

Britain's 'high-tech' budget praised...

[LONDON] The British government's latest measures to boost knowledge-driven economic growth, announced in last week's budget, have been applauded by scientists, universities and investors (see *Nature* 398, 98; 1999).

Each of the measures announced last Tuesday addresses a particular stage of the commercialization of research (see table).

Most were inspired by a report published last year by a committee of scientists, entrepreneurs and investors, set up by the government and chaired by Sir Peter Williams, chairman of Oxford Instruments, to identify ways of improving the financing of high-technology companies.

The budget measures will be complemented in the coming weeks by a report from the Department of Trade and Industry outlining its plans for implementing its recent white paper on competitiveness (see *Nature* 396, 714; 1998).

The government last week also announced the winners of the first round of University Challenge, a competition for a £45 million (US\$73 million) seedcorn fund to help universities commercialize research. Britain's finance minister, Gordon Brown, increased

Budget highlights

* The starting rate of corporation tax will be halved next year to 10 per cent for companies whose annual profits do not exceed £10,000 (US\$16,260).

* A tax credit allowing small- and medium-sized companies not making profits to reduce the cost of research and development. Companies in profit will receive a 12.5 per cent R&D tax credit.

* A new £20 million venture capital fund in partnership with the private sector will provide finance for young, high-technology firms.

* A tax-free employee share-ownership scheme in which capital gains will also be tax free if kept in the scheme for three years. This is aimed at attracting top managers to small companies unable to pay large cash salaries.

* Corporation tax relief from next year for large companies that invest in small, risky ventures.

* £100 million for the Joint Infrastructure Fund. This was launched by the government and the Wellcome Trust last July as a £600 million fund for science laboratories, buildings and equipment.

* An additional £10 million for a second round of the University Challenge Fund, a seedcorn fund to commercialize university research.

the fund by £5 million so that promising initiatives that did not make the final shortlist would not have to find alternative sources.

Most of the winners were joint bids by groups of large research universities. But Lord Sainsbury, the science minister, said that the government is to repeat the competition with an additional £15 million available. He says he wants every university to be involved in commercializing its research.

Alan Wilson, vice-chancellor of the University of Leeds, welcomes the "incentives for technology transfer in the budget" but is

concerned that core university funding has only just kept pace with inflation.

Leeds is among a number of leading UK research universities to have enthusiastically embraced the government's technology-transfer initiatives. Together with the universities of Sheffield and York, Leeds has emerged as joint-highest recipient of University Challenge funding with £4.5 million.

Sir David Cooksey, a member of the Williams committee and chairman of the British Venture Capital Association, welcomed the measures in the budget. But he regrets the government's decision to omit a key recommendation from the Williams report: exemption from both capital-gains tax and corporation tax for large companies that invest in high-technology companies — known as corporate venturing.

The report said that such incentives could unlock vast amounts of capital for high-technology industry. Large investors such as insurance companies currently consider the high-technology sector too risky to invest in.

The government has, instead, decided to restrict tax incentives for corporate venturing to relief from corporation tax but not from capital-gains tax, although this has not been ruled out for the future.

Craig Pickering, another member of the Williams committee and a former senior civil servant at the Treasury, says that, in his experience, ideas take time to make the transition from a proposal to a change in the law. One of the reasons for this is that the government's taxation agency, the Inland Revenue, takes time to work out in detail the implications of any new proposals.

One Treasury official says that progress on further tax relief for corporate venturing is unlikely until the government is able to quantify the cost to the public purse of a more comprehensive tax rebate.

He says it is difficult to forecast the capital gains that a large company could make from high-technology investment. It is safer, he adds, for the government to set aside a fixed sum towards a venture-capital fund.

Ehsan Masood

... in the push for a knowledge-driven economy

[LONDON] The British government believes it is near the end of its checklist of measures to turn the country into a knowledge-driven economy. The central idea behind the initiatives is that richer countries with a good science base should seek to profit from knowledge, as their high labour costs make them uncompetitive in low-skilled areas of work.

This idea is backed up by a belief that knowledge-driven activities can make a substantial contribution to economic growth. Much of the government's vision is inspired by the success of the US information technology and biotechnology industries, which ministers and university vice-chancellors have been studying closely.

Science minister Lord Sainsbury, for example, is considering setting up regional clusters of technology businesses

similar to those in the United States. And the Committee of Vice-Chancellors and Principals organized a study visit to the United States, which resulted in a conference last month at which the former head of the technology transfer office at the Massachusetts Institute of Technology was flown over to advise UK academics.

But concerns are being expressed privately by companies involved in helping to get research to the marketplace. Many feel that the government is overemphasizing the role of university 'spin-out' companies; that its initiatives are too 'technology push' rather than 'demand pull'; and that it needs to understand better the differences between the experiences of Britain and the United States.

For example, much US high-technology industry is driven by scientists who return to universities after a

period in industry, not necessarily by scientists who set up spin-out companies, points out the head of a technology transfer office at a university in the north of England.

Second, the bulk of US high-technology investment comes from wealthy individuals, not large corporations.

And third, a shortage of effective managers is more of an obstacle to technology transfer in Britain than a shortage of funds.

This is the view of Ian Harvey, chairman of BTG plc, which specializes in the commercialization of publicly funded research. Harvey says that funds can always be found for a good concept with an effective management team.

"There is a danger that start-ups are becoming flavour of the month," he says. "But if you can't find people to manage them, you could be worse off." **E.M.**