

Companies and innovation

Less glamour, more profit

Apr 22nd 2004

From The Economist print edition

Innovation is rarely rocket science

WHEN Frito-Lay added a little curl to its snacks, the company's sales improved. The clever twist allowed consumers to scoop up their guacamole or salsa dip and place relatively more of it in their mouths and less on their rugs. Of such seemingly modest innovations are great fortunes made. Next month Gillette will launch the successor to its sensationally successful Mach3 razor. Much as the company would like it to be as revolutionary as the Mach3 was in its day, the battery-operated vibrating beard-remover is unlikely to be more than evolutionary. That may not, however, prevent it from making a sizeable contribution to Gillette's profits.



Big firms still aspire to make truly great breakthrough inventions—products that will underwrite their profits for at least a decade. They are, however, coming up with such inventions less and less often, even though many industries, notably pharmaceuticals, continue to spend vast sums trying. Indeed, for most of industrial history, small firms have been responsible for the bulk of breakthrough products. America's Small Business Administration claims that the pacemaker, the personal computer, the Polaroid camera and pre-stressed concrete all emerged from small entrepreneurial outfits, and those are taken only from the list of items beginning with the letter P.

Big firms are better at less eye-catching forms of innovation—adding the twist to the snackfood, for example, and generally improving the ways in which products invented elsewhere are manufactured, marketed and continually enhanced (see [article](#)). Henry Ford, whose name is almost synonymous with four-wheeled transport, did not invent the automobile. He “merely” invented a far superior way to manufacture it—namely, the mass-production assembly line. And on that was built an industrial empire that has thrived for almost a century. Likewise, in the past few decades most of the companies that have created truly extraordinary amounts of wealth have done so by inventing great processes, not great products. Dell, Toyota and Wal-Mart, for example, have risen to the top of their respective industries by coming up with amazingly efficient ways of getting quite ordinary products into the hands of consumers more cheaply than their rivals.

Does this mean that big firms should sack all their scientists and leave inventing to others? In practice, more and more are doing just that. For some time, the computer industry has, in effect, relied for much of its research and development on small firms backed by venture capital, and the telecoms industry is outsourcing more and more research to smaller firms in India and elsewhere. Without their own in-house labs, however, big firms fear that they will be taken by surprise by what a Harvard professor, Clayton Christensen, famously described as a “disruptive technology”, an innovation so revolutionary that it will enable an upstart outsider to crush them, much as the

PC did to the mainframe-computer business.

But, as history has shown time and time again, a bevy of in-house scientists gives no guarantee that their output will protect their employer from technological change. Xerox, AT&T and IBM spent billions on research but all failed to exploit much of what came out of their labs, and all ended up being caught out by new technologies. It is far better if big firms' managers keep their binoculars well trained on the outside world and their minds open to any new ideas they spot there. They can then buy them and do what they do best: find innovative ways to bring them to market.

Copyright © 2004 The Economist Newspaper and The Economist Group. All rights reserved.