

## **Comments to the Competition Policy and State Aid Regulations**

### **State aid for research**

I would like to address only the questions of State aid issue dealing with research, development and innovations. The rules for State aid in the segment of research are expressed in “Framework for State aid for research and development and innovation (2014/C 198/01)”, as well as in “General Block Exemption Regulation (GBER)” and newly also in “State Aid Rules in Research, Development & Innovation, Addressing Knowledge and Awareness Gaps among Research and Knowledge Dissemination Organisations - Decision Tree” compiled by the Joint Research Centre's (JRC) Competence Centre on Technology Transfer (CCTT).

### **Why do I want to contribute to the discussion on the State aid issue?**

#### *My experience and qualification*

My qualification to address the State aid issue for research reflects my role within the “Academy Council” of the Czech Academy of Sciences, the executive governing body of the Academy. My responsibility here is knowledge and technology transfer into application sphere, and coordination of the utilization of intellectual property. Thanks to my effort to create an environment supporting the knowledge and technology transfer I inevitably faced the limitations and restrictions posed by State aid regulations.

I am also an active researcher, head of a Department of Coherence Optics of the Institute of Scientific Instruments, Czech Academy of Sciences. I personally conduct a number of projects of fundamental research, applied research, projects performed in collaboration with private companies and also projects funded exclusively by private money – research on demand (contract research). My specialization is laser technology, quantum metrology, optical frequency standards and dimensional as well as industrial metrology and applications. I have a large experience in collaborative research with high-tech companies. All of this in a country (Czech Republic) which is the most industrialized in EU, it underwent a transition from communist, centralized economy but still has not yet achieved the efficiency and productivity of the EU 15 countries. I think it is quite unique and inspiring experience.

The Czech Academy of Sciences is a member of the TTO Circle within Joint Research Centre and I represent the Academy on the meetings and workshops there. I initiated a debate there about the State aid issue in research and its impact on the research environment of the EU 13 countries, especially those after transition from a centralized economy. The result was an investigation among the new EU countries on how the State aid regulations in research are implemented and what their impact is. Consequently JRC established a working group (including me as a consultant) which put together an explanatory guide “State Aid Rules in Research, Development & Innovation, Addressing Knowledge and Awareness Gaps among Research and Knowledge Dissemination Organisations - Decision Tree”. The work on this document helped me to understand more about the State aid regulations and their impact.

#### *Research environment in Czech Rep. and other EU13 countries*

The State aid regulations for research came to the Czech Republic (and other EU 13 countries) with the Structural funds. A small portion of these funds supported research and those who received funding for their large infrastructure projects were told to obey these rules.

This meant that ministries and agencies distributing these funds decided to monitor whether the research organizations obey the rules. The rules (sometimes unclear and vaguely formulated) needed

interpretation. The authorities due to their fear of being not strict enough imposed really a restrictive approach and started careful inspections of the research organizations. It is a well-known effect called "gold-plating". The fear of being not strict enough is fueled by political implications when the EU might stop these funds due to our breaking the rules.

The result is obvious. Research organizations and researchers themselves, under pressure from a restrictive interpretation of State aid rules by the authorities, started to see any applied research, knowledge transfer, collaboration with industry, etc. as something risky, more or less illegal or at least strictly regulated. On one hand politicians talk about technology transfer and support of competitiveness of our industry to be a great priority of state funded research and on the other hand, EU imposes strict rules making these activities a very risky business. The implications on the research environment are dire.

We have now the official interpretation (State Aid Rules in Research, Development & Innovation, Addressing Knowledge and Awareness Gaps among Research and Knowledge Dissemination Organisations - Decision Tree). It is better than nothing; at least it helps the research organizations to fight the authorities with their too strict approach. But the result is only more bureaucracy.

I am sure that the State aid regulations for research have to be significantly simplified; they must not allow strict interpretation and have to be much more open and supportive for research done with the intention to be applied in practice. In the EU15 countries the rules evolved gradually, the research environment adapted to them and they are not interpreted restrictive way. In EU13 their impact on the research environment is tragic. A full abolition of the state aid rules for research should also be considered. If their positive and negative impact is weighted, it seems to me, that the negative prevails.

## **Research and the Green Deal**

This call for contributions focuses primarily on policies fighting climate change and protecting the environment. As far as research is concerned it seems to me that research in general is environmentally friendly. Not only research with direct effects on climate, biodiversity, circular economy, etc. should be supported but one with indirect as well. Any research that has a socioeconomic significance finally targets a shift towards more sophisticated production and services, towards more hi-tech industry and manufacturing with a higher added value. All of these promise smaller environmental burden through smaller demands for raw materials and energy with the same or higher economic output. The competitive markets generate pressure strong enough.

Taking this into consideration I strongly call for abandoning any priorities in research, in this case priorities set by imposing the State aid rules on research selectively. This can do much harm. History shows that any predictions of the progress in modern technology proved to be wrong. More, any setting of priorities gradually degrades into fighting of lobby groups trying to push through their agenda. No one knows where the new breakthrough technology might come from and what will really kick-start the European recovery.

If there is fear that some kind of research really may be environmentally unfriendly, rather than imposing selective rules I would suggest to rely on the moral integrity of researchers and a code of conduct for responsible research. It has to be kept in mind how bureaucratic the research environment now is. It should not be made any worse.

## **Implications on the research environment**

State aid or financing from the state budget is justified when the market fails. Research surely fits into this category. It is questionable whether there might be some circumstances when research distorts market and might be a source of unfair advantage.

If there is a risk of market distortion or indirect state aid given to some entity (undertaking) via subsidized research, there is also a risk of research organizations being discouraged from any activities leading towards collaboration with any application partner (company). According to my experience within the Czech research environment the second risk strongly prevails. If there is a research performed within collaboration between a research organization and a private company, the results are fit to the demands of the company. It is very unlikely that there is anyone else able to exploit the results. Similarly the efforts of knowledge and technology transfer have a very small success rate. Only a very little amount of research results created in publicly funded research organizations have a chance to enter practice. Any success of this kind should be appreciated. Any idea that the research organization distorts the market by handing the result over to one company and not to another is false. If a single user of the result is found, it is a great success.

If there is a risk of market distortion by publicly funded research organizations, it is in case they are forced to earn income from private sources. A typical example is imposing monitoring indicators in various funding schemes linked to this kind of income. It is in its way copying the Franhofer model. Inevitably the research organizations are thus forced into activities having little or nothing to do with research, such as small-scale production of goods, offering services, e.g. routine analysis, measurement, etc., that can easily be done by the private sector. At the moment such incentives exist and the State aid rules on the other hand restrict it. Much better and effective approach would be to stop the pressure. It is always better to remove the motivation to do something wrong than to make it forbidden. It means to find other and better methods how to measure the level of collaboration between the public research sector and the private one. And to issue some code of conduct for public research what is acceptable and what is not.

Quite an important element is the effort to divide research into categories, such as fundamental and applied (or industrial) research, development and innovations. Sometimes even including oriented (or targeted) research, eventually going even deeper with the Technology Readiness Levels (TRL). It has serious consequences, political and also financial for the research organizations due to limits of co-financing imposed by the State aid rules. This is described in detail below.

To summarize, the existence of the State aid rules might have been motivated by an effort to help the protect research organizations and to avoid lawsuits from companies that may feel disadvantaged by market distortion by state funded research organizations. The number of cases where the rules really helped this purpose should be compared to the damage done to the research environment and to the legal insecurity of the public research sector resulting from extensive inspection and restrictive interpretation of the rules.

## **Comments to the Framework for State aid for research and development and innovation**

I try to pick up the most important aspects of the Framework that should be revised. A detailed discussion would be too extensive. I hope this brief overview is, or will be a motivation for revision.

- Definition of the knowledge transfer is quite broad in the Framework. Chapter 1.3 Definitions says that it is acquiring and sharing all kinds of knowledge in economic and non-economic activities as well. This looks logical; it is any effort to help research results to be used in practice. On the other hand, in Chapter 2.1.1 Public funding of non-economic activities the

term knowledge transfer appears again, being defined as non-economic activity with some restrictions. This results in a restrictive interpretation of what really knowledge transfer is and creates confusion.

- The key aspect of the State aid rules in research is the concept of distinguishing economic and non-economic activities. These terms collide with the same terms from tax regulation and legislature where their meaning differs significantly. This is a source of great misunderstanding by authorities.
- The term of "contract research" is also one of the most misunderstood. It is a nice catchphrase that turned into a general term for any research performed for private sector and paid by private money. The Framework, Chapter 2.2.1 Research on behalf of undertakings (contract research or research services) offers some characteristics and says that they are typical for contract research. This is a source of a great confusion. The reality is, that in most cases the research done for/with a company is always somewhere in between contract research and (effective) collaboration. More, a great damage to knowledge transfer effort is a statement that, in case of contract research, the results (often understood as intellectual property – IP) belongs to the undertaking. Together with an idea that everything we do for a company is a contract research makes the proper knowledge transfer and management of IP impossible. And the companies are happy to understand, that whatever we do for them and they pay for it, the IP is theirs. The Framework says that clearly enough.
- The Framework sets a limit for economic activities of the research organization to 20% of its capacity. Not to mention the reason why just 20%, this is a source of a lot of bureaucracy and one of the greatest sources of inspection and monitoring of research organizations by the authorities. What the limit says? Is it something the research organization should not do? Or is it slightly tolerated? Is it a good thing or not? And 20% of which capacity? Should it be calculated from income, or personal capacity, or capacity of instrumentation, or ground floor of the institute? This generated enormous amount of disputes, misunderstandings and quarrels about the method how to calculate it.
- The concept of effective collaboration is strange and even funny. It is hard to understand why just this "effective" form of collaboration is something better than any other form of collaboration and why it should have some preferential treatment by the Framework (i.e. to be a non-economic activity, while contract research, also a form of collaboration, is economic and thus limited by 20%).
- The category of independent R&D is mentioned as one of the non-economic activities. In reality no research is independent. No one lives in vacuum, with no interactions with the outer world. Especially in technical subjects most of the research draws inspiration from industry. The form of collaboration with industrial partners we appreciate the most is something as inspired research funded by private money. Is it an effective collaboration? No, the company does not contribute. So should it be a contract research and thus economic activity? This would be a tragedy. But the authorities tend to see it this way.
- Chapter 4.5.1.4. Cumulation of aid shows the limits for R&D projects for various categories of research. Small and medium-sized enterprises are allowed more. More detailed description is given in Annex II, in table Maximum aid intensities. If this is applied to projects where a publicly funded research organization and a private company join forces this results in a weaker position of the research organization in project negotiations. Only the private company has resources to co-finance the project. The will of the company to invest its own

money into the project thus limits directly the whole budget. The company holds the key to the budget and the research organization has to accept it.

- Chapter 2.2.2 Collaboration with undertakings speaks about compensation for the research and IPR done for the undertaking. The Framework operates with market price. If it is really research, there is no market price. The alternative is a “transparent and non-discriminatory competitive sale procedure” or “negotiation at arm’s length conditions”. Thanks to this there is a lot of room for strict interpretation and inspection and monitoring of research organizations by the authorities. Not to mention the bureaucracy associated with proving that we followed these rules. In an environment where the research organizations are (through monitoring indicators) forced to generate income from private sources, these statements of the Framework simply have to be sometimes circumvented.

### **Suggestions for change**

To fix the effects of the State aid regulations I would suggest several options of approach.

#### *The most radical suggestion*

- To admit that the “Framework for State aid for research and development and innovation (2014/C 198/01)” has done more harm than good and to abolish it completely without replacement by any other regulation.

#### *Minor changes*

- To abolish the categories “contract research” and “effective collaboration”. The activities done by public research institution for/with an undertaking should be either “research” with no adjective or everything else which is not research, let’s say routine services, manufacturing, etc. The category “research” should be a non-economic activity and routine services, manufacturing should be economic activity.
- To say that the economic activities should be done only on a small scale and to avoid setting any limit (such as the 20% limit).
- It should be stated that the category “research” is an activity where IP is generated, including all kinds of IP, as defined in the knowledge transfer in the Framework: besides scientific and technological knowledge including explicit and tacit knowledge, skills, and other kinds of knowledge. The IP belongs to the entity where it was created and not to the entity which paid for the research. The IP has to be a subject of knowledge transfer. The knowledge transfer has to be defined broadly. The economic activities are those where no IP is created, only results that should be defined as a product of e.g. a routine measurement and they belong to the undertaking that paid for the activity.

#### *Medium scale approach*

- The same as in the previous suggestion but I would also suggest to abolish the categories “economic” and “non-economic activity”. As mentioned above, the terms create confusion; they collide with the categories in tax regulations and legislature. The categories such as “research” and “everything else” would be enough.

### *Other general suggestions*

- Maximum aid intensities given by the Annex II should not be given by the category of research. This only fuels the culture of pretending. It should be given by the type of the entity which performs the activity. If it is a public research organization it should be eligible to 100% financing of a project no matter whether it is a fundamental, independent, applied or any other kind of research. The limits should be given to funding research in an undertaking. Again, no matter what kind of research they do. In collaborative research projects with funding from state budget the private sector partner should not be able to control the whole project budget through his will of co-financing.
- This is closely related to the existence of categories fundamental, independent, applied, targeted, oriented, industrial and whatever else research. Especially dividing research between fundamental and applied is widely misused by political representatives and we hear quite often that the fundamental research is the useless one, while the applied is the only one that can deliver something. Any research has a potential of socioeconomic relevance. The categorization of research is surely harmful and should be abandoned.

### **Closing remarks**

If the EU really aspires to be competitive on global markets with the most hi-tech products and services and to be a leader in deep-tech innovations, the State aid rules for research have to be revised and simplified.

What I wrote here is definitely written from the perspective of a person who actually does the activities (research) that are subject of the State aid rules and regulations; from a perspective of a researcher within a state funded research organization. I have read a number of articles about State aid in the journal State Aid Quarterly and I must say that this subject is too serious to be left to lawyers. The way how the rules are written and interpreted seem to me to be in many cases out of touch with reality. If there is a working group to be put together to do the job of revision, I would be happy to contribute.

Prof. Josef Lazar  
Institute of Scientific Instruments, Czech Academy of Sciences  
Královopolská 147  
612 64 Brno  
Czech Republic  
e-mail: [joe@isibrno.cz](mailto:joe@isibrno.cz)  
phone: +420 541 514 253