

Chapter V – Evaluation of participation of the Czech Republic in 6th EU Framework Programme

(This is an intermediate evaluation presenting the state as at 1 March 2006)

6th Framework Programme (6FP) is aimed, like the previous framework programmes, at targeted research and its priorities are set on the grounds of an extensive discussion on the EU needs. But the Sixth Framework Programme has a new common objective – to contribute to the creation of the European Research Area – ERA. This objective requires developing a common policy of research and development supporting the attainment of the Lisbon strategy targets; to reach the highest degree of competitiveness in the global knowledge-based society of the 21st century by 2010. Therefore, 6FP introduces absolutely new types of projects - integrated projects and networks of excellence making possible the more effective connection of national teams into large research projects and networks being necessary for solution of essential problems. In general, 6FP strives for better utilisation of capacities of the European research workplaces, better relationship of national researches and closer cooperation between research funded from public sources and private industrial research and creation of an environment supporting market application of research and development results.

EURATOM programme wishes to attain the above targets particularly in the field of peaceful use of nuclear energy.

The summary budget of 6FP and EURATOM programme after accession of ten new Member States in 2004 amounts to EUR 19.1 billion. Its structure is given in Table A. Each priority has its own detailed working programme, which the European Commission (EC) calls for submission of draft projects refer to. Sixth Framework Programme was really launched on December 17, 2002 when first calls were delivered covering nearly the whole spectrum of its priorities.

The amount of the EC contribution to a team participating in the solution of any 6FP project depends on the type of its activity (and moves from 30 % of the overall cost with demonstration activities and 50 % with research activities up to 100 % for project coordinators or investigators of projects, in which EC has a special interest).

The draft projects submitted mostly by international consortia go through a process of professional evaluation (peer review system), in the course of which an international team of experts classifies the project according to predetermined criteria. The draft projects have a chance to win the EC contribution in the ranking set by the above evaluation. The success of any project is to a great extent supported also by contracting negotiations between the investigating consortium and EC requiring the fulfilment of a whole range of formal requirements; the most important being the conclusion of a consortial contract between the participating teams (on the value of knowledge brought by each team at the beginning of a project, on the funds management in the course of the project solution and particularly on handling with the acquired results). During contracting negotiations the amount of EC contribution is agreed for the participating team to cover its costs of project solution – these funds are marked as the contracted amount. Consortia for solution of 6FP projects can be formed without any limitations from teams of EU-25 states, eight associated countries (Bulgaria, Romania, Turkey, Iceland, Israel, Liechtenstein, Norway, and Switzerland) and if required by the project solution, a team from any country may participate (with the amount of EC contribution for its participation regulated by special rules).

When evaluating the statistics on the participation of countries in 6FP, it is necessary to bear in mind the factual reporting value of indicators provided by EC. Most often the aggregate number of teams of a particular country that became members of consortia submitting draft projects within a certain programme is mentioned. But more important characteristics of success of a particular country is the aggregate number of its participants in successful contracted projects. This chapter mentions the numbers of participants in contracted projects. The international comparison of EU-25 countries is then based upon the

“number of participants in contracted projects converted to a unit population (1 million inhabitants)”.

It is, however, obvious that the participation in the consortium itself does not reflect the importance of the team's contribution to the draft project preparation or project solution. The significance of the team's participation in successful project is then evidenced by the amount of contracted contribution. So the international comparison can be based upon the aggregate support received together by all teams of a particular country in contracted projects. And even here the international comparison needs to express the aggregate contracted support in comparable units. Two indices are used in the chapter: The aggregate contracted support per one research worker (i.e. the aggregate support received by all participants of a particular country divided by the number of research workers of this particular country) and the aggregate contracted support of a particular country per its gross R&D expenditure. Data are taken from the database of contracted projects made available by EC to the national delegates of the Programme Committee of the Specific Programme 1 (see Table A) in March 2006. The overall released financial contributions of EC set forth in this database correspond approximately to one half of the overall budget of 6FP, and therefore the mentioned statistical indices can be considered as characterising the first half of 6FP.

Sources:

Database of contracted projects of 6FP, European Commission, Programme Committee SP1, March 2006

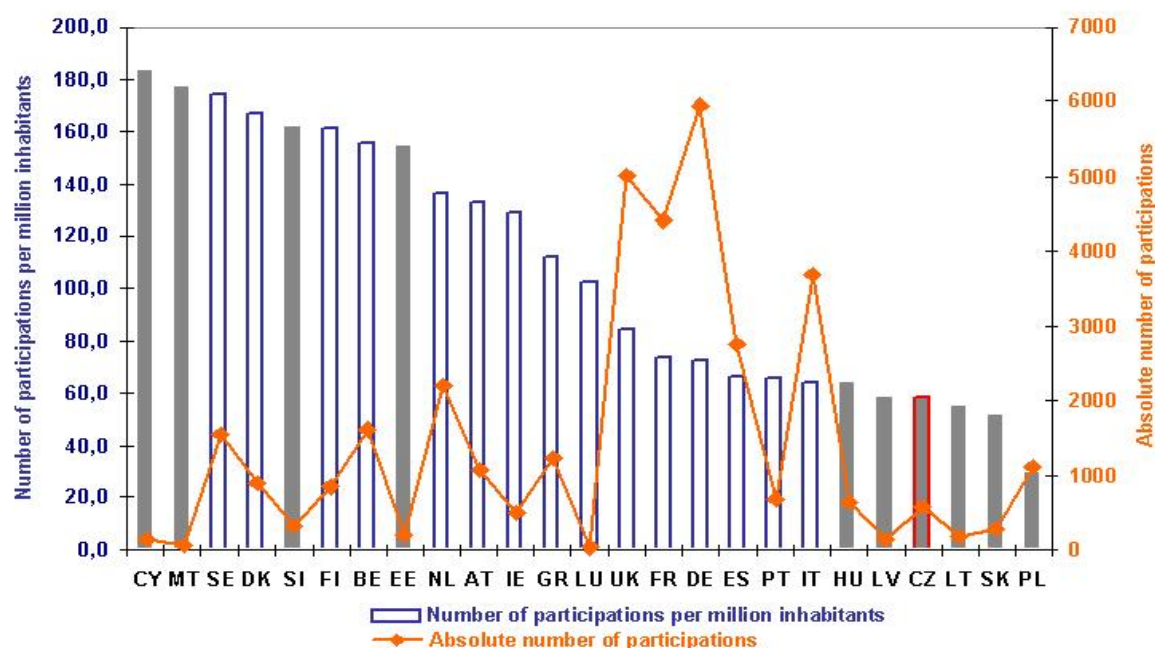
Science and technology in Europe, Statistical pocketbook, Data 1993-2003, Eurostat, European Commission, 2005

Statistics in focus, 7/2006, EUROSTAT

Table A Structure and budget of 6FP (after accession of new Member States in 2004)

	EUR million
6th EU Framework Programme for Research and Development	17 883
1. Concentrating and Integrating Community Research (SP1)	14 682
1.1 Thematic Priorities	12 438
1.1.1 Animated nature, genomics and biotechnology for health	2 514
1.1.1.1 <i>Advanced genomics and its application for health</i>	1 209
1.1.1.2 <i>Combating major diseases</i>	1 305
1.1.2 Information society technologies	3 984
1.1.3 Nanotechnologies and nanosciences, intelligent multifunctional materials, new production processes and devices	1 429
1.1.4 Aeronautics and space	1 182
1.1.5 Food quality and safety	753
1.1.6 Sustainable development, global changes and ecosystems	2 329
1.1.6.1 <i>Sustainable energy systems</i>	890
1.1.6.2 <i>Sustainable surface transport</i>	670
1.1.6.3 <i>Global changes and ecosystems</i>	769
1.1.7 Citizens and governance in a knowledge-based society	247
1.2 Cross-cutting research activities	1 409
1.2.1 Encouraging of policies and scientific and technological needs forecasting	590
1.2.2 Specific research activities supporting SMEs	473
1.2.3 Specific measures supporting international cooperation	346
1.3 Other than nuclear activities of the Joint Research Centre	865
2. Structuring the ERA	2 854
2.1 Research and innovation	319
2.2 Human resources and mobility	1 732
2.3 Research and infrastructures	715
2.4 Science and society	88
3. Strengthening the Foundations of ERA	347
3.1 Co-ordination of research activities	292
3.2 Encouragement of coherent development of policies	55
Euratom Framework Programme	1 230
1. Priorities of research thematic activities	890
1.1 <i>Controlled thermonuclear fusion</i>	750
1.2 <i>Radioactive waste management</i>	90
1.3 <i>Radiation protection</i>	50
2. Other activities in the field of nuclear technologies and safety	50
3. Joint Research Centre activities	290
In total	19 113

V.1 Participation of teams from EU-25 Member States in 6FP as a whole (number of participations; number of participations per million inhabitants)



The points connected by broken line in Graph V.1 show the absolute numbers of participations of EU-25 teams in 6FP projects being registered by the European Commission as “successful” as of January 1, 2006. There are in total 5,327 projects as of this date, on the solution of which 41,233 teams will participate. Participants in these projects ask the European Commission for support in the amount of EUR 9.65 billion corresponding approximately to one half of the overall budget of 6FP. In this sense, data in this report predicate more or less about the course of the first half of 6FP.

The column graph shows the participations of EU-25 states as converted to a unit population (per one million inhabitants). The states in the graph are ranked according to level of this relative indicator.

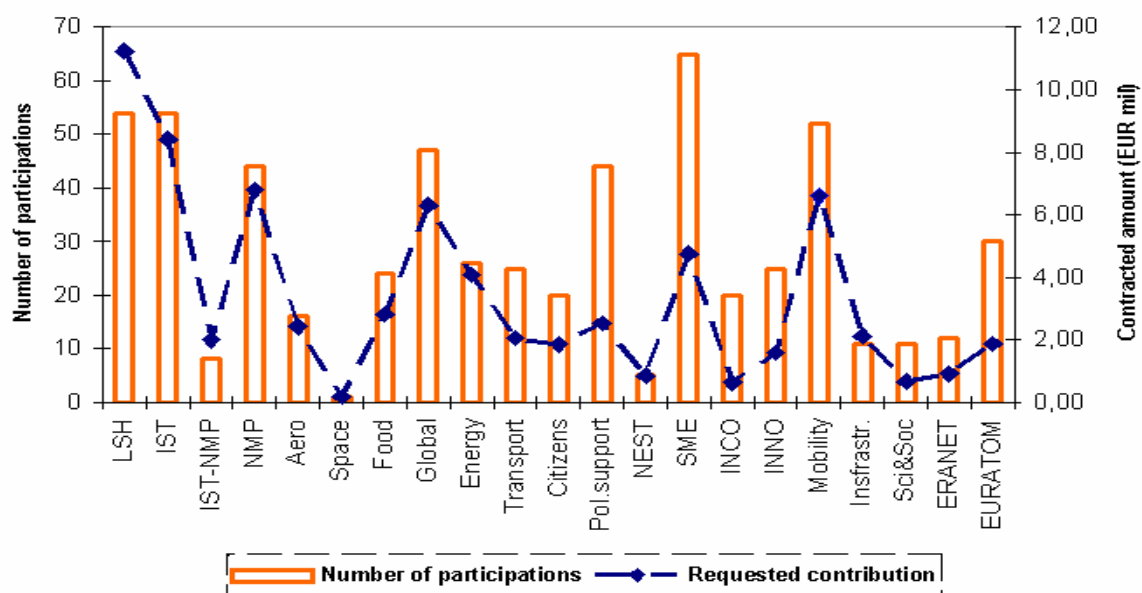
There are 485 projects among those mentioned, on the solution of which 594 teams from the Czech Republic will participate. These data classify Czechia on 22nd place among EU-25 states. If we rank the states according to level of absolute numbers of participations in 6FP projects, Czechia takes 16th place.

Czech participants enter the projects with overall budget of EUR 98.46 million and ask the European Commission for support in the amount of EUR 70.63 million (ca CZK 2 billion).

In terms of total number of participations, the highest figure is reported by teams from Germany (5,943 participations), followed by the United Kingdom, France and Italy. Least participations are reported by Lithuania, Latvia, Cyprus, Malta, and Luxembourg (46 participations).

On the other hand when converted to 1 million inhabitants of a particular country, the highest participation is reported by Cyprus (over 180 participations per million inhabitants), then Malta and Sweden (both countries over 170 participations per million inhabitants). The lowest participation is then reported by Czechia, Latvia, Slovakia, Lithuania (mostly less than 60 participations per million inhabitants) and Poland (less then 30 participations per million inhabitants).

V.2 Participation of Czech teams in selected programmes of 6FP and contracted support for these participations (number of participations; EUR mil)



The graph columns show numbers of participations of Czech teams in projects falling under following programmes (see also the structure of 6FP in Table A):

- LSH: 1st Thematic Priority - Animated nature, genomics and biotechnology for health
- IST: 2nd Thematic Priority - Information society technologies
- NMP: 3rd Thematic Priority - Nanotechnologies and nanosciences, new intelligent materials and production processes
- IST – NMP: joint projects of 2nd and 3rd Thematic Priorities
- Aero: 4th Thematic Priority - Aeronautical research
- Space: 4th Thematic Priority - Space research
- Food: 5th Thematic Priority - Healthy and safe foodstuffs
- Global: 6th Thematic Priority - Global changes
- Energy: 6th Thematic Priority - Energy
- Transport: 6th Thematic Priority - Transport
- Citizens: 7th Thematic Priority - Citizens and governance in a knowledge-based society
- Pol. support: Research encouraging policies
- NEST: New and emerging science and technology
- SME: Programmes promoting involvement of small and medium-sized enterprises
- INCO: Programmes promoting cooperation of EU with third countries
- INNO: Programmes promoting research and innovation
- Mobility: Programmes promoting mobility of researchers (the so called Marie Curie action)
- Infrastr: Programmes promoting transnational utilisation of scientific infrastructures
- Sci&Soc: Science and society

ERANET: Programmes for coordination of national research activities

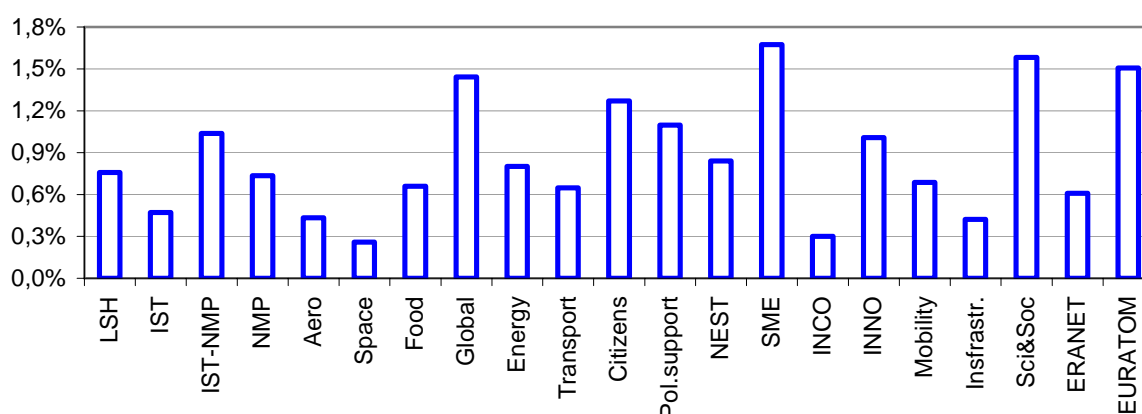
EURATOM: Separate programme in the area of nuclear energy use

Graph V.2 shows that the Czech Republic has most participations (98) in the 6th Thematic Priority consisting of three thematic areas (global climate changes: 47 participations, energy: 26 participations and transport: 25 participations). The second place is taken by participation in programmes for small and medium-sized enterprises (65 participations). It is necessary to say that the structure of participation of Czech teams has been going through changes in the course of 6FP. While in the 6th Thematic Priority the Czech participation has been reaching a high level in the long term, the participation of small and medium-sized enterprises, as well as utilisation of mobility programmes is experiencing a significant growth now.

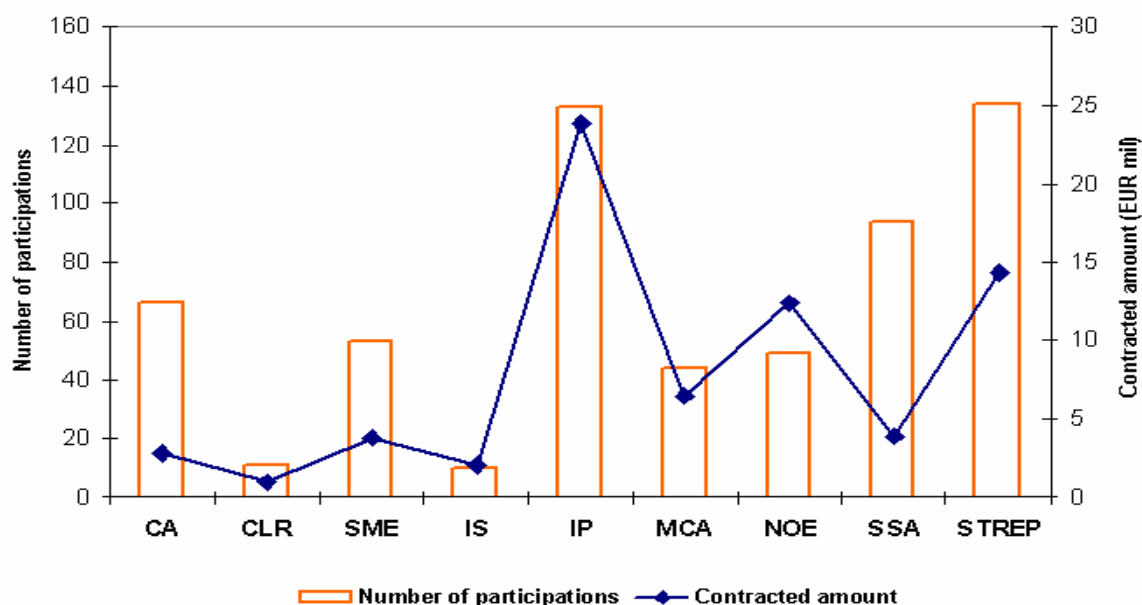
In terms of contracted support, the highest contribution will be obtained by Czech teams participating in projects of the 6th Thematic Priority (EUR 12.45 mil – again sum total for thematic areas of global climate changes, energy and transport), then follow the life sciences (EUR 11.24 mil). The lowest support will be obtained by Czech teams in the space research programme (EUR 0.17 mil) and in the INCO programme – Cooperation of EU with third countries (EUR 0.66 mil).

It is, however, necessary to take into account that the amount of support depends primarily on the size of budgets for individual programmes. This was highest for IST programme. Generally, the Czech teams contract 0.75 % of the so far released budget of 6FP. The column Graph V.3 depicts shares contracted by Czech teams from budgets released for individual programmes. Most successful in this regard is the Czech participation in programmes for small and medium sized enterprises (SME) and in the programme “science & society” (its budget is, however, very small). In thematic priorities, the Czech Republic is most successful in global climate changes (Global) and in the programme “Citizens and governance in a knowledge-based society” (Citizen). In the long term, the Czech teams have been successful in the EURATOM programme activities. On the other hand, the least successful programmes are “aeronautical and space research” and IST programme (having the largest budget of all 6FP programmes).

V.3 Budget shares for individual programmes of 6FP acquired by Czech teams



V.4 Numbers of participations of Czech teams in individual 6FP instruments (forms of support) and allocation of contracted support to these instruments (numbers, EUR mil)



The column Graph V.4 shows the overall numbers of participations of Czech teams in individual 6FP instruments (forms of support). The points in the above graph connected by broken line indicate amounts contracted by Czech teams in individual instruments (forms of support).

The 6FP instruments (forms of support) are as follows:

IP: integrated project

NoE: networks of excellence (data on support of Czech teams will be available only after termination of these projects)

STREP: specific targeted research projects

CA: coordination actions

SSA: specific support actions

SME: projects promoting small and medium-sized enterprises

MCA: Marie Curie action promoting mobility of researchers

IS: projects promoting infrastructure usage

These instruments (forms of support) are used in all thematic priorities mentioned on the previous Graph V.2.

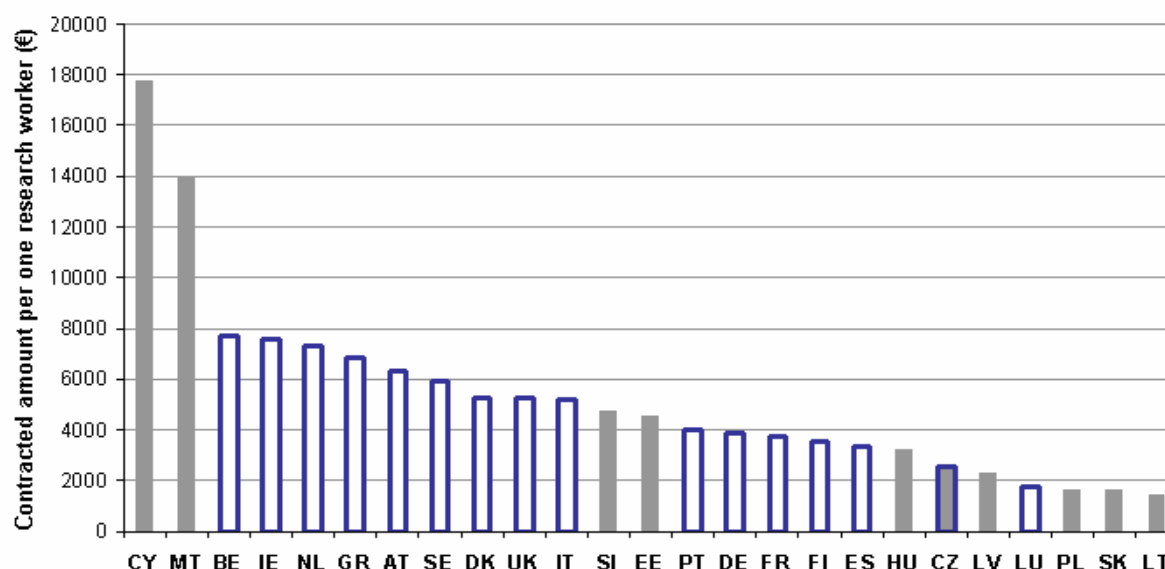
It is obvious that most often the Czech teams take part in research-oriented projects like STREP projects (134 participations) and IP projects (133 participations).

As far as the contracted amount of support is concerned, the Czech teams demand the highest support for integrated projects (EUR 23.87 mil) and STREP projects (EUR 14.40 mil). While the Czech teams obtain 72 % of the total contracted support in the “main

instruments" (IP, NoE, STREP), this percentage is substantially lower with other new Member States. The new Member States most often take part in SSA and CA projects, which are not primarily oriented to research activities. The deeper analysis, however, shows that Czech participants are concerned in IP projects only with a very small capacity, because the support demanded by the Czech teams from the European Commission for their participation in IPs is markedly lower than that of participants from other EU-25 countries. It cannot be ignored that the Czech teams got the fourth highest amount (EUR 6.45 mil) through their involvement in projects promoting the mobility of researchers. These projects lead to initialisation of further international cooperation in research and development.

On the other hand, one of the smallest supports even when compared with other EU-25 countries was demanded by Czech teams in SSA projects (EUR 2.95 mil). At the same time, the Czech teams report a relatively high number of participations in this form of support. In projects for small and medium-sized enterprises (CRAFT and CLR) the Czech teams contracted the support in the amount of EUR 4.74 mil.

V.5 Relative contracted supports from 6FP per one research worker in EU-25 Member States (EUR per person)



The importance of national participation in projects of the framework programme is expressed more clearly by the overall amount contracted by national teams than only by data on numbers of their participation. For the purposes of international comparison it is, however, necessary to convert this support either to the number of inhabitants (e.g. 1 million inhabitants) or to a unit capacity of the national R&D system. This latter possibility is illustrated by the column Graph V.5 giving the comparison of EU-25 countries by contracted amounts converted to the capacity of 1,000 research workers of the national R&D system.

As can be seen from the graph, Cyprus and Malta are totally beside the set of EU-25 countries with their amounts (EUR 17,780 and 14,960 respectively per one research worker). At the same time it is obvious that the old Member States EU-15 contract higher amounts per unit capacity of their research systems than the new ones. This difference has several reasons. In the first place, it is necessary to take into account what opportunities of project-oriented research are offered to national teams by their own national R&D systems (states without own grant system often contract higher amounts per one research worker than states

having their own grant systems). These opportunities are richly developed especially in large states (United Kingdom, Germany, and France) or states with high investments into their national R&D systems (Sweden, Finland). The salary level in national R&D sector is another key issue, since wage costs constitute around 50 % of the project budgets. It also depends on the structure of project types in a particular state: the prevailing participation in supporting projects (CA – coordination actions, SSA – specific support actions) reduces the overall contracted amount (see also the previous Graph V.4).

According to this indicator the Czech Republic takes 20th place (EUR 2,526 per research worker) among EU-25 countries and 6th place respectively among the new Member States. Hungary on 18th place contracts support in the amount of EUR 3,238 per one research worker.