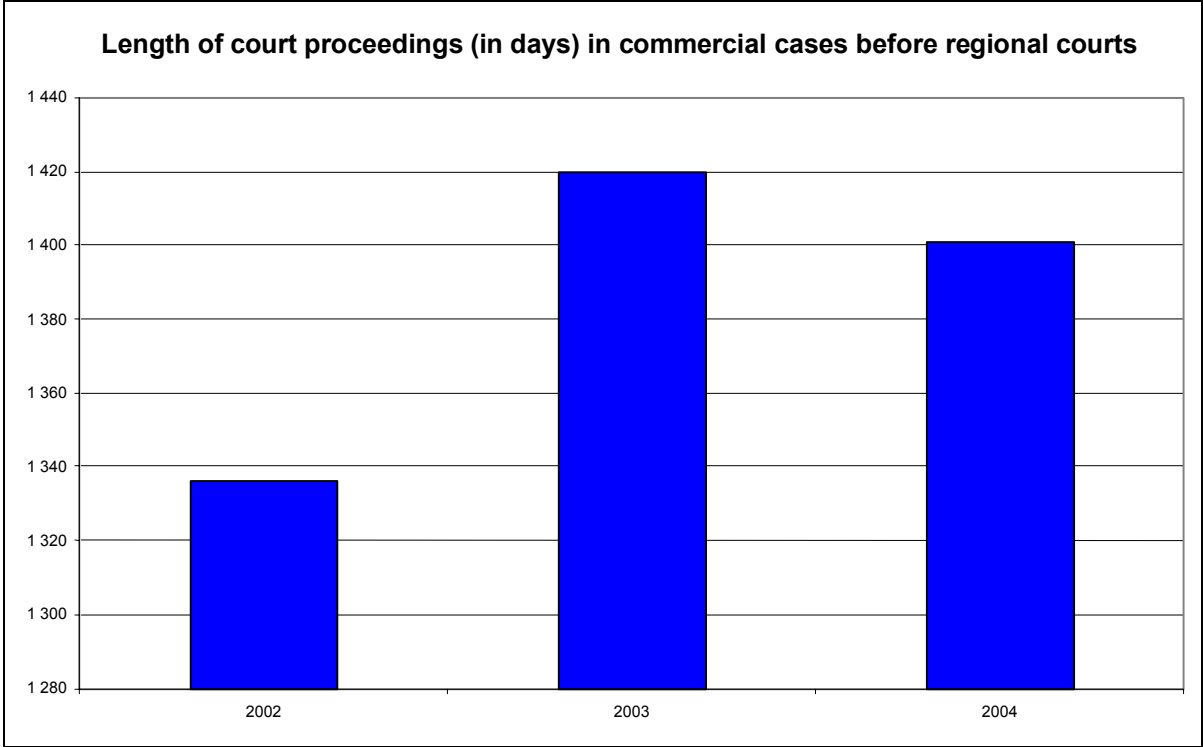**International comparison**

Data for international comparison of this indicator are not currently available.

33. Corruption Perceptions Index

Meaning and context of the indicator

Corruption, or corrupt practices, is a negative phenomenon that can be traced in all economies throughout the world. It can be characterised as a specific relation between two or more subjects (whether individuals or institutions or both), one of which offers and provides a consideration for any unjustified advantage or promise of such advantage, and the other demands and accepts the consideration for such unjustified advantage. The consideration need not always be in cash, but may also consist of material benefits, information, action or inactivity, etc. The danger of corruption lies in its capability of undermining the principals underlying competition, democracy and other values, such as the rule of law, unrestricted access to information, and civil and professional virtues. Corruption may cause erosion of trust in the legitimacy of existing government institutions and may contribute to the formation of a parallel structure of power with potential close ties with organised crime.

As the consequences of corrupt practices are reflected most in the administration of public affairs, the fight against corruption has become one of the priorities of the Czech government. Developments in the field of corruption and the achievements in combating corruption are thus one of the appropriate indicators of the development and ripening of democracy in the Czech Republic. For this reasons, the authors of this Report decided to include this factor among the other indicators.

For this purpose, the *Corruption Perceptions Index* (CPI) was selected; it has been published annually by Transparency International since 1995. CPI is an extremely complex indicator compiled on the basis of numerous surveys carried out by a number of agencies (18 surveys by 12 agencies in 2004). CPI measures the level of corruption (in 2004 in 146 countries of the world) as perceived by entrepreneurs, analysts and risk managers. It is thus based on purely subjective data and may not correspond with the actual state of corruption in a particular country, which, however, cannot at present be determined reliably. Nonetheless, CPI is a valuable indicator, recognised and used globally.

As the Progress Report comprises primarily the sources of empirical, "hard" data, it may appear that CPI and other "soft" indicators are somewhat inorganically incorporated into the document. The authors of the Progress Report nonetheless intended to provide, using available information, the whole picture of all aspects of the developments in the Czech Republic, and are convinced that CPI is suitable for this purpose. Nevertheless an indicator will be designed in the future that will use more objective rather than subjective data to grasp the problem of corruption.

Method of calculation of the indicator

The Corruption Perceptions Index is a composite index compiled on the basis of several corruption-related surveys. These surveys use a uniform definition of corruption: "Corruption is the abuse of public power for private benefit, the brining of public officials, or embezzlement of public funds", but do not use a uniform methodology. In order for a source indicator to be included in CPI, it must meet three criteria: 1. Compares several countries; 2. Measures the overall rate of corruption (frequency and/or total amount expended in corruption by those corrupting); 3. Is not older than 3 years.

The aim of CPI is to provide data on the general perception of corruption in the countries involved.

CPI for 2004 reflects the findings of 18 surveys conducted by 12 independent institutions. All input indicators are standardised on a scale between zero and ten, where a higher number means a lower rate of corruption. The CPI level is calculated as the arithmetic average of these indicators.

CPI for 2004 offers a comparison of 146 countries. To achieve maximum objectivity of the index, only those countries that were included in at least three separate surveys were ranked.

All surveys exclusively include a subjective type of data obtained from answers of entrepreneurs, analysts and risk managers. In principle, there are three categories of surveys depending on what respondents are approached. 1. surveys approaching non-residents – experts in developed countries; 2. surveys approaching non-residents – managers in developing countries; 3. surveys approaching residents – local and foreign managers. Data obtained from all three types of surveys correlate well with each other despite the different categories of respondents and different methodologies.

In general, the weakness of CPI is that it is based on subjective data. Furthermore, it is a composite index, whose drawback is that it incorporates different inputs based on mutually incompatible methodologies. This may be reflected in a broader scatter of results, which may not be sufficiently statistically robust.

CPI methodology develops progressively and improves rapidly as its significance increases.

Development of the indicator in the Czech Republic

The year-on-year changes in CPI levels are the result not only of changing perceptions of corruption in individual countries, but also of the changing range

of resources and methodologies used. The use of certain outdated resources in CPI is often discontinued and replaced by new resources, which disrupts the consistence of the selection. The primary purpose of CPI is to provide a yearly summary of the opinions of individual respondents rather than to monitor the trend of CPI. The trend can be reliably monitored only in respect of some countries where the resources remain the same year on year. In the Czech Republic, it is possible in this way to see an improvement in 2004 compared with 2003 (but not in 2003 compared with 2002 etc.).

The table below shows development in the Czech Republic after 1998.

Table 33.1: Corruption Perceptions Index, Czech Republic, 1998-2004

Year	Index	Divergence	Position	Number of countries surveyed	Surveys used
2004	4.2	1.2	51	146	11
2003	3.9	0.9	54	133	12
2002	3.7	0.8	52	102	10
2001	3.9	0.9	47	91	10
2000	4.3	0.9	42	90	11
1999	4.6	0.8	39	99	12
1998	4.8	0.8	37	85	9

Source: Transparency International

Between 1998 and 2002 CPI indicated a gradually worsening rate of corruption in the Czech Republic. In 2003 and 2004 the CPI trend showed an improving tendency. This reliably determined improvement in the index may be attributed to the Czech Republic's accession to the European Union, which improved the country's credit in the eyes of respondents in the surveys in connection with the free movement of persons, goods, services and capital and the reliance on the transposition and implementation of acquis communautaire.

International comparison

The table below shows the ranking of EU Member States and CPI levels.

Table 33.2: Corruption Perceptions Index, international comparison, 2004

Country ranking	Country ranking in the EU	Country	CPI 2004 level	Range	Surveys used	Vari-ation	Max./min. values
1	1	Finland	9.7	9.5 - 9.8	9	0.3	9.2 – 10.0
3	2	Denmark	9.5	9.3 – 9.7	10	0.3	8.7 – 9.8
6	3	Sweden	9.2	9.1 – 9.3	11	0.2	8.7 – 9.5
10	4	Netherlands	8.7	8.5 – 8.9	10	0.4	8.3 – 9.4

11	5	United Kingdom	8.6	8.4 – 8.8	12	0.5	7.8 – 9.2
12-13	6	Austria	8.4	8.1 – 8.8	10	0.7	7.3 – 9.3
12-13	7	Luxembourg	8.4	8.0 – 8.9	7	0.8	7.3 – 9.6
15	8	Germany	8.2	8.0 – 8.5	11	0.6	7.5 – 9.2
17-18	9-10	Belgium	7.5	7.1 – 8.0	10	0.8	6.6 – 9.1
17-18	9-10	Ireland	7.5	7.2 – 7.9	10	0.7	6.5 – 8.7
22-23	11-12	France	7.1	6.6 – 7.6	12	1.1	5.0 – 9.04
22-23	11-12	Spain	7.1	6.7 – 7.4	11	0.6	5.6 – 8.0
25	13	Malta	6.8	5.3 – 8.2	4	1.9	5.3 – 9.1
27	14	Portugal	6.3	5.8 – 6.8	9	0.9	5.0 – 7.3
31-32	15-16	Estonia	6.0	5.6 – 6.7	12	1.2	5.0 – 9.1
31-32	15-16	Slovenia	6.0	5.6 – 6.6	12	1.0	5.6 – 8.7
36	17	Cyprus	5.4	5.0 – 5.8	4	0.5	4.74 – 6.0
42-43	18-19	Hungary	4.8	4.6 – 5.0	12	0.5	4.1 – 5.6
42-43	18-19	Italy	4.8	4.4 – 5.1	10	0.7	3.4 – 5.6
44	20	Lithuania	4.6	4.0 – 5.4	9	1.3	3.1 – 7.7
49	21	Greece	4.3	4.0 – 4.8	9	0.7	3.8 – 5.6
51	22	Czech Republic	4.2	3.7 – 4.9	11	1.2	3.4 – 7.3
57-58	23-24	Latvia	4.0	3.8 – 4.3	8	0.4	3.5 – 4.8
57-58	23-24	Slovakia	4.0	3.6 – 4.5	11	0.9	3.0 – 5.3
67	25	Poland	3.5	3.1 – 3.9	13	0.9	2.4 – 5.3

Source: Transparency International

Of the 25 EU Member States, the Czech Republic placed 22nd in 2004. Of the ten new members, the Czech Republic achieved worse values than Malta, Estonia, Slovenia, Cyprus, Hungary and Lithuania, and better values than Latvia, Slovakia and Poland. In the context of the European Union, where the average value of CPI is 6.58, the Czech Republic's position is considerably below the average.

The sources of CPI do not distinguish between the forms of corruption, administrative and political corruption, or small-scale and large-scale corruption etc. The rate of CPI itself does not answer the question of what the differences between countries mean and whether the differences are real or just reflect differences in perceptions. For this reason we suggest to also monitor the indicator "total amount of direct foreign investments in a country per capita (per capita DFI)", which may significantly mend these drawbacks.

As noted above, CPI levels indicate with a high rate of reliability the influence of the factors taken into account on the values of total direct foreign investments in individual countries.

The per capita recalculation is proposed because sustainable development concerns humankind, which is its lead actor and draws the main benefit thereof. Humankind bears the impacts of corruption, which lowers its standard of living, impedes access to education and the span of life. These three factors are accounted for in the Human Development Index (HDI), published annually by the United Nations (178 countries of the world in 2004). Subject to correlation of the per country values included in CPI and HDI, the resulting significant value is approximately 0.7. This is shown in the chart below, representing the CPI and HDI values in 2004 for 143 countries.

For the purposes of this chart, the CPI data are deducted from 10 in order to avoid any erroneous interpretations. In this case, a higher CPI level means a higher rate of corruption.

Chart 33.1: Correlation between CPI and HDI, international comparison, 2004
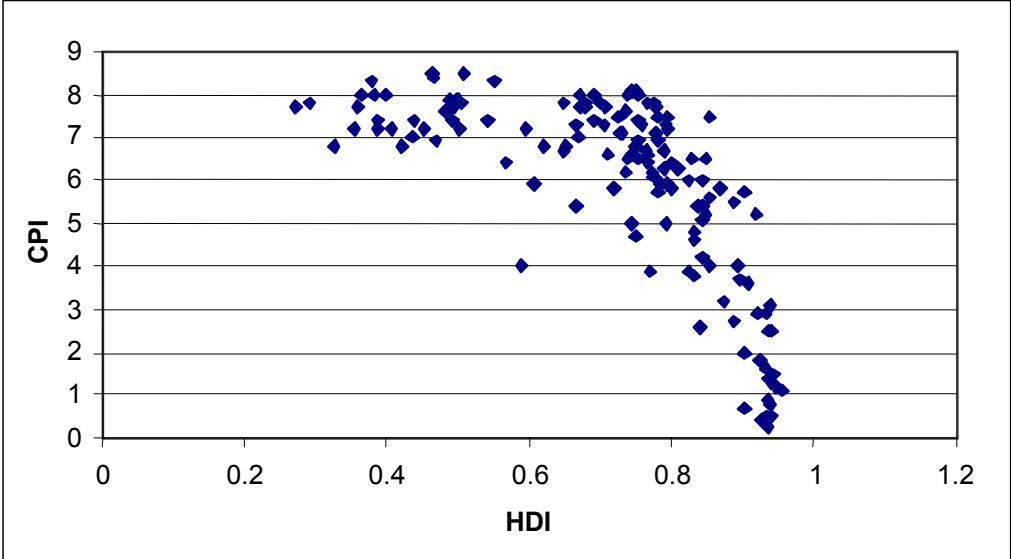
Source: Transparency International, UN

The chart shows that the higher the level of corruption based on CPI, the lower the HDI is.

The per capita recalculation of DFI is also appropriate because individual countries may differ significantly in terms of area and population. The indicator of the simple amount of DFI would not be relevant from the point of view of accomplishment of the meaning of the sub-indicator "sustainable development".

The main meaning of the sub-indicator "per capita DFI" is to create a wider framework for the perception of corruption in individual countries.

34. Coverage of the territory of the Czech Republic by approved town and country planning documentation of municipalities

Meaning and context of the indicator

Town and country planning documentation (TCPD) consistently and comprehensively provides for the functional use of a territory, sets out organisational principles, and coordinates the material and time aspects of construction and other activities influencing the development of territories. It creates conditions for providing continuous compatibility of all natural, civilisational and cultural values in an area, mainly in view of environmental considerations. TCPD is thus drafted with regard to all three pillars of sustainable territorial development. Any approved TCPD is legally binding on the owners of lands, and is relevant for the exercise of state administration in the field of town and country planning.

An approved local plan with clear, generally binding rules for the use of areas significantly affects the decision-making of the private sector as to where to invest its resources and how to participate in the development of the municipality or region. Town and country planning documentation is also one of the relevant materials underlying the allocation of public funds and the assessment of their economical use.

The Building Act does not prescribe any obligation of municipalities to draft a local plan; the principle of positive motivation is used (investment assurance, simplified zoning proceedings). The local plans of municipalities define the urban concept, specify the acceptable, unacceptable or conditional functional use of space, its layout, provides basic regulation of the territory and define the limits of area available for development. The local plan comprises local plan of a municipality (LP M) and older town and country planning of settlement configuration (TCP SC), many of which have been amended.

Method of calculation of the indicator

This indicator represents the proportion of cadastral areas with approved and valid TCPD of municipalities to the total area of the country, expressed as a percentage.

Data for calculation of the indicator are available at the central database DAS2002 of the Registration of Town and Country Planning Activity in the Czech Republic (the "Registration"). Consistent data are available for a period from 1995.

The obligation to keep records of land use planning and related activities was imposed by Act No. 50/1976 Coll. on town and country planning and on building regulations (Building Act) in its effective wording. The Act is implemented in accordance with § 21 of Ministry for Regional Development Decree No. 135/2001 Coll., on planning documentation and non-statutory planning materials. The powers and responsibilities of planning authorities related to the registration are further provided by The methodology of the Planning Department of the Ministry for Regional Development on the registration procedure of planning activities.. Registration of the TCPD of municipalities are kept continuously on the basis of registration cards delivered to regional authorities by the drafters (procurers) of TCPD (municipal authorities). Regional authorities then make entries in the central database with the use of the iLAS web application. The administration of the central database and development of applications necessary for its administration and assessment is the responsibility of the Institute for Spatial Development (UUR) based in Brno in accordance with its statute of an organisational unit of the state controlled directly by the Planning Department of the Ministry for Regional Development. The database[9] is available for review.

On the basis of the DAS2002 database integrated with the vector file of administrative and cadastral borders with a database for the 1 : 50 000 scale, managed and published by the Czech Geodetic and Cadastral Office, an interactive application is currently generated under the name "Mapa", permitting, among other functions, the generation of map-based outputs. The application is in trial operation and is available[10].

The overview of the municipalities and regions in the Czech Republic having an approved or pending TCPD is a source of valuable information that is made available to the general public in the form of annual publications (yearbooks) and in particular over the Internet.

Development of the indicator in the Czech Republic

The table and chart below show the development of coverage of the territory of the Czech Republic by approved town and country planning documentation of municipalities (in %). Current coverage of the territory of the Czech Republic by approved town and country planning documentation of municipalities (in %), i.e. the proportion of km^2 covered by approved TCPD (legal status) to the total area of the country, is 56.54% (as of 31th March, 2005). Time sequences can be

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[9] http://www.uur.cz/ilas/iLAS.asp.

[10] http://www.uur.cz/default.asp?ID=966

calculated based on the data in the Registration retroactively to year 1995. Coverage of the territory of the Czech Republic by approved town and country planning documentation of municipalities has an ascending tendency.

Table 34.1: Development of the coverage of territory by approved TCPD (in % as of 31th March, 2005), Czech Republic, 1995-2005

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Indicator	19.10	23.37	28.15	32.47	38.11	42.33	47.75	49.55	52.96	54.90	56.54

Source: Records of town and country planning Activities in the Czech Republic. DAS2002. UUR, Brno, 2005

Chart 34.1: Development of the coverage of territory by approved TCPD (in % as of each 31th March), Czech Republic, 1995-2005
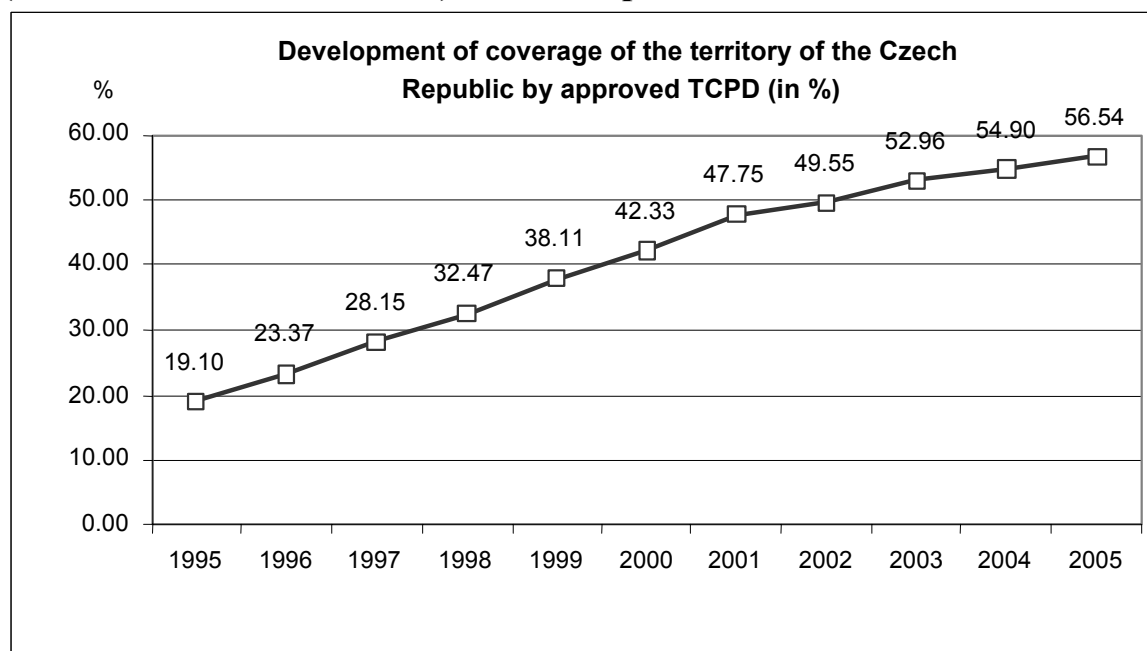
Source: The registration system of regional planning activity in the Czech Republic. DAS2002. UUR, Brno, 2005

The draft new building bill reinforces the principle of positive motivation and the tools used in safeguarding sustainable development within a territory. Growth of the indicator can be expected in connection with the increasing pressure towards development in the area. The bill also requires the gradual updating of older documentation, and thus a slight variation of the indicator may occur in the early stages.

Maps generated from the DAS2002 database are attached to illustrate the current situation.

Chart 34.2 Map of municipalities with approved town and country planning documentation (legal status), Czech Republic, 2005

Source: The registration system of regional planning activity in the Czech Republic. DAS2002. UUR, Brno, 2005 (Map by Czech Geodetic and Cadastral Office, 2005; Scale 1 : 500,000)

Chart 34.3: Map of municipalities with approved and unfinished town and country planning documentation and non-statutory planning materials and planning documentation (physical status), Czech Republic, 2005
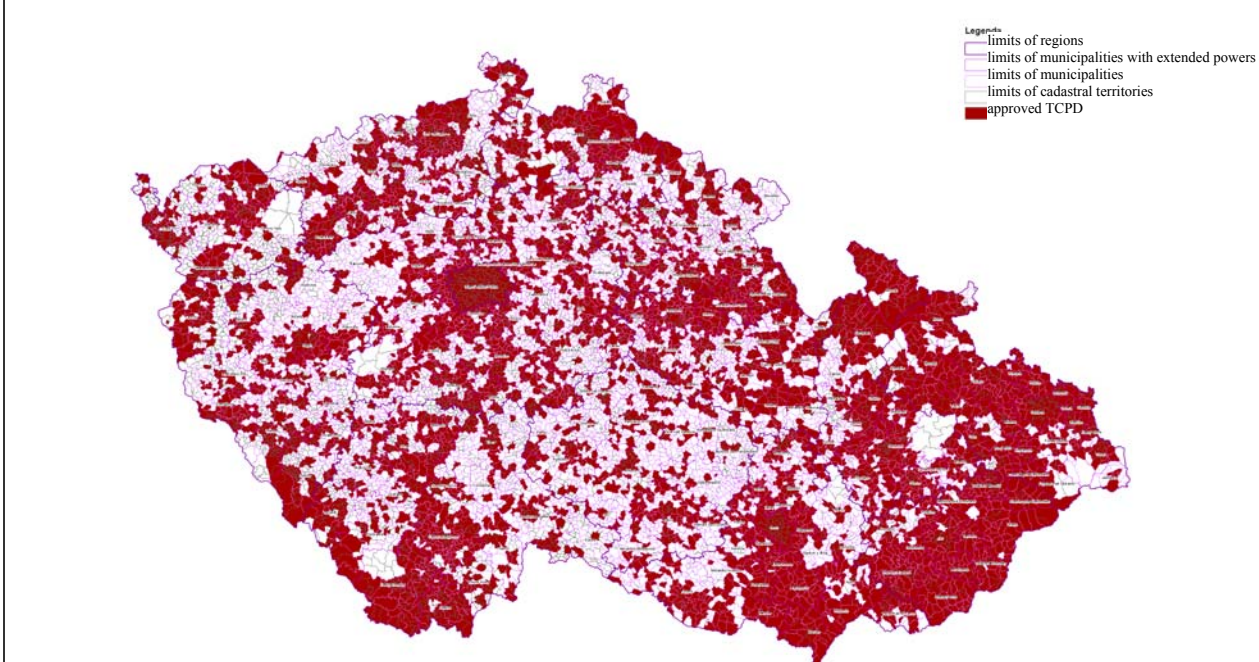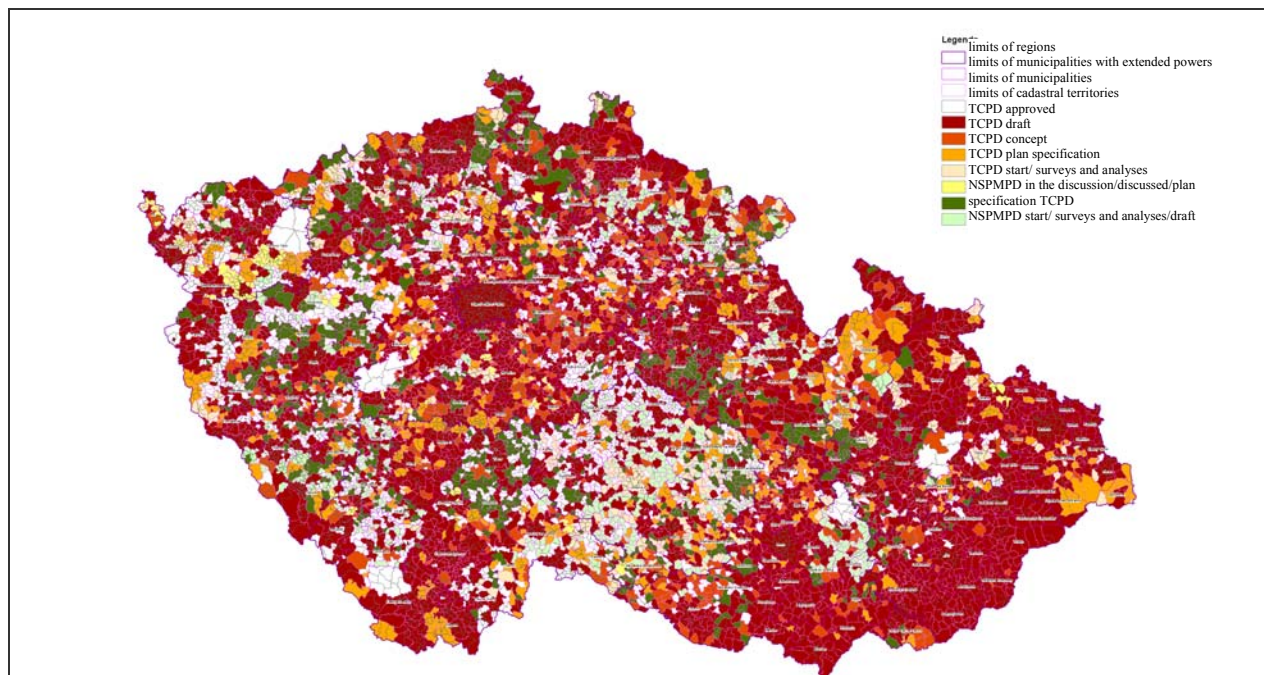

Source: The registration system of regional planning activity in the Czech Republic. DAS2002. UUR, Brno, 2005 (Map by Czech Geodetic and Cadastral Office, 2005; Scale 1 : 500,000)

International comparison

Land use planning (or spatial planning) has a long tradition in EU countries. The standard contents of TCPD in European countries are becoming increasingly harmonised (this trend is also followed by the new draft building bill).

In some EU countries, certain forms of TCPD are required by the operation of law (for example in Germany or Sweden), but TCPD is not always legally binding (it is not binding in Sweden and the United Kingdom). The situation in the Czech Republic is the most similar to that in Slovakia and the Netherlands, where documentation is drafted for the same period of time and the document is legally binding for the decision-making of the state administration.

In Germany, where monitoring is the responsibility of state authorities, it is customary to take account of the share of the area of the relevant state covered by approved local plans of municipalities. For example, in Saxony a report on the development of territory is submitted to the State Assembly for 4-year periods. A DIGROG database was developed (digital spatial planning register), the content of which somewhat differs from the content of the Czech

Registration. The DIGROG database is as yet available only in the intranet of spatial planning sections of regional authorities (Regierungspräsidien – Chemnitz, Dresden, Leipzig) as superior authorities responsible for spatial planning. Public access over the Internet has not yet been made available. An Information Spatial Planning System is being prepared, similar to the system of town and country planning analytical documentation as proposed by the draft building bill (the European trend of unifying the contents of land use planning databases).

Updated central databases of records integrated with the files of administrative and cadastral limits are not, based on available information, maintained in other EU member states, but several countries are interested in the Czech practice and are considering developing databases inspired by the Czech experience.

Slovakia, for example, maintains central records of TCPD of municipalities similar to the Czech model. However, the area to be covered by TCPD is only defined by a list of cadastral territories of the MEMO type. The database is not integrated with the Territory Identification Register, which is the case in the Czech Republic. This means that the size of the territory covered by documentation of the relevant type cannot be generated automatically. The indicator of coverage of territory by approved town and country planning documentation of municipalities (in %) in Slovakia is not available for the time being, but an application of this type is being developed and should be made available in the near future. It is currently possible to only determine the proportion of municipalities with approved TCPD to the total number of municipalities. According to preliminary information, the proportion is about 30% of municipalities. The current proportion of municipalities with approved TCPD (legal status) to the total number of municipalities in the Czech Republic is 48.5% (the coverage of the territory of the Czech Republic by approved town and country planning documentation of municipalities is 56.54%). However, this proportion does not take account of the differences between municipalities of different size and significance.

Presumably, an international comparison will be available for this indicator in several years.

35. Regional dispersion of the employment rate of the 15-64 age category

Meaning and context of the indicator

Regional dispersion of the rate of employment measures inter-regional differences in the dispersion of employment. It is based on the data of selective labour force surveys conducted in all EU countries pursuant to the methodology of Eurostat and guarantees full international comparability of results.

Method of calculation of the indicator

Regional dispersion of the rate of employment is monitored in the form of a dispersion index of regional employment rates for persons between 15 and 64 years of age, expressed as a proportion of the relevant variation of weighted regional rates of employment of persons between 15 and 64 years of age to the nationwide rate of employment of persons between 15 and 64 years of age.

The calculation is based on the annual average of employment rate in the Czech Republic and in individual NUTS 2 or NUTS 3 regions.

The indicator is defined as the proportion of (i) the square root of the dispersion of weighted employment rates for persons between 15 and 64 years of age to (ii) the nationwide rate of employment of persons between 15 and 64 years of age.

The dispersion of weighted employment rates of persons between 15 and 64 years of age is defined as:

$$Var\left(\frac{x_i}{y_i}\right) = \sum_i \left(\left[\frac{x_i}{y_i} - \frac{\bar{x}}{\bar{y}}\right]^2 \cdot \frac{y_i}{\sum_i y_i} \right)$$

where x_i is the number of persons employed in the age of 15 to 64 years in region i, y_i is population between 15 and 64 years of age in region i, $\bar{x}$ and $\bar{y}$ stand for nationwide average values of x_i and y_i.

The nationwide employment rate is defined as $\dfrac{\bar{x}}{\bar{y}} = \dfrac{\sum x_i}{\sum y_i}$.

Eurostat does not apply the indicator of the dispersion of regional employment rate to Denmark, Estonia, Luxembourg, Cyprus, Lithuania, Latvia, Malta and Slovenia, which are not subdivided into regions due to their size, and to Ireland, subdivided into only two regions. However, employment rate dispersion in these

countries is accounted for as a quantification of this indicator for the relevant group of countries (EU-25, EU-15, EU-12).

Development of the indicator in the Czech Republic

The findings of the labour force survey indicate two stages in the long-term development of the dispersion of the regional employment rate. During the first stage from 1996 to 2000 the rate grew rapidly as a result of the increasing differences in employment rate between regions. This growth in the variance index was influenced mostly by the development of employment in Prague, where job opportunities are much greater than elsewhere, and by the rapid decrease in employment rate in Moravian regions. The regional differences from the nationwide average stagnated in and after 2001. In the Czech Republic, the differences in the group of NUTS 2 regions are slightly lower than in the group of NUTS 3 regions.

Table 35.1: Variance index in NUTS 2 and NUTS 3 regions, Czech Republic, 1993-2004

Territorial subdivision	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
NUTS 2	2.9	2.9	3.1	3.1	3.6	4.4	5.6	5.8	5.7	5.6	5.8	5.5
NUTS 3	3.0	3.0	3.2	3.5	3.9	4.7	5.8	6.4	5.9	5.8	6.0	5.7

Source: Eurostat - New Cronos, Czech Statistical Office

The rate of employment of persons between 15 and 64 years of age declined in all regions except Prague from 1993 to 2000. In the next four years, when employment declined at a substantially slower rate, it remained at the level of the turn of millennium in the Středočeský, Liberecký, Pardubický and Moravskoslezský regions, while it increased moderately in the Ústecký region. Nonetheless, the low rate of employment in the Ústecký and Moravskoslezský regions still adversely affects the variance index of the regional employment rate in the Czech Republic.

Chart 35.1: Employment rate of persons between 15 and 64 years of age, by region, Czech Republic, 2004
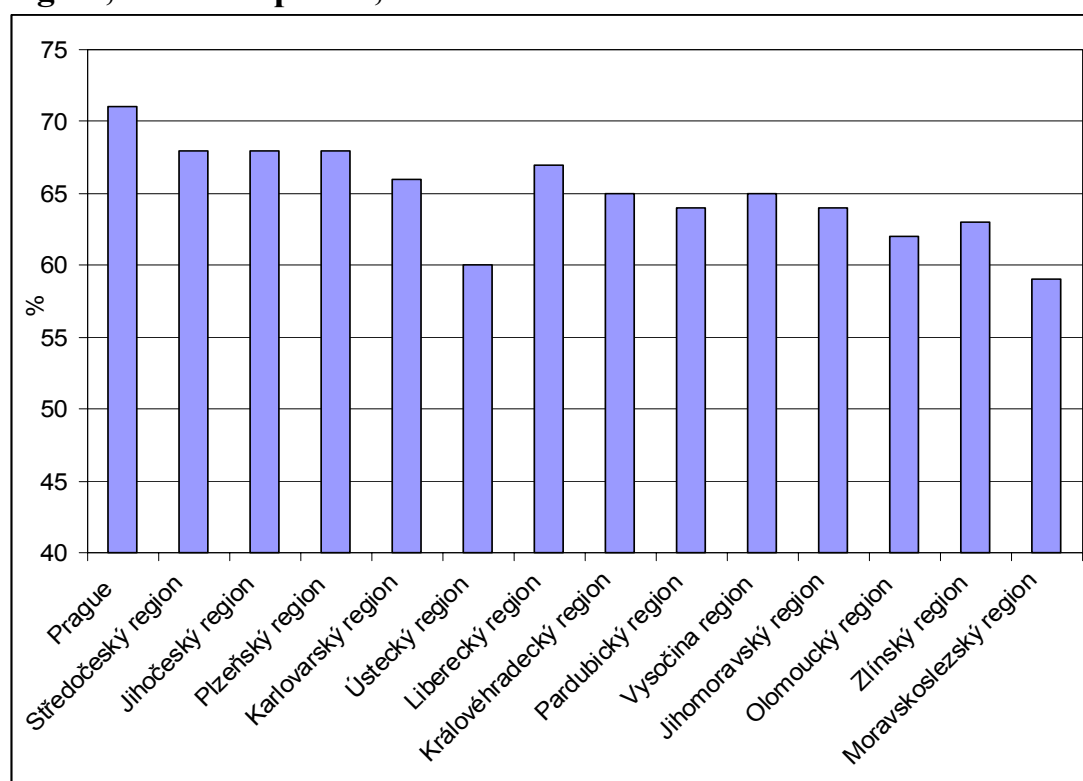
Source: Czech Statistical Office

International comparison

The variance index of the regional employment rate amounted in the EU-25 aggregate in 2003 to 13.0%, 0.4 percentage points less than in 1999. The variance index declined significantly in the EU-15.

Table 35.2: Dispersion of regional employment rate at NUTS 2 level, international comparison, 1999-2003

Country	1999	2000	2001	2002	2003
EU-25	13.4	13.5	13.6	13.5	13.0
Eu-15	14.1	13.5	13.2	12.6	12.0
Eurozone	13.3	13.0	12.8	12.1	11.5
Belgium	8.0	7.9	8.0	8.0	7.7
Czech Republic	5.6	5.8	5.7	5.6	5.8
Finland	6.7	6.8	7.0	6.7	6.1
France	7.1	6.9	6.4	6.2	5.0[1]
Italy	17.4	17.5	17.1	16.7	17.0
Hungary	9.1	9.0	8.8	9.4	8.5
Germany	5.5	5.7	6.1	5.9	6.0
Netherlands	2.3	2.2	2.3	2.2	2.4
Poland	4.8	6.9	7.2	7.3	7.2
Portugal	3.6	4.3	3.5	3.8	3.9

Austria	2.3	2.5	2.6	2.5	2.9
Greece	5.2	5.1	4.6	4.2	3.6
Slovakia	8.1	9.1	8.3	7.3	7.6
United Kingdom	7.1	7.0	6.8	6.6	6.0
Spain	10.7	10.5	9.9	9.2	8.9
Sweden	4.8	4.5	4.2	4.6	4.3

Note: [1] change in methodology
Source: Eurostat - New Cronos

The data referring to groups of countries are considerably influenced by the differences between countries; within the borders of individual countries, a higher level of dispersion existed only in Italy as a result of differences between employment rates in the north and in the south of the country, while in other countries it ranged in 2003 from 2.4% in the Netherlands to 8.9% in Spain. The higher the variance index is, the less the data on regional employment differ from the national average in individual countries. The variance index in the Czech Republic is practically in the middle of the range and is approximately the same as in Germany and the United Kingdom.

Chart 35.2: Variance index of regional employment rate at NUTS 2 level, international comparison, 2003
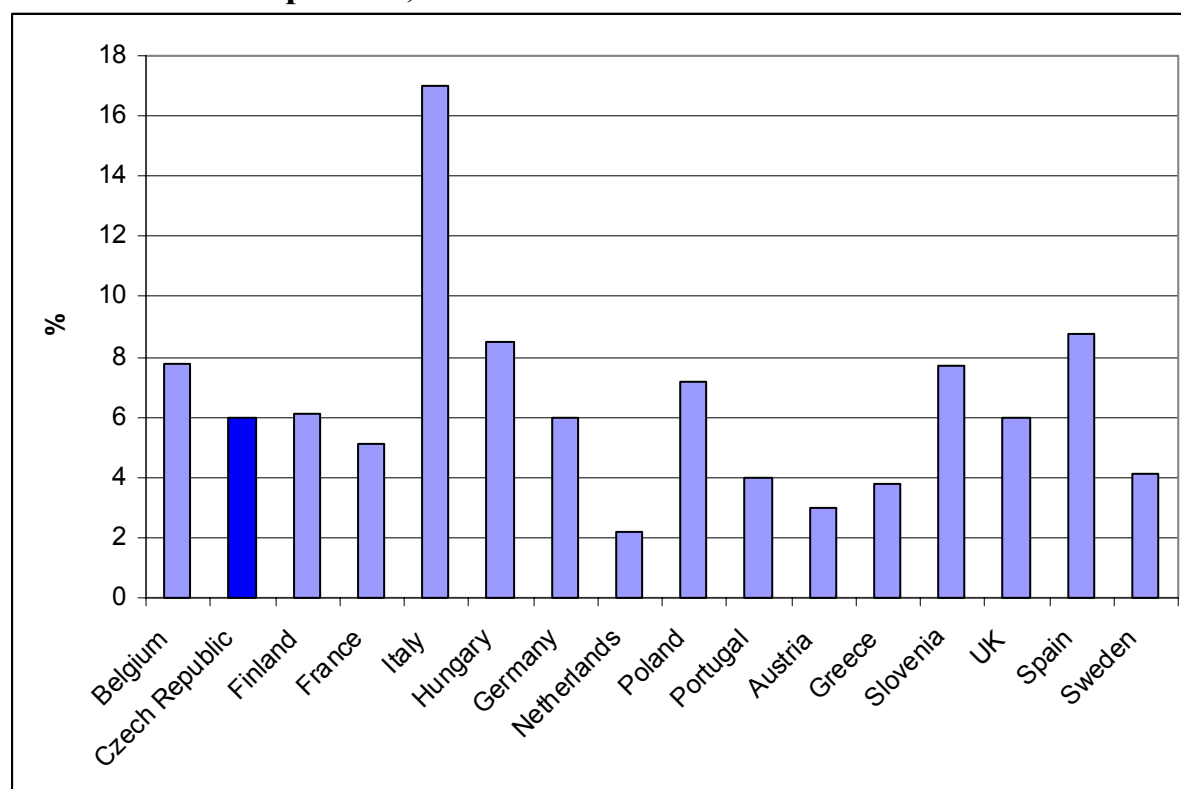
Source: Eurostat - New Cronos

Differences in the employment of women in the regions of countries are considerably greater than in the employment rate of men, and are extraordinarily

conspicuous in Italy and Spain. Germany is the only country where this variance index for females is lower than for males. The variance index of regional employment rate in the Czech Republic (4.9% for males and 7.4% for females in 2003) compared with other EU countries is roughly in the middle of the interval (seventh lowest of the 16 countries for males, and seventh highest for females).

Table 35.3: Variance index of regional employment rate for males and females at NUTS 2 level, international comparison, 2003

Country	males	females
EU-25	10.4	18.8
EU-15	8.2	19.2
Belgium	6.9	9.1
Czech Republic	4.9	7.4
Finland	5.7	6.7
France	4.0	6.8
Italy	9.1	29.7
Hungary	8.1	9.2
Germany	7.1	5.7
Netherlands	2.1	3.3
Poland	6.4	8.7
Portugal	3.2	6.3
Austria	3.6	3.8
Greece	2.6	6.9
Slovakia	6.7	9.0
United Kingdom	5.7	6.8
Spain	5.9	14.6
Sweden	4.1	4.8

Source: Eurostat - New Cronos

36. Civil society

Meaning and context of the indicator

Civil society is a term designating the space between private interests and the state. It refers to voluntary associating outside the market, state and private life, based on the recognition of integration of our world. The existence of civil society is based on the fact that any democratic political system is founded on the ability of the citizen to influence public affairs by direct participation.

Method of calculation of the indicator

For the purposes of the *Participation index* we define the proportion of the number of citizens to the number of NGOs as the indicator of civil participation, which, to get a clearer picture, is complemented by the indicator of political participation (measured in % using the average participation in elections to the PSP CR and to regional bodies). This indicator is structured so that it permits the measuring of differences between individual regions of the Czech Republic.

Development of the indicator in the Czech Republic

Table 36.1 summarises the development of civil and political participation in the Czech Republic.

Table 36.1: Civil and political participation, Czech Republic, 1998-2000/2002 and 2004

| Civil participation		
1998-2000		2002-2004
136.8	citizens per 1 NGO	118.4
Political participation		
1998, 2000		2002, 2004
74.03	elections to PSP CR (1998 and 2002)	58.01
33.64	regional elections (2000 and 2004)	29.62
58.84	average	43.81

Source: Czech Statistical Office, Government Council for Non-state Non-profit Organisations

The combination of civil and political participation contributes to a better understanding of the notion of participation, as both dimensions correlate. Between 1998 and 2000 and between 2002 and 2004 the rate of civil participation increased while political participation decreased significantly.

International comparison

The major development of civil society started in Central and Eastern Europe after 1989. The impulse for the establishment of a large number of non-profit organisations was the differentiation of social interests and needs associated with the process of political and social transformation. The non-profit sector in Central and Eastern Europe followed up on the historical tradition of civil participation and non-profit organisations, which to a certain extent had existed in the region – originally in connection with social movements, churches and the middle class. Chart 36.1 illustrates the dynamics of establishment of non-profit organisations in Visegrád countries between 1989 and 2001.

Chart 36.1: Establishment of non-profit organisations in V-4 countries, 1989-2001
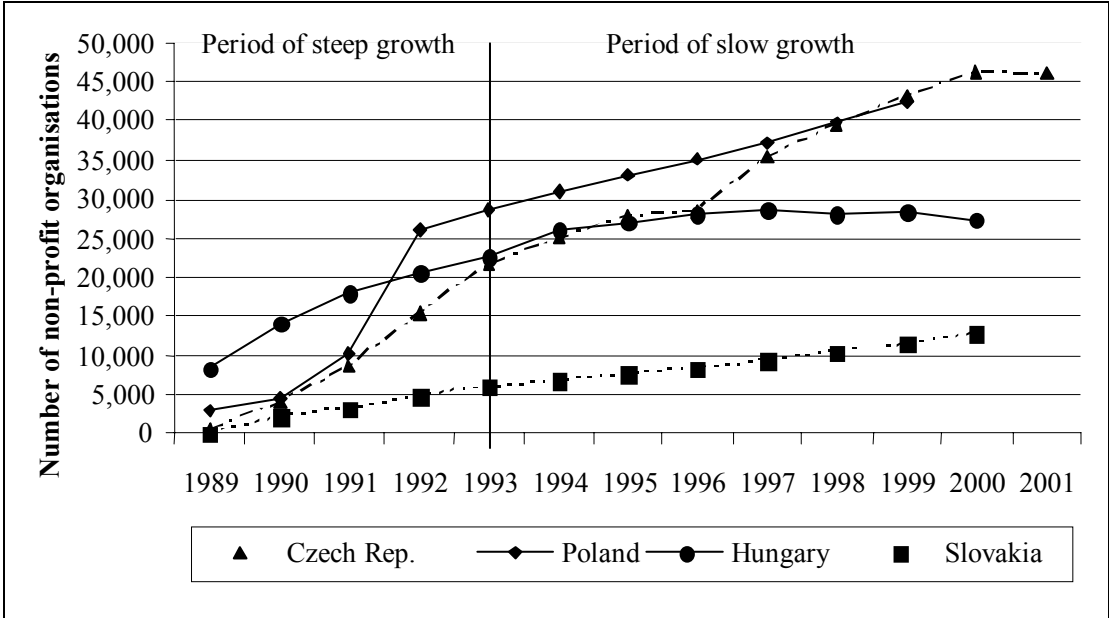
Source: Mansfeldová et al. in Zimmer, Priller (eds.) 2004

Although the number of non-profit organisations increased significantly in all countries in the region, considerable differences exist between individual countries, which are due to the different level of autonomy enjoyed by non-profit organisations in these countries in the late 1980s. While Poland and Hungary had had, at the time of disintegration of the Soviet bloc, a number of developed non-profit organisations that became key players in the social transformation, the civil sector in the Czech and Slovak Republics had been much more intensively regulated and subordinated to the state. The total increase in the number of non-profit organisations in the region is remarkable – between 1989 and 1999, the number of participating individuals multiplied by 123 in Slovakia, by 81 in the Czech Republic, by 14 in Poland and by 3 in Hungary.

Comparing the non-profit sector in EU countries and in V-4 countries based on the indicator of employed (Chart 36.2), it appears that the non-profit sector in Central Europe is considerably smaller than in Western Europe. Comparison in the region indicates a remarkable difference between the Czech and Slovak Republics.

Chart 36.2: Percentage of employed in non-profit sector in Visegrád countries, 1995
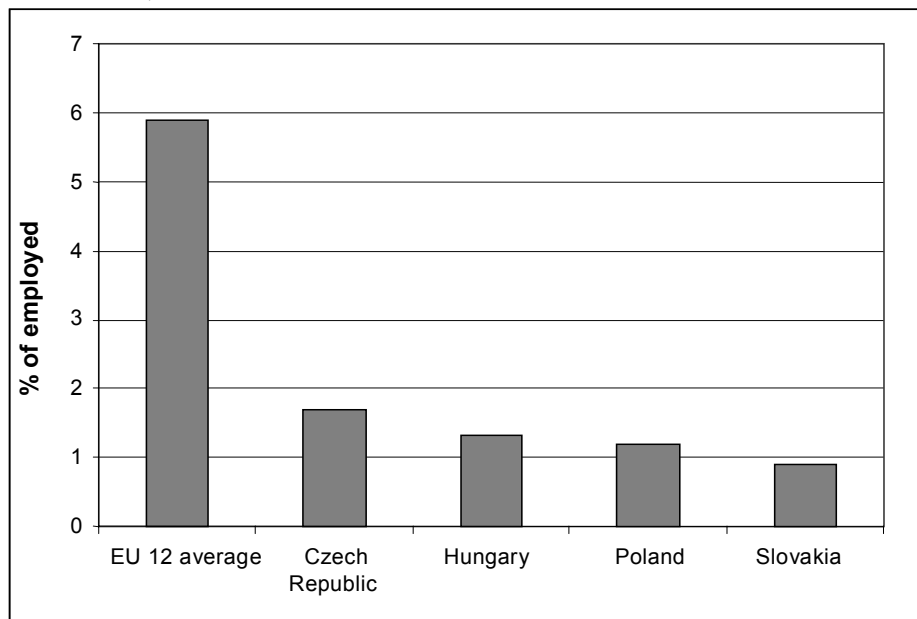
Source: Johns Hopkins Comparative Non-profit Sector Project, Mansfeldová et al. in Zimmer, Priller (eds.) 2004: 112.

Besides size, another important difference between the non-profit sectors in Central and Western Europe is their internal structure. While more than 30% of employees of the non-profit sector in Central Europe work in the recreation, leisure and sport sector, in Western Europe nearly one half of employees are concentrated in the sector of health and social services (health services 19% and social services 27%). In Central Europe, this percentage is much lower – only 21% of the labour force employed in the non-profit sector work in the sector of health and social services.

Summary of indicators and responsible institutions

	Indicator	Principal body responsible	Cooperation
1	Gross Domestic Product per capita	Czech Statistical Office	
2	Share of government deficit/surplus in GDP; Share of government debt in GDP	Ministry of Finance	
3	Current account of balance of payments/GDP ratio	Czech National Bank	Ministry of Industry and Trade
4	Labour productivity	Czech Statistical Office	
5	Environmental protection expenditures	Ministry of Environment	
6	Public environmental protection expenditures	Ministry of Environment	
7	Material consumption	Charles University in Prague	Ministry of Industry and Trade, Czech Statistical Office
8	Passenger transport intensity	Transport Research Centre	
9	Freight transport intensity	Transport Research Centre	
10	Energy intensity of GDP	Charles University in Prague	Ministry of Environment, Ministry of Industry and Trade, Czech Statistical Office
11	Total consumption of primary energy supply	Charles University in Prague	Ministry of Environment, Ministry of Industry and Trade, Czech Statistical Office
12	Share of energy from renewable sources	Charles University in Prague	Ministry of Environment, Ministry of Industry and Trade, Czech Statistical Office
13	CO_2 emissions per capita	Ministry of Environment	
14	CO_2 emissions per GDP	Ministry of Environment	
15	Material use of waste	Ministry of Environment	Ministry of Industry and Trade, Czech Statistical Office
16	Consumption of basic nutrients in industrial fertilisers	Ministry of Agriculture	

17	Consumption of pesticides	Ministry of Agriculture	
18	Index of common species of wild birds	Ministry of Environment	
19	Index of alien species of plants	Ministry of Environment	
20	Share of organic farming in total farmland	Ministry of Agriculture	
21	Life expectancy	National Health Institute	
22	Mortality	National Health Institute	
23	General unemployment rate	Ministry of Labour and Social Affairs	Czech Statistical Office
24	Registered unemployment rate	Ministry of Labour and Social Affairs	Czech Statistical Office
25	Employment of older people	Ministry of Labour and Social Affairs	Czech Statistical Office
26	Population living below poverty line before and after social transfers	Ministry of Labour and Social Affairs	
27	Research&Development expenditure	Institute for Information on Education	
28	Highest level of education attained	Institute for Information on Education	Czech Statistical Office
29	Access to the Internet	Ministry of Informatics	Institute for Information on Education, Czech Statistical Office
30	Total international development cooperation	Ministry of Foreign Affairs	
31	Availability of public cultural services	Ministry of Culture	
32	Average duration of court proceedings	Ministry of Justice	
33	Corruption Perceptions Index	Ministry of the Interior	
34	Coverage of the Czech Republic's territory by approved town and country documentation of municipalities	Ministry for Regional Development	

35	Regional dispersion of the employment rate of the 15-64 category	Ministry of Labour and Social Affairs	
36	Civil society	Institute of Sociology, ASCR	

Abbreviations

ATU	administrative territorial unit
AV CR	Academy of Sciences of the Czech Republic
BERD	research and development expenditure in the business sector
c. p.	constant prices
CBD	Convention on Biological Diversity
CEPA 2000	international classification of environmental protection activities
CO_2	carbon dioxide
CPI	Corruption Perceptions Index
CRS	churches and registered religious societies
DAC	OECD Development Assistance Committee
DAS2002	central database for Zoning Activities Register
DFI	direct foreign investment
DIGROG	Spatial Planning Digital Register
DMC	domestic material consumption
ECHP	European Community Household Panel
EEA	European Economic Area
EMU	European Monetary Union
ESA 95	European system of national and regional accounts
EU	European Union
EU-10	new EU Member States after enlargement in May 2004
EU-15	the European Union before enlargement in May 2004
EU-25	the European Union after enlargement in May 2004
FC	final consumption
GAERC	General Affairs and External Relations Council
GDP	Gross Domestic Product
GERD	gross domestic expenditure on research and development
GFCF	gross fixed capital formation
GFS	government finance statistics
GNI	gross national income
GOVERD	research and development expenditure in the government sector
HDI	Human Development Index
HERD	research and development expenditure in the higher education sector
ICT	information and communication technology
IDC	total international development cooperation
ILO	International Labour Organisation
ISCED-97	International Standard Classification of Education
MZP	municipal zoning plans
NEP	National Energy Policy
NGO	non-governmental organisations
NPF CR	National Property Fund of the Czech Republic

NUTS	territorial statistical unit
OA	official assistance
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
OkU	District Office
OUP MMR	Zoning Department of the Czech Ministry for Regional Development
p.p.	percentage point
PES	primary energy sources
PNPERD	research and development expenditure in the private non-profit sector
PPS	purchasing power standard
PSP CR	Chamber of Deputies of the Parliament of the Czech Republic
RES	renewable energy sources
SI	international system of units
SLFS	selective labour force survey
SMW	solid municipal waste
TPES	total primary energy sources
TRIM	"Trends and Indices for Monitoring Data" programme
UIR-ZSJ	Territorial Identification Register
UK	United Kingdom
UN	United Nations
UPBC	Uniform Programme for Bird Census in the Czech Republic
USA	United States of America
WHO	World Health Organisation
ZD	zoning documentation
ZPRC	zoning plans of residential clusters