

5. Selected factors of competitiveness

The ability of given country to compete on international markets influence price and non-price factors. Following selection is focused on the change of the share on the world exports of goods and services, competitiveness with respect to the development of unit labour costs and also the intensity the country is able to exert for support of sophisticated activities.

5.1. Change of share of the CR in the world exports

Benefits and risk of openness of the economy

Openness of the economy, regarding the strength of the flows of goods and services with abroad, represent for a given country ambivalent effects – on one hand it provides evident benefits in the possibilities to use national work on foreign markets, on the other hand then the risks connected to the dependency on these markets in times of economic slowdowns and slumps.

Share of the CR on the world exports of goods and services in 2012 in the amount of 0.72 % for the first time since the beginning of monitoring fell

Open Czech economy exported in 2012 goods, which represented in value 0.721 % of world exports of goods, and services in worth 0.528 % of world exports of services. In both cases the year 2012 was year, when continued the lowering of share of the CR in world exports of goods as well as world exports of services (chart 61).

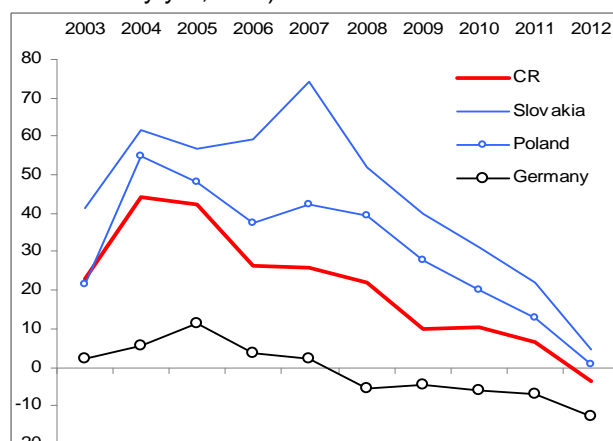
The highest share of exports of goods in the crisis year 2009...

Share of the CR on the world exports of goods was the highest in the crisis year 2009, which can be to a large extent attribute to the enormous slump of the world goods exchange - the CR in that time benefited from the specific conditions given by the structure of its exports and opportunities it provided (introduction of measure to support demand in several countries, where the exports of motor vehicles from the CR headed, i.e. so called „scrappage allowance“). After the crisis then the share of exports of goods from the CR on the world exports mildly fell.

Chart 61 Share of exports of goods and services from the CR in flows on a global scale (in %)



Chart 62 Change of share of exports of goods and services on global exports (year y/y-5, in %)



Source: Eurostat

...in exports of services already in year 2008

Also the exports of services recorded a loss of competitiveness in the form of lowering of the share on the world exports of services. Unlike the exports of goods however the share was the highest already in year 2008 (chart 61) – it follows that crisis year 2009 hit more, with respect to foreign export destinations, just the services. Its role could also play the slump of international transport services, associated with the lower exchange of goods.

Drops of shares typical also for other European exporting countries, Slovakia and Poland for now only with a lowering

Year-on-year change of proportions is for the assessment of the competitiveness of a country in exports a too short period. If we compare however the shares of the given year with the shares five years back, it is visible from chart 62, that in 2012 in this notion for the first time declined the share of aggregate exports of goods and

additions of these shares

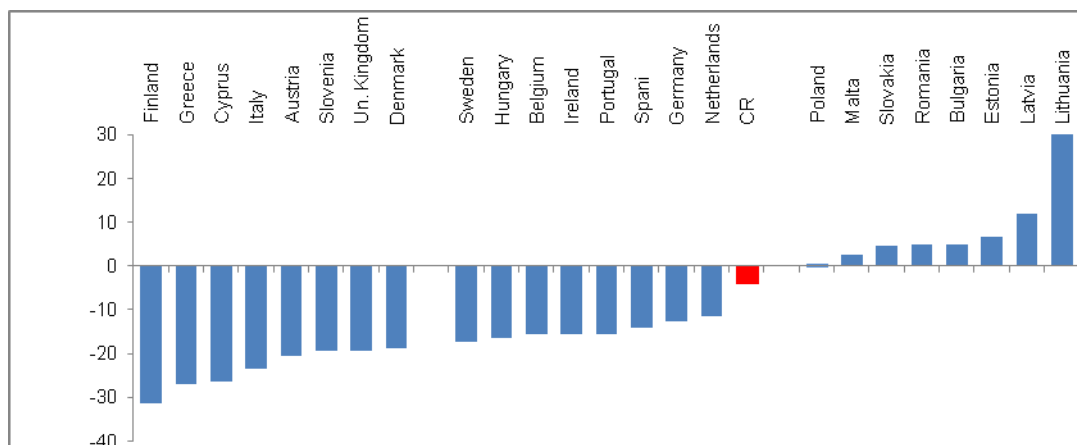
services from the CR on the world exports of goods and services.

This issue for now did not strike Slovakia, which fared for the whole monitored period 2003-2012 better in contrast to the CR and so far not also Poland, where the same occurred. On the contrary due to the strong Asian competition, Germany has been losing its share already since year 2009 (chart 62).

Decrease of competitiveness of exports for the CR in year 2012 milder in contrast to most EU 27 countries

Despite for the first time arising negative shift of the share of the CR in 2012 compared to year 2007 and subsequent drop of competitiveness, the Czech Republic enjoys in the ranks of EU 27 countries a relative good position (chart 63) – most European countries recorded in 2012 substantially higher losses of competitiveness of their exports of goods and services compared to the CR.

Chart 63 The CR position in competitiveness based on change of share of exports of goods and services on their world exports (in %)



Source: Eurostat

5.2. Cost competitiveness based on real unit labour cost

Meaning of the labour factor in relation to the economic performance

Cost (price) competitiveness of economies in the international comparison is expressed by the unit labour costs. The aim of the indicator of unit labour costs is to express the dynamics of the production factor labour participating on the overall economic performance.

For years 1995-2011 growth of real unit labour costs in the CR the highest among the EU 27 countries

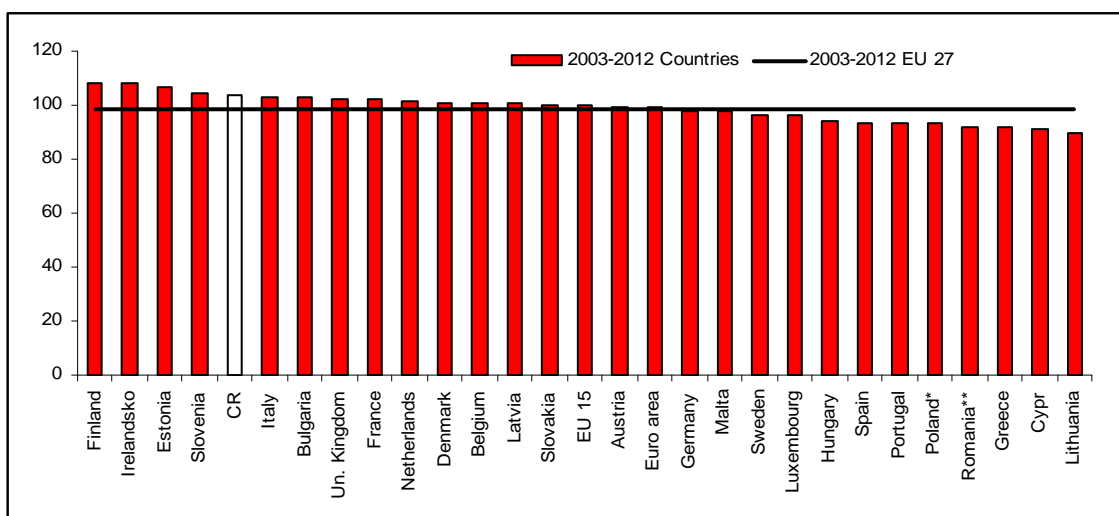
While in 2011 belonged the CR in the European comparison of increases of unit labour costs to the top among other countries for the period 1995-2011 – it means, that labour in relation to the performance of the economy raised its price in the CR for that time period the most -, from the comparison of shorter time period is apparent, that this growth of unit labour costs occurred mostly in the second half of the 90s.

Labour in relation to economic performance raised its price in the CR for period 2003-2012 by 3.4 %, which was the fifth highest increase of real unit labour costs in the EU 27

If we compare the position of the CR from years 1995-2011 and a shorter period, i.e. decade 2003-2012, from chart 64 can be seen, that real unit labour costs recalculated to the base of year 2003 show an increase in the CR of 3.4 %, which was the fifth highest increase in the EU 27. Price of labour „increased more“ only in Finland (growth of real unit labour costs from period 2003-2001 by 8 %, in Ireland by 7.9 %, Estonia by 6.4 % and Slovenia by 4.5 %.

On average for the whole EU 27 however occurred in the CR in 2012 against year 2003 to the lowering of real unit labour cost by 1.5 %, while milder was this drop in „old“ Union countries (EU 15), i.e. -0.3 % and in the euro area, with -0.5 %. Competitiveness here thus increased.

Chart 64 Real unit labour costs (index 2003=100)



*Poland 2004=100, **Romania 2005=100

Source: Eurostat

5.3. Support of sophisticated activities

Future multiplications effects of the support of research and development

Expenditure on research and development belong to the investment into sophisticated activities with potential multiplication effects in the labour productivity and generally to developed predominantly economic activities, resp. possibilities of improving the quality of life.

Financing of sophisticated activities

Research and development is financed both from the public sources and private sources, is being performed on workplaces of various nature (universities, special research institutions, firms etc.). Its character is also given by the area of research execution (natural sciences, technical sciences etc.). Data provided in charts are based on total expenditure of the given country on research and development, i.e. money spent from the public budgets as well as funds from companies and other sources.

Expenditure on research and development relative to GDP in the CR in years 2002-2011 rose and amounted to on average 1.41 % of GDP...

Advancement of a country and effort for its future competitiveness is often gauged by the proportion of money, which are expended on research and development. The Czech Republic belongs among countries, where in the last decade during years 2002-2006 share of these expenditures in relation to GDP grew (chart 65), in years of strong boom then it mildly decreased (also due to the impact of mathematic relationship of the high value of GDP as a denominator). Afterwards in crisis year 2009 most likely again also due to this effect the ratio of expenditure on research to development to GDP rose and in years 2010 and 2011 continued increasing (1.55 %, resp. 1.84 %).

... growth of this share was however lower than for the EU 27 (1.91 %) and EU 15 (1.99 %)

This positive development of strengthening investment on research and development in relation to income of a country however in the international comparison shows, that the rate of growth was not in contrast to the EU average (1.91 %) and especially ratio for „old EU countries“ (1.99 %) adequate (chart 65). Convergence of the ratios occurred only in years 2010 and 2011.

Chart 65 Expenditure on research and development in relation to nominal GDP (in %)

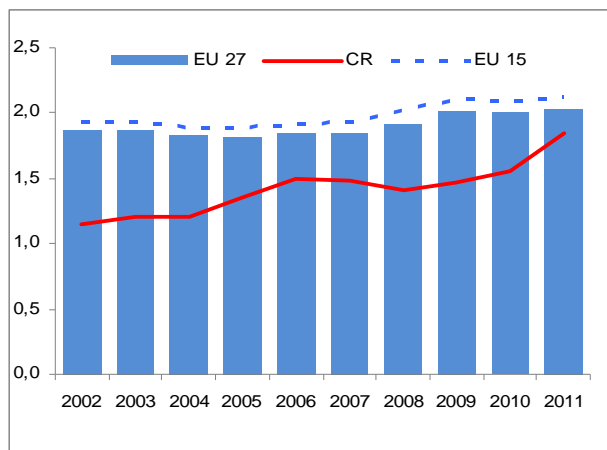
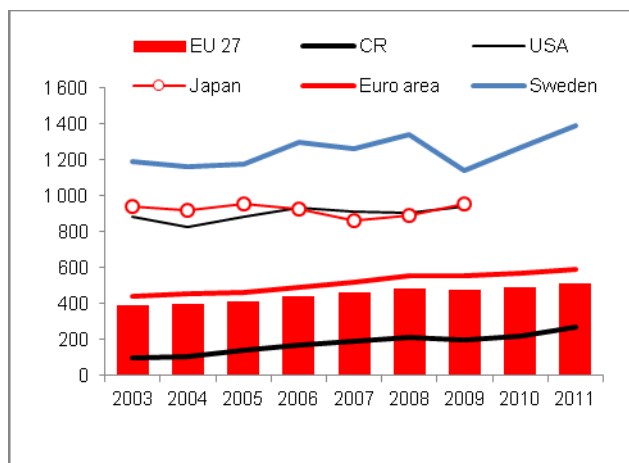


Chart 66 Expenditure on research and development (in euros/inhabitant)



Source: Eurostat

Ability of rich countries of the North of Europe to finance sophisticated activities

On the contrary a strong support of sophisticated activities is traditionally recorded on the North of Europe, where the potentially technologically leading countries of Europe come from. It can be assumed, that the ability to finance their social states is connected just to the building up of the competitiveness through the support of research and development. The opposite direction is also valid, i.e. that their wealth enables them to expend money in this extent.

Finland the world power in relative expenditures on research and development...

The highest expenditure on research and development in relation to GDP records in the long-term with more than three percent of GDP Finland (3.78% in 2011), Sweden (3.37 %) and Denmark (3.09 %). For the 2002-2011 decade arrived the ratio of expenditures on research and development to GDP in case of Denmark annually to 2.73 %, Sweden 3.21 % and Finland even 3.60 %, which contrasts with the number for the Czech Republic in the amount of 1.41 % of GDP annually on average.

...with larger relative investments into research and development than in the USA, Japan or South Korea

Countries, where the data for year 2011 are not available at time of preparing this analysis, recorded according to data for year 2009 expenditures on research and development in relation to GDP in case of South Korea 3.57 %, Japan 3.36 % and USA 2.87 %. Investment into research and development achieved in China in year 2009 relatively high 1.7 % of GDP, which was more than in the CR in the given year (1.47 % of GDP).

Also on a global scale thus according to data captured in the Eurostat tables is the country with the highest expended investments in relation to income of a country Finland. Here in 2009 constituted the mentioned ratio 3.94 % of GDP, which was the most also from all countries monitored according to the relative expenditures on research and development in the whole time series from year 2002.

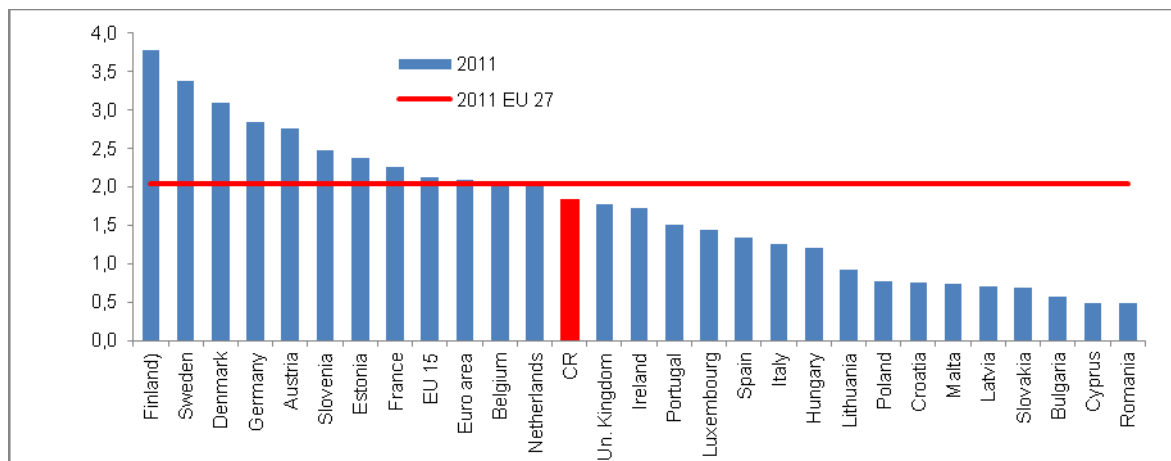
Slovakia in the long-term invests very little from its GDP into research and development

For instance Slovakia, with impressive rates of growth in time of European boom in the last decade as well as after crisis in 2009, which were in the European context very high and also higher than for the Czech Republic, expended very low share of its GDP on research and development. In 2011 it belonged in the ranking of EU countries with 0.68 % of GDP as far as the fourth place from end before Bulgaria, Cyprus and Romania.

In 2011 the CR with the highest share from new countries after Slovenia and Estonia

In 2011 invested the CR into research and development in relation to GDP (1.84 %) the most out of all new EU countries after Slovenia (2.47 %) and Estonia (2.38 %) and in the ranking of EU countries was placed on the eleventh position.

Chart 67 Expenditures on research and development as % of nominal GDP in year 2011



Source: Eurostat

The CR in 2011 on 11th place in the EU based on expenditure on research and development relative to GDP...

While in 2011 was the Czech Republic placed in the context of the EU 27 countries according to the expenditures on research and development to GDP close below the average for this group (1.84 % against 2.03 % in the EU 27) and tightly behind was placed the United Kingdom and Ireland, look on the recalculation of these expenditures per inhabitant shifts the Czech Republic on back places.

...but as far as 17th place in the EU with respect to recalculation of expenditures on research and development on one inhabitant

Expenditures on research and development, which Eurostat calculates for individual countries in euros per capita, reached in 2011 in the CR only 273 eur per one inhabitant. Average for the EU 27 came to 510.5 eur/inhabitant, which means the CR expended in this recalculation only about a half (53.5 %) than the EU on average (chart 68). In 2002 it was only 24.2 % of the European average in eur per capita.

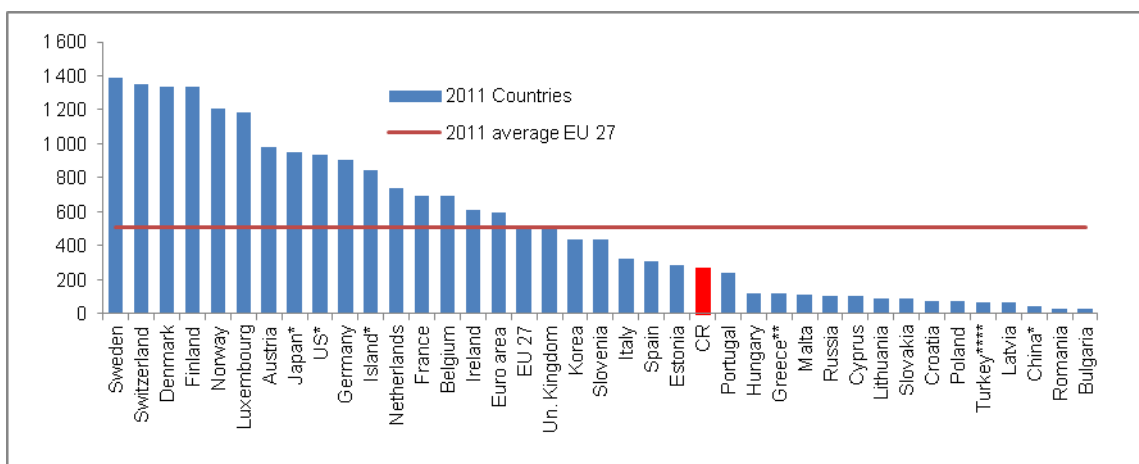
In the last available data arrived this ratio in the USA to 937 eur/inhabitant, in Japan 951 eur. In Denmark, Luxembourg and Finland it was in 2011 more than 1200 eur/inhabitant and to this amount was close also Sweden with 1137 eur per one inhabitant invested into research and development. On the contrary less than 100 eur per capita invested into research and development in 2011 in Croatia, Poland, Slovakia and also in Turkey, which in this indicator overtook Latvia, Romania and Bulgaria.

Considerable reserves in the support of sophisticated activities in the CR and consequently also a potential growth of competitiveness

CR despite the growth of expenditures on research and development, both in relation to GDP and recalculated per one inhabitant, so far is not even nearing the limit, which was in directions of the so call Lisbon strategy (previous aims of the document Europe 2020) set at 3 % of GDP. However, troubles to reach it have most European countries. Apart from the three named Scandinavian states has got close to it in 2011 Germany (2.84 % of GDP), Austria (2.75 %) and from new Union countries also Slovenia (2.47 %).

A certain issue remains to present the fact, that majority of these expenditures represent funds heading into the technical research, mostly in the motor vehicle industry. Financing of other areas, where given the nature of things participates mostly the state, were in the previous years limited by the restriction of budget funds, even with respect to the common state expenditures and even more so of the expenditures on development, which do not have a mandatory character.

Chart 68 **Expenditure on research and development** (recalculation in euros per capita; Europe and selected world countries)



Source: Eurostat

*2009, **2007, ***2008, ****2010