

Japan considers the achievements and pitfalls of its five-year plan

Debates on the revision of the Science and Technology Basic Plan—a five-year initiative to boost public research spending launched in 1995—are intensifying in Tokyo. An interim document released last month by an ad-hoc committee of the Council for Science and Technology concludes that many of the targets set out in the plan, such as an increase in the number of post-doctoral positions, have been, or are close to being, met. R&D spending now stands almost within reach of the ¥17 trillion (\$US140 billion) projected for 2000.

But the document also concludes that changes within the structural organization of research have been slow to occur. The composition of the scientific work-force in Japanese public research has changed little since the introduction of the plan, and many university laboratories still lack sufficient technical staff.

Also, the document admits that the increased funding may have been distributed unevenly and that objective evaluation at all levels is still lacking. Recent surveys have shown a continued bias towards a limited number of national universities and institutes. This is hardly surprising, as funding modalities have changed little over the past few years.

Even in cases in which targets have been met, many questions remain. A separate report released by the Science and Technology Agency (STA) in April shows that one of the Plan's boldest proposals—to push the number of post-doctoral positions from several thousand in 1995 to ten thousand in 2000—has already been realized. However, what the future holds for so many young scientists is uncertain. Japanese companies, for example, have traditionally been reluctant to hire students with higher degrees, preferring instead to educate researchers in-house. Thus, increased interaction with the private sector, by means of internships and other exchange mechanisms, needs to be addressed urgently.

Post-doctoral positions are often used merely to bide time between graduation and employment, and the opportunity to develop individual research projects is limited. According to the report, this is because the system makes it difficult for young researchers to obtain their own financing or technicians.

Shinichi Kobayashi, a science policy analyst from the University of Electro-Communications near Tokyo, goes so far as to say that post-doctoral positions under the present system are little more than convenient “scientific labor” for senior scientists.

Kobayashi believes that an increase in post-doctoral and fixed-term positions—research contracts limited to 3–5 years—has the potential to revitalize the system but stresses that a number of complementary measures, such as stricter evaluation criteria and diversified funding mechanisms, need to be implemented to guarantee that young researchers can take advantage of new positions. “Introducing non-tenured positions at the very bottom of the age pyramid is simply not enough,” he says.

One proposal presently being discussed is the creation of a separate track of ‘super post-doc’ positions, which

would provide young researchers with a competitive salary and their own basic research funding.

This idea takes its cue from the STA's experience with the Frontier System—a flexible funding arrangement at the Institute for Physical and Chemical Research (RIKEN)—features of which have been incorporated into RIKEN's new 500-person Brain Science Institute (BSI).

Reflecting strict limitations in the overall number of tenured positions in the Japanese public sector, BSI provides only fixed-term contracts that are non-renewable. After a rigorous evaluation, researchers are either promoted or have to leave the institute. “We want to give young scientists a chance to concentrate on their work,” says Masao Ito, the institute's founding director, “but we also need to increase competition.”

ROBERT TRIENDL, TOKYO.

Wellcome chance for higher salary

The Wellcome Trust may substantially increase the salaries of its researchers if the British government fails to raise academic pay sufficiently following an independent review of higher education pay and conditions, known as the Bett enquiry.

Mike Dexter, director of the Trust, hinted last month that the Trust was unhappy about current levels of pay for UK researchers, and was skeptical about the likely outcome of the review, which was due to be released as *Nature Medicine* went to press.

The issue of academic careers is a “major problem” in the UK, he warned, because of a combination of poor salaries and short-term employment contracts: “If we don't do something soon we will regret it.”

Although it is likely that the Bett enquiry will recommend a single pay spine with an upper level of academic pay, Dexter sees “no problem with the idea of a two-tier system”—one standard scale and another band for ‘high-fliers’. The Trust currently pays a top rate of £60,000 (\$100,000) to its researchers, a sum that is very competitive on a national level. But Dexter says, “I think we [the UK] underpay the best people by

a considerable amount. Many universities do pay over the going rate, something which is done privately but no public statement is made.” Dexter believes that for the UK to retain the best scientists and to attract researchers from abroad, there must be no upper limit to pay.

He also highlighted as unacceptable the sharp difference in pay between basic and clinical researchers. “They could be working together on the bench,” he said, “but the basic researcher could be earning £15,000 less than their clinical colleagues.”

Dexter is also preparing to rock the boat regarding the use of animals in research. The UK is well known for its strong anti-vivisection league and Dexter believes that the time has come for the country's Labour government to stop “sitting on the fence” and support the use of animals in biomedical research.

A government decision on whether the Trust can go ahead with its proposed construction of a £100 million genome science park at Hinxton, Cambridge, is expected in the next few weeks.

NATASHA LODER, LONDON



Mike Dexter