Some selected experiences with FP5 participation a view from Poland

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1. General comments on handicapped position of CEECs before entering the FP5

It is of fundamental interest to everyone engaged in the process of European Enlargement to address the following question:

how important in EU catching up activities by the candidate countries is the R&D sector, and how instrumental in enhancing this sector have been so far the opportunities offered by the 5th Framework Programme?

While any measurable answer to the first part of the above question is anyhow enormously difficult, addressing the second part of it in sufficiently precise terms appears equally complex and also greatly premature in view of our only one-year experiences. Nevertheless, sharing some of the experiences gathered so far, no matter how incomplete, may shed some interesting light on the present and future of our 5FP engagement.

Let us start by identifying two major world economy trends:

- advance of information technologies
- internalization and globalization of society and economy

Regarding Eastern CEECs) vast statistical data do not leave any for inspite of sometendenc (like an estimated number of personal computers per 100 population or telephone line growth rates) a gap in information infrastructure between CEECs and EU is large and the situation is definitely far from satisfactory. Barriers to growth, related to historical legacy, appear to be related to:

- a hierarchical organizational culture,
- a large number of non-restructured enterprises,
- a deficient business environment.

Fortunately a number of optimistic observations can be made regarding the globalization of the leading CEEC economies. We witness in particular:

- changing trade patterns (by passing from a semi-closed economy to the trade opening),
- moving from the default on foreign dept to the positions of a major capital importer,
- starting the circle of the investment, productivity growth, increase in wages and income, which means transition from a declining area of massive emigration to a growing economy.

The fundamental problem of whether we have managed in the last decade to reduce the technological gap remains open with many key issues still to be addressed:

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1 The text below is merely an edited version of the presentation given at the Conference and as such may look rather sketchy at places.
- Should the fall of the R&D expenditures be linked merely to the adjustment of the R&D sector to the new market conditions (positive), or is it a long-lasting indicator of the peripheric position of the country in the modern world?
- To what extent the CEECs should strive to become producers rather than merely importers of technology?
- What macroeconomic policies (market-based!) are instrumental in enhancing the absorption abilities in the field of knowledge and technology? It appears that the pull factor (weak demand from the economy, low level of innovative behaviour of SMEs) is the main source of the problem and creation of a competitive R&D market is at least a part of the solution.
- How to integrate the S&T systems within the wider Europe is the key question for both the European economic convergence pace and enhancement of Europe competitiveness in third markets.
- Relatively smaller number of students in CEECs appears less dangerous in the longer run (will be made up for soon) than the quality and profile of education which is due to:
  - insufficient funding of renowned state universities (potentially a top-European class),
  - uncontrolled growth of private schools (only few really good, most quite weak),
  - distorted

As a conclusion we emphasize that knowledge economy is not about a simple absorption of new technologies, it also requires significant changes across the whole socio-economic system, industrial organization, administration, institution and managerial best practices. In fact, knowledge economy is a cumulative feedback loop between the innovation creation and the uses of innovation.

2. First experiences with FP5

In view of above brief discussion, and passing to our experiences with FP5, it has to be stressed from the very beginning that we highly value the very idea of CEECs participation in the Programme. Researchers in both academia and industry begin to be more and more aware of the opportunities offered by FP5 and positive attitudes towards it are visibly on the rise. The fact that the R&D sector has become the first area of national economy largely integrated with EU has tremendous significance, in terms of both its potential economic consequences for accession of the countries.

On the other hand, we have to admit that not everything we have experienced during the first year of the FP5 participation has been welcome enthusiastically. Among those aspects of our participation which we feel should be given careful scrutiny by the Programme authorities are the following facts:
- CEECs contribute a fair amount to the EC budget. Unfortunate perception among some EU-15 researchers and administrators is that EC heavily subsidizes CEECs participation. This may clearly negatively influence the pace of all-Europe research sector integration and, possibly, have also unfavorable impact on FP5 general results.
- Best European research consortia avoid CEEC participation, presumably because
  - Established links are crucial for smooth forming of new consortia,
  - Existing links are a clear operative asset at the stage of project execution.
However, new partners may sometimes be quite instrumental in invigorating the research area in question and may contribute with very new ideas. Large-scale promotional action within EU-15 countries demonstrating potential benefits from cooperation with CEECs appears very much needed, with the emphasis on very low labor costs resulting in enhanced competitiveness, high quality research potential in some areas and a potential access to new markets.

- Strengthening of EC promotional activities related to FP5 within the CEECs appears so far insufficient:
  - organization of major FP5 events (like Programme Committee meetings) in CEECs is very desirable,
  - more attention and support for networking contact points is needed to help breaking the local barriers of the lack of international experience on the part of potential participants and of very weak support from national resources.

- Centers of Excellence appear to be a real chance to invigorate CEEC participation in FP5. However, the current total funding of 20 mln euro is much too low to truly influence the overall prospects.

- IST results of CEECs are comparable to those in other thematic programmes which, in view of the IST future significance, can be seen as a very positive factor.

- Traditional weakness in technology transfer policies are clearly seen, negatively influencing the overall CEEC performance in FP5.

- In trying to assess the overall FP5 results it should be remembered that all the countries contribute to FP5 as per cent of their GNP. However, a realistic chance for financial return is measured rather in terms of the country's CEECs may be a few times lower! For Poland, for instance, the GNP share in the overall gross European product is at the level of 1.5% (and such is the Polish financial contribution to the FP5), whereas the similar share indicator in terms of the R&D budget is 2-3 times smaller.

3. Guidelines for action

On the basis of our experience so far the following guidelines for action within Poland can be formulated:
- More
- Development of skills to translate good research ideas into written format required by FP5 procedures.
- Strengthening promotional activities in some regions of Poland, where the FP5 success rate is visibly lower, see Fig.1 in which we plotted the distribution of research groups successful in the IST Calls so far, with the area of circles corresponding to the relative number of winning proposals, and Polish acronyms standing for the corresponding institutions.
- Encouraging those who failed to help enhance their proposals and resubmit.
- Increase project information campaign should be instrumental in this respect.
- Much better cooperation with European networks operating in the IST sector.
- Specialization in selected area where the success rate can be quickly increased (internet, services for citizens and governments, for instance)

Some statistical data below complete the presentation. In Fig.2 we demonstrate the comparison of FP5 participation of different pre-accession countries with the corresponding participation in FP4.
It has been documented in many reports that the pre-accession countries have significantly lower success rate in terms of both the participants (i.e. the research groups) and funding. However, the picture looks differently if we normalize the results in particular groups of countries with the corresponding average GDP in these groups, Fig. 3. The conclusion is striking: the GDP-normalized participation is almost uniformly distributed!

The fact that this is not quite so in terms of the GDP-normalized funding does not contradict the above tendency.

As a final conclusion we state that:

a) The CEECs have to be praised for their efforts in trying to adjust the local, historically unfavorable, R&D policies to the EU standards.

b) The economic situation in a country, as measured by the GDP, for instance, is a decisive factor influencing the country FP5 performance.

<table>
<thead>
<tr>
<th>Country</th>
<th>FP4 Accepted participants</th>
<th>FP4 Average yearly</th>
<th>FP5 (1999) Accepted participants</th>
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<tr>
<td>BG</td>
<td>173</td>
<td>43,3</td>
<td>28</td>
<td>65%</td>
</tr>
<tr>
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<td>304</td>
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<td>167%</td>
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<td>32</td>
<td>148%</td>
</tr>
<tr>
<td>HU</td>
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<td>88,3</td>
<td>129</td>
<td>146%</td>
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<tr>
<td>LV</td>
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<td>14,5</td>
<td>18</td>
<td>124%</td>
</tr>
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<td>LT</td>
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<td>25,8</td>
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<td>70%</td>
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<tr>
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<tr>
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<tr>
<td>CY</td>
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<td>329%</td>
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<tr>
<td>TOTAL</td>
<td>1974</td>
<td>493,5</td>
<td>706</td>
<td>143%</td>
</tr>
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</table>

Fig. 1. Comparison of participation CEEC participation in FP4 and FP5.
Fig. 2. Location of participants in IST Calls in 1999.

Number of participants

- TOTAL
- Member States
- Pre-Accession
- Poland

Submitted
Accepted
Fig. 3. Average results of the IST Calls 1 and 2 per country. Numbers of participants and funding normalized with the GDP in each group of countries (GDP in Member States = 100%). Success rates not normalized.