RESEARCH SUBSIDIES

Stakes high in tax debate

Washington

In the debris of the US federal budget, which Congress struggled to rebuild last week in an eleventh-hour compromise, is a little-known but hard-fought clause that could produce some $1,500 million in extra research spending over the next five years.

Known as the small business research and experimentation (R&E) tax credit, the provision is an important element in the White House's plan for spurring industrial growth and reversing the country's economic decline.

Combined with the existing R&E tax credit for companies of all kinds, the proposed small business R&E credit (which increases the tax concession from 20 per cent to 30 per cent for companies worth less than $50 million) could boost industrial research by more than $20,000 million between 1991 and 1995, according to a recent study* by the Brookings Institution, a Washington-based independent think-tank. But because the credits would also cost the federal government some $7,400 million in revenue over that period (no small matter in the face of a $300,000 million deficit), their future remains uncertain as an austerity-minded Congress scrambles to make budget cuts.

The research tax credit has found both strong friends and strong enemies. Backing the credits is the Republican administration, which is betting that revenue sacrifices over the next five years will pay off in handsome dividends later, when the products of the additional research hit the market. But congressional critics point out that similar research credits have delivered precious little since their introduction in 1981.

The latest official analysis of the tax concessions, a study completed late last year by the General Accounting Office (GAO), found that the first five years of R&E credits stimulated less than $2,500 million in new research at a cost of $7,000 million in revenue lost to the government.

Since the GAO report, however, the picture has changed considerably. One of the chief problems with the original R&E credits was that they were based on the increase in research spending from one year to the next. Because Congress was reluctant to give any industry a permanent free ride, a company was allowed to recover only a percentage of that portion of the research that exceeded the average spending over the previous three-year period. Of course, come the next year, the increased spending had raised the three-year average, so businesses were forced to boost research once again to obtain the credit.

Eventually, many companies found that even a 25 per cent reimbursement was not sufficient to justify spending more on research. "You could run yourself into the poor house trying to keep taking advantage of the credit", recalls Christopher Hill, executive director of the National Academy of Engineering's manufacturing forum.

In the 1989 budget reconciliation bill, however, Congress decided to abandon the 'moving average' in favour of a fixed base percentage, calculated as the ratio of research spending to sales between the years 1984 and 1988. Each year, companies could recover 20 per cent of the research that exceeded a level determined by multiplying the average of the previous four years' sales times the R&E ratio. As a legitimate business expense, research can already be deducted from profits. With the new credit, however, a company could not only reduce its taxable income with additional research, but actually get a 20-cent refund every year for each research dollar spent above some fixed level.

While the acceptance of a fixed base greatly brightened the picture, one problem remained. Congress insisted on authorizing the credit from year to year, essentially retaining the right to cancel it on whim. Such a climate of uncertainty "keeps industry in a constant guessing game", says Daniel Burton, executive vice president of the Washington-based Council on Competitiveness. "Companies can't assume [the tax break] in their planning budgets." Rather than planning next year's research and development on a tax credit, "they're doing R&D in spite of it", he says.

Burton, like other promoters of the R&E tax credit, is lobbying for a longer trial period. "Make it permanent for ten years and then come back and take a look at it", he suggests. But Congress, facing a huge deficit, has so far been unwilling to commit itself to losing over $15,000 million in revenue on the basis of rosy predictions of future gain. Underlying disagreements over the credits' effectiveness are continuing questions over government sponsorship of industrial research altogether. "In this budget atmosphere, where we're asking tough questions about spending, it's unclear to me why we should exempt R&E", says Joseph Cordes, deputy assistant director for tax analysis at the Congressional Budget Office. "We've always assumed that you can't get enough R&E. But is that true? If we encourage companies to do more research than they would do otherwise, will that research be top grade? Maybe not."

Given a lack of convincing evidence of effectiveness, budget negotiators are expected once again to authorize the credits for one year only. Although the credits are no doubt improved by last year's changes, "I wouldn't like us to simply declare victory and go home", says Cordes. "Now that we have a well-designed credit we finally have a fair experiment. We still need to watch it run." Although the new fixed-base provision will almost certainly perform better than their predecessors, evidence of its effectiveness will not be available quickly. Backers of the credits are hoping that Congress is willing to wait. **Christopher Anderson**

* *The Incentive Effects of the New R&E Tax Credit*. Brookings Institution, July 1990.

PERPETUAL MOTION

No end in sight

Helsinki

A machine purported to be capable of perpetual motion was unveiled last week at the Heureka, the Finnish Science Centre near Helsinki. The machine (see below) consists of an embellished bicycle wheel, which spins ceaselessly, and two pendulums whose bobs move in an elliptical

Heureka

IMAGE UNAVAILABLE FOR COPYRIGHT REASONS

David Jones, on the go.

path. Static elements include a manifold of shining brass pipe, some objects resembling magnets and a grey box of unknown function.

A delegation from the Soviet Politburo which attended the unveiling were particularly astounded by the machine, saying that "Soviet experts must learn of this [discovery]". But the machine's constructor, David Jones, a guest staff member in the physical chemistry department at the University of Newcastle upon Tyne, United Kingdom, confesses that the machine is a fake. "I know the laws of physics. But by the time they have puzzled out how it works, I shall be far away," he said. Jones left Helsinki early the next day, after confirming rumours that he was linked to the DREADCO organization (see page 622). Tytti Sutela