

Notes on the Second Interim Report

The report contains quite an immense amount of data and lots of recommendations. According to the contract, the Report should bring us (a) evaluation of the efficiency of the public R&D&I expenditures and the comparison with the European benchmark, (b) evaluation of the governance of R&D&I, and (c) evaluation of R&D programs. In my point of view, the evaluation results should give the government feedback for decisions on what types of research are worth supporting and what not, it should give answers to the questions as to which research institutions are more efficient and which are less and therefore which ones should be supported more and which ones closed. It should help the government to decide what kind of R&D programs are better for further application and which ones should better be stopped. The document does deal with these questions, yielding quite a lot of statistics, but in the end, more puzzles remain than answers to the above mentioned questions.

Ad (a): There are lots of statistics (mostly in the Annexes), both with respect to input (structure of the R&D expenditures) and output (mostly bibliometric data). They are quite interesting, and some are quite useful, however, I would expect that at the bottom line there would be an answer as to whether the results we get out of the system are worth the money which goes in. Of course, we get quite impressive graphs of the R&D intensity, or citation statistics, etc., however, the summary “*The comparison with a number of benchmark countries made clear that the Czech Republic still has a long way to.*” is rather vague for my taste.

Ad (b): The governance system evaluation is, in my view, quite interesting and useful. I think it can bring a useful feedback when rebuilding the system. Having only a brief and partial experience with the labyrinth of the Czech R&D&I governance structure, I could pin-point a few imprecise statements (see below) in the Report, but they are not essential. I consider this part of the report (Annex 2) as quite useful - especially the comparison with the experience of other countries.

Ad (c): The evaluation of the R&D programs is included in Annex 2, in my view, it is quite useful.

Apart of these points of the contract I was asked to focus on, the Report continues to discuss the “Evaluation methodology”. Since this topic is an ever-green in discussions polarizing the Czech research community, and the authors of the Report devoted quite some space to it, I will have some comments, too. The community is polarized in the sense that some people vigorously criticize the money allocation system based on the “methodology”, pointing to its flaws (by right), and there are other people who stress that the previous system was much worse (also being right, in many aspects). Since the authors of this Report take side with the former opinion, I have to question some of their conclusions.

- It is suggested several times, that the “Academy of Sciences ... can be used as an inspiring example” regarding the R&D evaluation. Before doing that, I would like to hear from the authors some comments on the following questions:
- In 2008 the evaluation of Academy institutes resulted in 41 institutes being A, 15 being B, nobody being C and nobody D. That is, every institute was, if not world class, then at least very good. I wonder whether this corresponds to the findings of the authors that “*the Czech Republic still has a long way to*”. I would expect that if almost everybody here is at the top, the world has to hurry to catch with us, and not vice versa.
- As the present evaluation of the Academy institutes is still under process, many remarks arrive that should be commented by the Report authors who offer it as an example to be followed. I hear that the institutes were rather free in defining their internal “teams” to be evaluated. They were also rather free in suggesting which foreign referees should be invited to write reports on their research teams. According to the information I have heard, some institutes played the system, redefining their “teams” so as to hide the weak teams dispersing their members among the stronger teams, thus improving the total scores. Those foreign experts that were willing to write the report were often friends of the institute members, whereas many teams were not subject to any foreign report - simply because nobody wanted to waste time dealing with them. On the other hand, there were institutes which wanted to take advantage of the opportunity of such a feedback and managed real world-class experts to evaluate honestly their work.

Sadly, as a result the honest institutes scored worse than those “playing the game”. At the time of writing this review, a gossip goes that one of the best chemical institutes - UOCHB - scored as one of the worst and the evaluation headmasters are now busy in “correcting” the evaluation results. Of course, there are no official results yet, but since the authors of the Report very strongly recommend following the Academy experience, I would expect that they would offer much more details about all the aspects of their evaluation. It would be also very useful if the Report gives more detail on how the evaluation results will be used for the money allocation (which is required by our law - and the way how it is done should be published *before* the money is distributed).

Let me now mention some other remarks regarding the Report:

- p. 3, Fig. 1 (also Annex 2, text on p. 6, Fig. on p. 41): the links suggest that just the Bioethics commission, the Technology agency and the Science foundation have their chairpersons as permanent guests of the R&D&I Council, whereas the Advisory commissions and the Ministry of education are just “guests”. Actually, the chairperson of the Bioethics commission is a full member of the R&D&I Council (by law), and the chairmen of the Advisory commissions, a deputy Minister of Education, a deputy of the Ministry of Industry and Trade, and also the director of the Czech Geological Survey, are permanent guests of the R&D&I Council (by the decision of the R&D&I Council chairman).
- “*the ratio industry/research members in the Council is 1:4*”: this is actually rather imprecise, as far as I know, those members of the R&D&I Council who are still more or less active researchers are about 11, so, if the industry members are present, the ratio would be 1:2,8. On the other hand, since 3 of the 4 industry members resigned, the ratio could be also treated as 1:11.
- Annex 1, p. 11: “*Interactions with the government sector are considerably higher. R&D funds of € 44 million flow from the enterprise sector to government sector R&D institutions, which mean that 10% of total R&D activities in the government sector are financed by business enterprises*”. What part of this number comes from a single institute, namely UOCHB? I would like to see how the numbers change if the sectors are compared without this singularity. Similarly - how would fig. 8 on p. 15 look like if UOCHB is excluded? (Also, same comment goes to the note on p. 85.)
- Annex 1, p. 16: I was rather surprised by the explanation of the high level of public funding of the business R&D, “*The reason for this high level of public R&D funding is according to the OECD latest Economic Survey on the Czech Republic (OECD 2008), that the existing tax break for R&D has proved popular with private-sector spending on R&D.*” How comes? The tax break stimulates in-house research paid by the company itself, which just benefits from the tax deductions. But the question is, why so much public money flows into the private companies?
- Annex 1, p. 40, fig. 27: The figure shows the ratio of the government sector to the university sector to be quite higher in CZ than in EU27 and in most western countries. I would expect that the authors comment more on this result. Is it good or not? It is often stressed that the research and education should better coexist in a synergy rather than to be kept separate. So why does the report not discuss a possible joining of these sectors, rather than vaguely talking about their “collaboration”?
- Annex 1, p. 84 “*...the Czech Republic has a very generous support system of direct measures (R&D programmes) and indirect measures (tax breaks) for the business enterprise sector. Overall direct government support for business R&D was at 13%, which is 6% above EU-27 and EU-15 levels.*” Yes, that should be stressed quite often. But I would expect more comments on that - is it good or not? Should the government try to change that somehow?
- Annex 2, figs on p. 55: I think the trends show clearly an increasing collaboration between the Academy and Universities, so it does not support the claims (see Annex 3) that the “evaluation methodology discourages collaboration”.
- Annex 2, p. 65 “*In the general mindset, the institutes in the Academy are considered to conduct basic research, while universities are said to focus on applied research; the perception is that experimental development is implemented in the ‘sectoral’ public research institutes, the private research institutes, and industry.*” I have not known about this “general mindset” on such a territory division, perhaps the authors could cite where this information comes from.
- Annex 3, p. 11, the mentioned 1.5% allowed increase of results except Jimp is wrong - it is 1.5 (=150%).

- Annex 3, p. 15, the sentence *“Without going into further detail, the table below illustrates that according to this original timetable, in 2011, for the majority of the research organisations the institutional funding would have been determined by the new PRFS – if not entirely at least for 2/3”* sounds rather strange (“would have been...”) given that now - in the beginning of 2011 - the budget 2011 is fixed (according to PRFS) and the R&D&I budget 2012 proposal is being prepared for submission to the government.
- Annex 3, p. 21, the authors discuss possible effects on various research fields. The authors did some math exercises, but the question is what their results really say. They conclude from the data of 2008 about rather drastic reallocations in the coming years. However, if they used data from Evaluation 2010 (e.g., available from the Ministry of education in the end of 2010), they would get much more precise figures. So, e.g., instead of saying that the money for the field Genetics and molecular biology will drop from 4.0% to 3.1% (i.e., -23%), the data from evaluation 2010 show that the drop is to 3.84% (i.e., -4%). This should not be taken as that nothing serious happens, actually, in many fields the changes are much higher, I just want to stress that the authors should go for real data when analyzing the system. Also, if the authors worked really hard with the numbers, they would discover a rather serious flaw in setting the parameters of the field allocations (field 3. Mathematics and Informatics, set to 8.2% rather to about 5%) which caused quite some trouble in application of the evaluation 2010.
- Annex 3, p.88: *“Any system for allocating institutional funding needs to have a prospective element in order to allow institutions to build up capacity or to venture into new research directions. As the case studies show, this is typically done through performance contracts. Prospective elements can also be included in the funding formula. Again, this is not currently the case with the Czech Evaluation Methodology”*. The term “performance contract” sounds very similar to the “research plan”, which many researchers here are scared of. It meant in many cases rather unfair division among those “with” and those “without” a research plan. Quite some researchers feel the “Evaluation Methodology” as a more just system than that of the research plans - even though the flaws of the methodology are obvious. These researchers think that the “prospective elements” should be reserved to the project funding but should not go to the institutional funding. It seems to me that the authors did not take their opinion much into account.
- Annex 3, p. 107: I do not understand the statement *“At present Academy researchers cannot be involved formally in teaching at universities and the contacts are based on informal agreements. They should be able to teach, inspire and recruiting students by establishing more formal relationships, for example by means of joint positions at the Academy and in a university similar to the situation in Germany where many researchers at Max Planck Institutes hold a formal (zero-salary) professor position at a nearby university,”* since I know quite a few professors with positions at both a university and the Academy.
- Annex 3, pp. 127-131: The recommendation basically says that we should freeze the institutional financing at some average of the previous years and not change it for the next 9 years or so, until a completely new methodology is developed and tested. This would be for sure welcomed by those who do not produce too many results and possibly will be retired within the next 9 years, but I know quite a few researchers that would feel this as extremely unjust. These are typically highly productive people who had worked at some conservative environment and the result-based system enables them now to finance their research. Did the authors of the Report think that maybe just these young productive people would then leave the country for a better perspective? Although the interim report admits that the present system was introduced as an answer to the high level of corruption, nepotism and proportion of institutions without any measurable output in long period, the means how to tackle the issue, when recommendations listed in the interim report are applied, are missing. The call to extend funding to ineffective teams and institution after they did not react to the incentives set already in the 2004 evaluation methodology is in the clear conflict with the required effectiveness of spending. The support of the ineffective teams can continue only in sake of the effective ones. The capable teams are expected to adopt in the several years period when extensive discussions and implementations of performance based system continued.
- Generally, I miss the comparison of the effectiveness of the previous system (before 2004 when research intentions were 'invited only' area, most university researchers did not have any access to any institutional funding and results of R&D were not evaluated on the regular basis) and the current system

of funding of all eligible institutions/teams and based on the output in the last five years (EM 2004 till 2010). The interim report stresses the role of high-level policy makers in creating a common vision on innovation strategy. What is the Czech experience with the previous system in fulfilling this task? Were the incentives to innovate stronger in the panel governed funding and evaluation or in the system rewarding quantified outputs? There is a common knowledge, that the system of funding valid till 2009 enabled the persistence of the very ineffective teams and institution on the basis of the high level decision that they will obtain a long term funding without subsequent accountability. Although it is mentioned that nepotism is a problem and should be tackled, nothing is mentioned how it should be achieved. Without setting mechanisms to safeguard effective spending of funds in R&D, the recommendations are unrealistic.

- The Report suggests (Annex 3, p. 18) that the Czech system evolved in isolation from other countries and differs from international practice. As far as I know, a very similar system is operated in Poland, which is in the similar situation as the Czech Republic and further examples are given in Annex 3. Although the statement in the Report is softened by expression that 'most countries' and 'almost complete isolation', I have not found any analysis under what conditions systems similar to the Czech one were introduced. The discussion with researchers in other countries shows, that the quantitative approach is effective in the environment of high level of biased panel evaluation (resulting from the size of community, personal tights, nepotism, etc.). It is hard to compare the UK research community in UK and Czech Republic in size, performance, traditions etc.

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