

Science for presidents

Scientific Policies

The keys of the science of excellence

The ERC financing programs accumulate prestige in their fourth year of requests for the promotion of frontier science

The European Research Council (ERC) faces its fourth year of life with a label that is positively surprising its promoters and users: The promotion of excellence is a guaranteed prestige. And probably, if things continue like this, a guarantee of success; at least, regarding the bidding capacity. Another very different matter will be the influence capacity, as in the design of scientific policies as well as in the research results. "It is still early to value the influence of the ERC" admits Andreu Mas Colell, current general secretary of the institution.

XAVIER PUJOL GEBELLÍ | 11 FEBRUARY 2010



As everybody knows, time is one of the key elements for the generation of quality science, as is a good funding or an exquisite organization, a part of assembling the right talent to perform the assigned tasks. And it is time that the ERC has been missing to prove its value in the medium and long term. Still, what can be seen until now, just when its first funding requests are approaching its equator, is more than encouraging. Will such high expectations remain as time goes by?

Independent science

A few years ago, when the ERC was just a declaration of intentions in draft format, the British Nobel prize Timothy Hunt, one of its drivers, lamented the European specific weight loss in the knowledge generation. "When I was young, everybody wanted to do research in Paris or Vienna or in the United Kingdom". With time, he went on, that desire moved towards the United States, where more and better conditions were given.

An excess in oriented science, activity mainly capitalized by the European Framework Programs, a rampant bureaucracy, and the loss of specific weight of the independent researcher, summarized Hunt, invited to a European escape of brains towards the other side of the Atlantic. In other words, to an intellectual decapitalization with the evident result of an international competitiveness loss. As Joan Guinovart, director of the IRB Barcelona (Biomedical Research Institute) and currently member of the executive committee of the IUBMB (International Union of Biochemistry and Molecular Biology) used to say, "what kind of applied science are we going to have if there is no basic science to apply".

To capitalize again the knowledge generation, that was and still is the goal. The question was simple and uncomfortable: how to capture and retain brains for a Europe with no space or common research structures and with resource lines directed exclusively to the applications generation? Fotis Kafatos, the founder president of the ERC has endlessly summarized it in a phrase: generating the adequate conditions so that the "independent frontier science" may succeed.

Intellectual decapitalization has as a main consequence an international competitiveness loss

"Independent science" should be understood in a way that scientists can aspire to develop their own lines in frontier territories, i.e. of risk, of any knowledge branch; with enough financing and assuring a suitable accommodation for the researcher and his backpack. With these

premises, the first summons of the ERC received more than 9,000 applications for just 300 vacancies.

Distributed talent

For the next summons, the momentum of the scientists was tempered, but remained high. "Now between 2,000 and 3,000 researchers apply per summon" informs Andreu Mas Colell. For the general secretary of the ERC, the four requests developed until now are insufficient to draw definitive conclusions, but ways are being suggested. "There aren't many surprises" says the Catalan professor of economy, "everything is developing as expected".

And what was being expected? "Talent is the best distributed resource of the planet", assured Fotis Kafatos, who will leave his charge at the front of the ERC next first of March when the first calls are being brewed. Mas Colell, who has been professor at Harvard and Berkeley –now at the University Pompeu Fabra of Barcelona- endorses it. "The destinations have been distributed throughout Europe according to what was expected", he states.

Two determining aspects influence the destinations of the applicants. First, the researcher's will; second, the destination institution, that has "to become accomplice" of the line the scientists carries in his backpack and keep up with the proposal made. It is because of this reason that these programs, basically two, are also considered a good tool of scientific policy. They don't just allow the access to suitable resources to researchers opting for their scientific independency, but also require sufficient conditions to the host institutions.

Frontiers

The two modalities with which the ERC works are currently understood as more than enough. More than with the age, the dividing has more to do with the time elapse since obtaining the doctoral degree. If it is under ten years, it means that the scientist is in the line of consolidating his interests, so that a funding, apart from promoting a specific line, must help him build his independency. In argot, these aids are known as *ERC Starting Grants*. If the ten years are exceeded, the so called ERC Advanced Grants want to give a definite push to risk science, also located in the knowledge frontier.

The aids are granted for a period of five years and are "transportable", which means that the researcher can decide to move his line to another institution if the first doesn't meet the expectations. But that, Mas Colell assures, has only happened on counted occasions. What is really important, says the general secretary of the ERC, is that "centres and universities should not only meet but promote the received aids as a prestige factor".

The pitfall of destination saved, it was left to know what would happen with the frontiers, what thematic areas would be the favourites. "The same way that there is a real distribution of centres throughout Europe and there aren't any concentrations above the expected", says Mas Colell, "the research lines are defined by the researcher". This means that it is the researcher who decides what to do and where and that the thematic preferences have to do with what is "the current tendency". A tendency that however, could vary regarding the researchers interest, and not so much when it comes to deciding strategic lines.

PARADOXES IN SPAIN

Every aid granted by the ERC means an average of around two million Euros per project to be developed in five years, although the range extends from a million to 3.5 million Euros. Since its inception in 2007, the ERC has financed about 1,059 projects with a budget that currently reaches one billion Euros annually.

modalities until now. The numbers throw a significant 6.3% of Spanish contribution. The percentage could be considered modest, but is much more than what one might have expected just ten years ago.

In front of Spain, are the countries with most tradition like the United Kingdom, France, Germany or Switzerland and also the Netherlands and Italy with whom it competes for the position. Therefore, it is not a bad return.

Regarding the Spanish distribution, it is surprising that the CSIC has made itself creditor of only 10 of the 68 granted aids. The ICREA researchers have received 21, the CNIO 8 and the centres assigned to the CERCA program of Catalonia a total of 24. Paradoxically, an enormous proportion of aids have been received by researchers who have gone beyond the traditional Spanish civil service mechanism, which abounds about the uncertainties attaching to the current organizational system.