Strategies to win the best: Observations and recommendations

Whether it is the “Pact for Higher Education,” the “Excellence Initiative,” or the “Pact for Research and Innovation” – much has been done to enhance the quality, competitiveness, and worldwide recognition of Germany’s research and higher-education system in the past years. Yet Germany is not alone in its efforts: Highly qualified people are sought after and courted all over the world. Research Chairs in Canada and South Africa, Discovery funds in Australia, A*Star awards in Singapore – countries worldwide are competing to attract and retain the world’s most accomplished and promising minds. What are the lessons to be learned from such national programs and initiatives? What is needed to make Germany internationally more attractive to excellent researchers? How can funding organizations in general and the promotion of international exchange in particular strengthen Germany’s position in the future global knowledge society?

While reports from different countries and organizations underlined the diversity of academic systems and strategies to win the world’s brightest minds, they also identified common developments and challenges. Statements given by experts with different backgrounds in science, science policy, and management stressed specific questions, issues of concern, and fields for improvement. The following 15 points summarize general observations and recommendations the International Advisory Board has drawn from the discussions during its second Forum on the Internationalization of Sciences and Humanities. Addressing the Humboldt Foundation itself as well as its partners in science, science management, and research policy in Germany and beyond, the Board suggests a threefold strategy, aiming at the international, national, and institutional levels, to ensure that Germany remains a top address for the international academic elite.

1. An international strategy to strengthen Germany’s role in the global knowledge society

With its “Strategy for Internationalization of Science and Research,” the “Excellence Initiative,” and the “Research and Academic Relations Initiative” the Federal Government of Germany has enhanced the attractiveness and international competitiveness of the German higher education and research system. Yet German universities and research institutions are facing ever stiffer competition in the global context for academic talent and cutting-edge researchers. With a new geography of science and innovation emerging, Germany has to develop an international strategy to strengthen Germany’s role in the global knowledge society. Combining foreign cultural policy instruments with international science and research policy instruments, Germany must develop a strategy that is ambitious and self-confident, competitive, and visible. In particular, the International Advisory Board suggests:

1) develop attractive and competitive instruments to make brain circulation possible: In the international contest for the most highly motivated students, the most talented Ph.D. candidates, the most ambitious post-docs, and the most renowned international scholars, Germany has to be more competitive, and get better at competing. For this reason, financially attractive stipends have to be provided that can keep up with international competitive offers. As the best students follow the stars of their respective disciplines, internationally visible landmark awards for top-notch international researchers, such as the Alexander von Humboldt Professorship, are necessary. Thereby, an academic network of excellence for Germany can be created. Yet it is not only necessary to offer perspectives in German academia to outstanding international researchers, but to German scientists wishing to return to – or, in fact, to stay in – Germany as well.

2) establish a transnational research environment by making joint appointments possible: As an instrument of “brain sharing” rather than as an instrument of “brain gain,” joint appointments would allow universities and research institutions in different countries to benefit from the presence of a top researcher for a certain period of time. A model of this kind would not only facilitate the exchange of knowledge and ideas, but could also become especially interesting in conjunction with the abolition of age limits: It would allow excellent senior researchers to continue working and mentoring younger researchers in different countries as well as supporting them to build up international networks, with two funding institutions benefiting from their experience and reputation. Advantages of joint appointments, therefore, reach from financing to graduate and postgraduate teaching, and, through “brain sharing,” they might help to establish transnational “cultures of creativity.”

3) support international academic cooperation and exchange at the individual as well as institutional level by coordinating career structures: International mobility and the possibility to build up international scientific networks is an important factor for the personal and scientific development of young researchers in particular. Just as scientific independence at an early stage, international mobility is essential for the advancement of science, which increasingly depends on the international exchange of knowledge and ideas. Therefore, career structures need to be coordinated and obstacles for mobility such as the non-transferability of pensions need to be removed. The establishment of a global postdoctoral system, which encourages mobility and independence among young researchers, facilitates the circulation of knowledge and lays the foundation for lasting international partnerships and research collaborations. It is necessary, therefore, to provide postdoctoral researchers with visas that allow them to participate in their groups’ extensive research collaborations worldwide, offer them tenure track options, and provide dual career support.
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4) enhance the international image of the German higher education and research system: The Board recommends that suitable marketing instruments be developed to promote Germany’s role as a major centre of education, research, and innovation. Boosting international academic exchange and research collaboration and opening up new fields of innovative potential, specifically targeted, international marketing measures should aim at expanding and consolidating the cooperation with the world’s top-notch researchers. In the framework of the Federal Government’s Strategy for “Internationalization of Science and Research,” first measures have been taken to highlight Germany’s appeal to the global academic community. Future strategies must lead to the identification of the best available knowledge, optimum structures, and the most suitable processes.

5) internationalize social security benefits: Internationally mobile researchers often have to accept major disadvantages or financial losses with regard to pension rights. On a European level at the very least, basic conditions for transferring social security benefits must be put in place. An equalization fund could temporarily allow science organizations or individual universities to compensate for the disadvantages.

2. A national strategy and an explicit commitment to strengthen the German research and higher education system

The contest for the most accomplished and promising international researchers can only be as successful as the German higher education and research system becomes more attractive itself. While joint appointments ensure that academic exchange does not suffer as a result of the world-wide competition for the brightest minds, enabling several countries to profit from “brain sharing,” creative solutions and new ideas are called for in the national higher education and research landscape as well. It is necessary that Germany makes a strong political commitment to higher education and develops a clear national strategy to enhance its science and research system. In particular, the International Advisory Board of the Alexander von Humboldt Foundation recommends to:

1) create more jobs for scientists and scholars: On average, German professors supervise 63 students. This is more than twice as many as the average at top-rank international universities. In order to realize the European Union’s Lisbon Targets Germany would have to create 70,000 new research positions. The Pact for Higher Education and the Pact for Research and Innovation provide a financial basis for recruiting young academics. However, the measures are not sufficient and must be augmented in the mid-term.

2) ensure appropriate and internationally competitive remuneration: It must be ensured that international cutting-edge researchers can be offered appropriate and internationally competitive remuneration. This is an essential precondition for ensuring that knowledge transfer via people remains lively and productive. A national special program for appointing eminent academics from abroad might be one way of creating the conditions for attracting internationally renowned cutting-edge researchers.

3) promote early independence by taking risks in financing research: In particular for young researchers it is important to be independent and mobile in order to be able to build up networks and develop scientific creativity. Yet by international comparison, young academics in Germany have less scope for decision-making and action. The freedom and independence of young researchers, however, does not depend on first-class universities. While the system needs to be adapted to the needs of younger researchers and the new demands of academic mobility, funding programs for early, independent research must be strengthened. Especially for researchers at early career stages, procedures should be profiled for research work involving an unknown risk factor. Research funding organizations should therefore also aim at improving local research cultures and environments suitable for young researchers in very concrete ways. Research clusters and institutes of advanced study may provide an example how to combine transnational and local perspectives. The recent “Excellence Initiative” was an important step in this context. Funding organizations should evaluate how their programs and policies fit into a transnational framework.

4) establish tenure track as an option for junior researchers to give academic careers planning certainty: German universities must take measures to plan the career stage between a doctorate and a tenured professorship and make it compatible internationally. On the pattern of the Anglo-Saxon tenure track, clear, qualifying steps should be defined as to which decisions have to be made about the future career at an institution. A stage model of this kind must on all accounts include the option of being appointed to a tenured professorship, albeit in the knowledge that this option is only open to a certain percentage of those who choose to set out on this path.

5) support courage and confidence on the part of funding organizations: The German system provides only few funding opportunities for “truly risky projects,” and the social cost of failure is much higher in Germany than elsewhere. Exploring unknown territories and taking risks, however, is part of the very nature of science and research. By promoting incentive and bottom-up structures, funding organizations play a major role in changing research cultures. Through their funding policies, they have to give the impetus to a national strategy for research policy. While providing more rewards for competitive performance and risk-taking, they can also help to decrease bureaucracy and regimentation by making staff appointment schemes and bureaucratic recruiting and appointment procedures more flexible and efficient. Funding opportunities have to be enlarged and funding secured for extended periods of time, to encourage the pursuit of risky, open-ended research and improve long-term career perspectives. Depending on the field, personal funding is even more important than institutional funding. This requires funding organizations to revise their selection processes in order to be able to identify truly excellent researchers.
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3. An institutional strategy to allow German universities and research institutions to actively recruit top international academics and promising junior researchers

Active recruitment of top international academics and promising junior researchers is one of the tools used by countries like Denmark, Poland, and South Africa to hold their own countries in the global contest for the best ideas and compete with the United States, which is still the leading science nation in many fields. As well as the race for the highest salaries, the best institutes, and the most expensive world-scale plants, however, there should also be creative new models. The International Advisory Board of the Alexander von Humboldt Foundation therefore calls for an institutional strategy to help German universities and research establishments build up a climate allowing for excellent researchers to concentrate on their research. In particular, it recommends to:

1) professionalize recruitment and appointment procedures: Professional appointment procedures are essential. The recommendations issued by the German Council of Science and Humanities in 2005 present the minimum standards. If international mobility leads to success, it must be duly recognized. Appointment procedures must have an open outcome and be transparent. To this end, commissions charged with appointments must include external or independent expert reviewers. Good academics should be appointed quickly. Internationally respected universities can no longer afford to sometimes take years over appointments, particularly as universities and research establishments now actively have to recruit junior researchers internationally to a much greater extent than they did in the past.

2) dissolve staff appointment schemes and adapt management structures: The most important resource of a university or research institute – its staff – is always a matter for the boss. Hence, university management should take full advantage of current university deregulation and the concomitant gain in autonomy. The way a university or academic field develops may offer an opportunity to reassess the particular emphasis of the respective chair. In each individual case, the relationship between continuity and change must be redetermined in collaboration with those involved within the university but also – if necessary – with colleagues from outside. Rigid staff appointment schemes must make way for flexible appointment options, or be dissolved. Independent junior research group leaders must be put on a par with junior professors within the universities and in collaborations between universities and non-university research establishments. The increased demands being placed on university and institute management must be reflected in their remuneration, which should bear some relation to emoluments for comparable managerial responsibilities in the non-academic sector.

3) offer career support as an advisory and supervisory task of academic managers: Senior academics as well as university and/or institute directors must play an active role in human resources development for their junior researchers. Young scientists and scholars need career advice, and their career paths should be monitored and coordinated. Planning certainty assumes that planning assistance is available, too, in order to find the right path, not only within the science system but also in employment out-
side the science system. Taking mentoring of graduate students into account, teaching and administrative duties should be reduced.

4) increase transparency and create an attractive working environment: As well as job-related conditions, in the global competition for cutting-edge researchers at all stages of their careers the support provided for people and families is decisive. Therefore, in order to provide internationally mobile junior researchers with a fast means of orienting themselves in the German science system, existing information and advice portals should be further developed and supported where researchers can find out how to get further information and take advantage of personal counseling. There is also an urgent need for suitable accommodation for internationally mobile researchers who come to Germany for a restricted period of time, and academic employers in Germany must be put in a position to offer organizational and financial support for removal and relocation. This is already the norm in other countries, especially when top-rank academic personnel are appointed. Moreover, career advice and support for (married) partners seeking employment as well as so-called dual career advice or support for academic couples is required to attract internationally mobile researchers. Examples from abroad indicate that this does not necessarily mean concrete job offers (which are often difficult to find). Rather, intelligent counseling can satisfy many researchers’ needs. In addition, child-care facilities at universities and non-university research institutions must be expanded quickly and extensively – not only, but also for internationally mobile researchers.

5) foster intercultural integration through the promotion of soft factors: Just as the support provided for researchers and their families is decisive for them to work and live in Germany, an attractive working environment always depends on people. As communication is essential both inside and outside of the research institute, the promotion of soft factors such as language skills plays a major role for the creation of a transnational scientific community. Promoting knowledge of the German language would, in a rather concrete way, support international researchers in their everyday lives, working in Germany, and interacting with German society. Yet while language is the door to a culture, research culture inclusive, creating a multilingual scientific community at German universities and research institutions needs to be encouraged as well. Providing international researchers with the necessary resources to acquire German language skills as well as providing academic and non-academic German staff with English language training because English is the lingua franca of the global scientific community, would not only facilitate the cultural integration of international researchers into the German academic community and society. It would also enhance international research collaborations, help create sustainable academic networks of German researchers and scientists and their international partners, and thereby strengthen Germany’s position in the global knowledge society. For this purpose, to help the German research landscape become more international, the establishment of “Welcome Centers,” offering start-up service for internationally mobile researchers, and of “International Meeting Centers” has to be further supported as well.
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