

# More Excellence for Europe



Since 2007, the European Research Council (ERC) has been awarding more than a billion euros each year to outstanding scientists in Europe. The funding is aimed, not at projects, but at individuals; national interests and political strategies play no role. We have fought long and hard for this clear commitment to supporting excellence. At present, the so-called Starting Grants have been awarded. These enable talented junior scientists to establish their own research teams and work autonomously on research projects of their own for a period of five years. The outcome of the fifth round of awards mirrors research performance in Europe – and shows that Europe is split in more than just economic terms. If, after these five allocation rounds, a list were to be compiled of “winners,” it would quickly become clear that the UK, Germany and France were the most successful in the competition for Starting Grants. Just 55 out of a

in the world. Including the proportion contributed by industry, each member state was targeted to spend three percent of GDP on research and development. The top individuals can choose for themselves where they wish to carry out their research – and they choose locations where they find the ideal conditions for their work. In Southern and Eastern Europe, this is currently not the case, and the migration of talent is a major problem.

The Max Planck Society, for example, provides ongoing support for talented junior scientists following a research residency at a Max Planck institute by setting up a partner group in their home country. In Southern and Eastern Europe, however, there is a lack of capable or adequately equipped laboratories. In Poland and Romania, we have just one partner group each – compared with 35 partner groups in the emerging Asian economies of China and India. And the pool of talent in these latter countries will grow rapidly in the coming years: In its current report entitled “Education Indicators in Focus,” the OECD forecasts that, by 2020, India and China alone will account for 40 percent of all university graduates. We can’t ignore global developments on this scale.

If we are to offer junior scientists in Europe a viable outlook in their own homelands, and attract talent from across the world, it is vital that excellence should be pursued everywhere in Europe. We must make greater efforts to bring the Southern and Eastern European member states on board, not least because developing scientific excellence would strengthen their economies. It is a fact, as the American economist and Nobel laureate Robert Solow demonstrated in his “Contribution to the Theory of Economic Growth,” that 80 percent of economic growth in the industrialized countries results from the development

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## Southern and Eastern Europe lack capable labs

total of 2,538 ERC grants, or 2.17 percent, went to EU member states in Eastern Europe (EU-12).

This meager success rate also reflects the unequal levels of research expenditures: The countries of Southern and Eastern Europe invest barely 1.5 percent, or even less, of their gross domestic product in research and development. At the dawn of the millennium, the European Union set itself an ambitious goal that was formulated in the Lisbon Strategy: Within ten years, Europe was to become the most competitive and dynamic knowledge-based economic area

of new technologies. And it is research, after all, that contributes vital ideas for new technologies. The economic weakness of the Southern and Eastern European states is thus primarily also a weakness of innovation, making increased investment in research urgently necessary.

This year's European Union budget totals around 147 billion euros. The major costs incurred by the EU are the product of its co-

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## Research and innovation are growth factors

hesion and common agricultural policies. Yet many experts regard Europe's agricultural policy as a phenomenon that costs a lot, but achieves little – an escalating policy that now consumes 40 percent of the EU budget. Much the same could be said of the so-called cohesion policy. Despite the huge sums deployed, the wide disparities in economic power between individual European regions still persist. After decades of this kind of funding, we should be asking ourselves how this money could be spent more effectively.

German reunification offers a striking example: 20 years after East and West were reunited, there still remains a major income differential. However, the impressive rate at which per capita GDP has grown in the former East Germany, having more than doubled since 1991, can't be emphasized enough. It is also beyond dispute that research and innovation have been the deciding factors in the development of the German economy in the east. SMEs actually do more research than companies of similar size in West Germany, and are more com-

mitted to networking. Together with the universities, polytechnical colleges and non-university research institutions – among them no fewer than 20 Max Planck institutes – they are contributing to the formation of knowledge-intensive clusters. One such cluster, for example, is that in Dresden, where, as part of the Excellence Initiative, the university was recently awarded "Elite" status.

One of the critical factors contributing to this success was the DRESDEN concept, which involves networking the university with non-university research organizations located in the vicinity, and extends not only to cooperation in teaching, but also to the coordination of research methods and approaches, the shared use of cost-intensive equipment parks, and the exchange of results. In many respects, the resurrection of East Germany was a new beginning. In 1990, representatives of the Federal Republic and the GDR agreed on the development of a "uniform research landscape." The aim was to transfer the West German research system, of which scientific freedom and the division of labor between university and non-university institutions were the defining features, to the whole of Germany at both the quantitative and the qualitative level.

The research systems in Southern and Eastern Europe, on the other hand, must renew themselves from within, which is no easy task. This, too, has been recognized in Brussels. As part of its "Horizon 2020" program, the European Commission intends to provide 80 billion euros to promote research during the period from 2014 to 2020. One of the three focal points of funding is "Scientific Excellence." In this context, the Max Planck Society has adopted an idea proposed by Federal Minister of Research Annette Schavan and MEP Herbert Reul, and is suggesting a new instrument of support: Teaming Excellence. This concept pro-

poses that European regions with world-leading research institutions should come together with the aim of developing scientific institutions of a standard with which

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## The teaming concept as a new way to foster innovation

country-specific research structures should then be aligned. The necessary infrastructure in particular could be financed through EU structural funding. This teaming concept would offer a means of harmonizing the fundamental principle of excellence as a critical funding criterion with the justified interest in strengthening the European research area.

New, attractive and highly capable centers of scientific excellence and value creation are currently forming in the burgeoning economic regions of Asia and South America. In order to multiply the achievement of excellence, India recently instructed its universities to restrict their choice of international partners to those institutions that are among the top 500 universities in the Shanghai ranking. In a few decades, the Harvard or Oxford of the future could well be found in Shanghai or Bangalore. If Europe is not to lose touch, we must translate support for the economy into support for innovation, and create the appropriate structures for this to happen.



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