



Research minister Johanna Wanka says planned changes will improve German universities.

POLICY

Federal boost for German science

Agreement on changes to constitution pave way for university funding shake-up.

BY QUIRIN SCHIERMEIER

Germany's highly federalized political system has been a pillar of democracy for more than half a century. But even as the country's constitution has underpinned its stability, it has been a thorn in the side of the scientific community. Universities are largely funded by local governments, and there are tight restrictions on the uses of federal funding — for example, it cannot be used to pay permanent staff or infrastructure costs. This makes it difficult for institutions to compete with the world's leading research powerhouses.

But now, after years of discussions, German legislators have finally agreed to revise a paragraph in the constitution that prevents the federal government from providing permanent direct funding to universities. The move has pleased scientists and promises to pave the way for improved job security, lucrative research collaborations and possibly new centres.

Education has traditionally been the responsibility of Germany's 16 states, and they have been keen to maintain control. In 2006, for example, they signed up to a reform that abolished federal interference in higher education and increased their independence. This made it even more difficult for the federal government to contribute to the maintenance of the more than 100 research universities run by the states.

There are exceptions: the federal government provides more than half of the €2.5-billion (US\$3.4-billion) annual budget of the DFG, Germany's main grant-giving agency for university research (the rest comes mainly from the states). The federal science ministry also contributes 75% of a €4.6-billion excellence initiative, launched in 2006, that allows universities to compete for top-up funds to bolster neglected disciplines. Since its inception, almost 100 graduate schools and large

research collaborations have been set up at 39 universities with this money. In total, the federal government pumps about €17 billion into the annual research budget, a figure dwarfed by the states' €75 billion. Germany's total research and development budget is roughly 2.9% of gross domestic product (see 'Big spenders').

But a lack of permanent federal support creates problems. For example, the excellence initiative expires in 2017, prompting fears that projects will be discontinued and researchers laid off. Scientists therefore applauded the planned constitutional change, which will allow the federal government to step in with permanent financial support for projects at risk.

"We now have much more room to manoeuvre," says Johanna Wanka, federal minister for education and research. "This is a great political success and it will lastingly improve conditions at German universities."

The changes, agreed last week and expected to come into effect before 2015, will end a six-month impasse over a €6-billion fund that the government last year promised to inject into science and education between 2014 and 2017. They will also enable a fundamental reform of German science, the heads of Germany's large research organizations said in a joint statement.

"The promised constitutional change is a true sea change that will finally enable the government to directly and permanently co-finance universities," says Wolfgang Marquardt, head of the German Science Council, which advises the government on science policy.

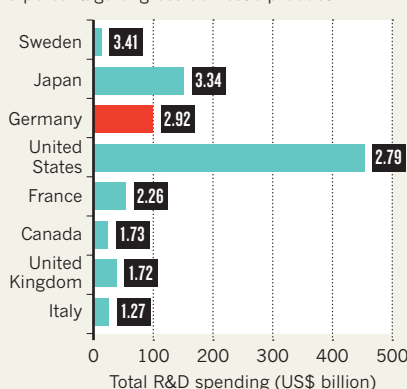
Universities in Germany's poorer states, such as the University of Bremen, a past winner of an excellence initiative award, are particularly in need of a steady flow of federal money. Gerold Wefer, a marine scientist at MARUM, the university's centre for marine environmental sciences, which was set up with award funds, is now optimistic that the centre can survive beyond 2017. "Otherwise, dozens of scientists on fixed-term contracts might have to fear for their jobs," he says.

How any future cash from the federal government will be used is yet to be worked out. The government has previously ruled out continuing the excellence initiative in its current form. Instead, says Marquardt, the government could channel extra cash to the DFG, enabling the agency to fund existing or new collaborations on a competitive basis. Alternatively, he says, the new money could be used to create federally funded university institutes or regional science centres to continue and expand successful research collaborations. For example, Wolfgang Herrmann, president of the Technical University of Munich and a long-time champion of a German national institute of technology, has suggested that his university could become a federal technology hub.

But Marquardt cautions that it is early days. "The changes agreed upon open up many pleasant possibilities," he says. "We shall now start thinking about what might work best." ■

BIG SPENDERS

Total research and development (R&D) spend in 2012 by selected countries, and the amounts as a percentage of gross domestic product.



SOURCE: OECD