Innovation’s golden goose

The reforms that unleashed American innovation in the 1980s, and were emulated widely around the world, are under attack at home

Reforms in the 1980s

Japan was busy snuffing out Pittsburgh’s steel mills, driving Detroit off the roads, and gathering its own motor industry. In Silicon Valley, too, Europe set up and started investing heavily. Why the sudden reversal of fortunes? Across America, there had been a flowering of innovation unlike anything seen before.

Possibly the most inspiring piece of legislation to be enacted in America over the past half-century was the Bayh-Dole act of 1980. Together with amendments in 1984 and 1986, this unshackled the inventors and discoveries that had been made in laboratories throughout the United States with the help of taxpayers’ money. More than anything, this single policy measure helped to reverse America’s precipitous slide into industrial irrelevance.

Before Bayh-Dole, the fruits of research supported by government agencies had belonged strictly to the federal government. Nobody could exploit such research without tedious negotiations with the federal agency concerned. Now, companies found it highly impossible to acquire exclusive rights to a government-owned patent. And without that, few firms were willing to invest millions of dollars in a new research idea into a marketable product.

The result was that inventions and discoveries made in American universities were made available to industry. This was to prevent companies from licensing academic innovation from rivals and to give them the right to block rival companies from doing so. The law was to have a dramatic effect.

The Bayh-Dole act did two big things

First, it transferred ownership of an invention or discovery from the government agency that had helped to pay for it to the academic institution that had carried it out the actual research. And it ensured that the researchers involved got a piece of the action.

Overnight, universities across America became hotbeds of innovation, as entrepreneurial professors took their inventions (and graduate students) off campus to set up companies of their own. Since 1980, American universities have seen a tenfold increase in the patents they generate, spun off more than 2,200 firms to exploit research done in their labs, created 260,000 jobs in the process, and now contribute annually to the American economy.

Odd, then, that the Bayh-Dole act should now be under such attack in America.

No free lunch

There has always been a fringe that felt it was immoral for the government to privatise the crown jewels of academic research. Why, they asked, should taxpayers be charged for goods based on inventions they have already paid for?

That is easily answered. Invention, as IQ has stressed before, is in many ways the easiest business. A dollar’s worth of academic research might require upwards of $10,000 of private capital to bring to the market. Far from getting a free lunch, companies that license ideas from universities wind up paying over 95% of the innovation’s final cost.

The Bayh-Dole act has been a fantastic success for the American science base, which has doubled in the past five years.

Innovation is a zero-sum game

No one is arguing that the Bayh-Dole act is bad. But it is being attacked because it is seen as absolutely necessary for innovation.

Yet innovation is a zero-sum game, and every new company, every new job, every new research dollar spent in America is one less dollar available to a rival. If that is not the case, then why is America so worried about innovation? Why do innovative companies like Apple and Google prefer to keep their money in America rather than spend it abroad, and why are Japanese companies beginning to look overseas for new markets?

Whatever the merits of their case, suffice it to say that the sole purpose of the Bayh-Dole legislation was to provide incentives for academic researchers to exploit their ideas. The culture of competitiveness created in the process explains why America is, once again, pre-eminent in technology. A goose that lays such golden eggs needs nurturing, protecting and even cloning, not plucking for the pot. Readers who agree or disagree can share their own views at www.economist.com/forums/it.