

SUMMARY

The Netherlands is an appealing country for researchers. The quality of Dutch research is excellent, the national research infrastructure is outstanding, and employees in the Netherlands have access to a generous benefits package and a good quality of life. But as the level of international cooperation in research grows and the volume of research activity in China, India and other emerging economies rises, the Netherlands must work to maintain its favourable status if it wants to continue attracting talented junior and outstanding senior researchers in the future. The Academy has established an advisory committee to study the impact of university researchers' geographic mobility on the Netherlands and to advise on how to improve the Netherlands' position in that regard. The committee has focused on long-term mobility – two years or more – and on university researchers with an academic rank of assistant professor or higher.

Based on the underlying report drafted by the advisory committee, the Academy concludes that the Netherlands has experienced neither a brain drain nor a brain gain in the past decade, but rather a growing tendency towards brain circulation. In the past ten years, the number of university researchers who came to the Netherlands was about the same as the number of researchers who left. In addition, geographic mobility is increasing, with academic staff in the Netherlands becoming more international all the time. That is also true of the group of top researchers awarded a VIDI or VICI grant. A third of the VIDI laureates and a quarter of the VICI laureates are not Dutch nationals. These figures illustrate that the Netherlands is an open society and that NWO's Talent Scheme has been a successful and appealing channel for brain circulation. The Talent Scheme also supports researchers who wish to build or continue their academic careers in the Netherlands, with more than 90% of laureates remaining after their grant ends. Researchers in which the Netherlands has invested therefore continue to live and work here. A worrisome trend, however, is the growing

number of funding applications received by NWO and the declining award percentage.

There are many different push and pull factors that play a role in researchers' international mobility, but what they appear to find most important is the available research budget and the intellectual freedom to spend it as they see fit. Personal factors also play a major role. The Netherlands gets high marks for general quality of research, research infrastructure, NWO's Talent Scheme, work/life balance, and the quality of primary and secondary education. Scores are lower when it comes to the budgets available for curiosity-driven research. Other areas where the Netherlands performs poorly are diversity and the amount of long-term funding. One particular worry is that the declining research budget for curiosity-driven research and the lack of long-term funding could cause the present process of brain circulation to tip towards brain drain in the near future.

The Netherlands has every opportunity to capitalise on its strengths and improve its weaknesses. The Academy recommends that it do the following:

RECOMMENDATION 1: BUILD TALENT

The Netherlands should build on NWO's Talent Scheme, which offers university researchers a great deal of freedom in their work. The grants are meant to be spent in the Netherlands but are available to researchers of all nationalities, with applications also being accepted from abroad. The report's qualitative analysis shows, however, that researchers are worried about their career prospects and that longer-term funding is lacking. Long-term funding is needed to maintain the Netherlands' excellent research infrastructure and to support lengthier research projects. Making funding available for a longer period gives researchers more freedom, certainty and confidence and reduces the level of bureaucracy. The precise requirements may differ from one domain to the next, however.

As NWO fills in the details of measures announced in September 2017, the Academy advises it to consider, on a domain-by-domain basis, how and under what conditions it can boost its grant programmes meant to support talent and unfettered, innovative research. It should also consider, again on a domain-by-domain basis, whether further investment is needed to attract and retain talented junior or outstanding senior researchers and whether funding that encourages researchers to work together across disciplinary boundaries should play a part.

It is also important for universities and research institutes to keep a close eye on talent development. Crucial in this regard are clear-cut agreements with researchers about career prospects and performance appraisals covering research, teaching and valorisation. What must be avoided, however, is a culture in which researchers are

forced to devote too much effort to accountability and are given too little time to prove themselves.

RECOMMENDATION 2: PROMOTE THE UNIVERSITY OF THE NETHERLANDS

The University of the Netherlands refers to the international positioning of Dutch universities as a group and their cooperating to recruit and guide foreign talent, without making any formal organisational changes. By accentuating and building on existing alliances, the Netherlands can capitalise more effectively on the excellent quality of Dutch academic research across the entire spectrum, as well as on its outstanding research infrastructure, the open, flat structure of academic research, and the short geographic distances between the Dutch universities. Doing so will allow the various organisations to complement one another without losing their own identities. The Association of Universities in the Netherlands (VSNU), the universities, and Academy and NWO institutes should work together to determine how The University of the Netherlands can offer added value, what form it should take, and which organisations should take the lead in coordinating activities within the framework of the various initiatives.

The Academy sees the advantages of joining forces in The University of the Netherlands in the following areas:

A. USING INTERNATIONAL BRANDING TO ATTRACT RESEARCH TALENT

Identify those areas of research in which the Netherlands serves as a main hub and bring the various research groups active in these areas together, following the example of the Dutch National Research Agenda. Analyse where the Netherlands can generate added value internationally. Promote this 'brand' abroad to establish or improve the Netherlands' international reputation. Actively recruit talented junior and outstanding senior researchers, not forgetting to stress the good quality of life, favourable work environment, and good system of primary and secondary education in the Netherlands.

B. EXTENDING A WARM WELCOME TO FOREIGN RESEARCHERS

Build on active disciplinary/multidisciplinary networks that promote nation-wide contacts between researchers at different universities and consequently also support the integration of foreign researchers into the professional community. Extend a warm welcome to foreign researchers by introducing them to this nation-wide 'family' of researchers who share their expertise. Some disciplines do not yet have networks of this kind, but they can draw inspiration from disciplines in which such networks are already active. In addition, it is very important for the relevant university, research institute and research group to support the integration of foreign researchers by offering them proper guidance. Regional expat centres can provide practical assistance.

C. HELPING THE RESEARCHERS' PARTNERS FIND A JOB

An international career move may be impeded by the researcher's partner being unable or unwilling to accompany him or her. What is often important in such situations is whether the partner can also find an interesting job. This is sometimes referred to as the 'two-body problem'. The Netherlands can make more constructive use of its short geographic distances and excellent public transport and road system in seeking jobs for researchers' partners. This would make it possible to tackle the 'two-body problem' on a national scale.

D. IMPROVING INCLUSIVENESS

The growing complexity and multidisciplinary nature of societal problems requires larger and more diverse research teams. Research organisations should consequently recruit teams that are diverse in composition, but they must also try to create a culture that makes optimal use of the different perspectives and opinions represented in such teams. The Netherlands still enjoys an international reputation as an open society. Researchers find that appealing. In addition to exploiting this image to promote the Netherlands internationally, however, we must also make efforts to improve different forms of diversity and inclusiveness. Such efforts are necessary because, despite our reputation, the Committee's report indicates that the Netherlands compares unfavourably with the reference countries in terms of perceived inclusiveness. As a result, we are not making use of talent that could help us advance in science. The risk is that our poor performance in inclusiveness will have a negative impact on both our appeal and our performance as a research hub.

Dutch universities can improve this situation by developing a joint diversity policy based on their existing best practices, and by considering whether measures meant to promote gender diversity can also be used to promote ethnic diversity. In addition, the Netherlands can learn lessons from other countries, such as Sweden. Important factors in developing a diversity policy include: a culture in which inclusiveness is the rule and differences are appreciated; strong leadership; having all employees develop intercultural competences; and active recruitment of researchers from a minority background.