

Thinking Managers

Secret of Success: As Christensen's Paradox testifies, finding the secret of success takes more than textbook management

Nov 2003

Robert Heller

Medieval man searched for the philosopher's stone that could turn base metal into gold. Managers and entrepreneurs often follow a similar, usually vain hope. But it needn't be vain, judged by the results of companies in one industry. They achieved \$62 billion in sales in 1976-1994, twenty times the figure for rivals which hadn't found the stone.

If that isn't convincing enough, sales per firm in the lagging group only averaged a cumulative \$64.5 million: the successes averaged \$1.9 billion - a difference of 29 times. The statistics come from a truly remarkable management book by Clayton M. Christensen. Its explicit title, *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, does less than justice to its message, which applies to all managements and all companies all the time - and not only to innovators.

The philosopher's stone in the statistics cited above, however, is innovation in 'disruptive technologies'. The successes 'sought growth by entering small emerging markets'. The back-markers, in contrast, pursued growth in large markets. Both groups took risks. The winners took the chance that an emerging market for the disruptive technology might not appear at all. The losers accepted the competitive risk of battling against established

companies in established markets - and the first lesson is that this is fundamentally poor strategy.

MANAGEMENT PARADOX

The book's wholly convincing thesis, however, is that large companies are locked into this mode. They are forced by customer demands and competitive pressures to invest heavily to sustain their existing strengths and, if possible, to enhance that prowess. This gives rise to Christensen's Paradox. The conventional explanation when great firms stumble is that they suffer from 'incompetence, bureaucracy, arrogance, tired executive blood, poor planning, and short-term investment horizons.' The Paradox, however, states that large companies fail, absolutely or relatively, in face of disruptive technologies, not because they are poorly managed, but because their management is excellent.

So how did the failures lose leadership to the new disruptive technologies? It was because they did exactly what any business school professor would be happy to recommend:

1. Listen to your customers.
2. Invest aggressively in new technologies that will meet those customers' rising demands for performance.
3. Carefully study and meet market trends.
4. Allocate resources to investments promising the best returns.

The author, an assistant professor at Harvard Business School, gives example after example from disk drives, computers, retailing, steel-making, earth-moving equipment, etc. to show how this good management can't cope with a disruptive technology; one which introduces a different category of customers. Typically, these are attracted by lower prices and by different functionality that together help to generate new types of product. Equally typically, the disruptive innovators break all the four rules of good management cited above:

1. They don't listen to customers, because they don't have any.
2. They develop lower-performance products instead of higher.
3. They don't rely on market research, because it's useless in these circumstances.
4. They head off into tiny markets, with sales ranging from zero to insignificant.

Yet they win and win big, like the successes quoted at the start. The industry concerned is disk drives. The strategy of the 14-inch drive industry sums up Christensen's thesis. The manufacturers went to very great lengths, technically and financially, to satisfy the customers, who all made mainframe computers. The 8-inch drives introduced by newcomers like Shugart, Priam and Quantum were no use to these customers.

The disks found their market with mini-computers - then a minute segment. As the segment grew, however, and as the 8-inch disks caught up with the performance of lower-end 14-inch models, so the latter's makers began to lose out. Yet two-thirds of the 14-inchers never introduced an 8-inch model. Those that did were around two years late, and ultimately every 14-inch drive maker was driven from the industry.

To repeat, this wasn't because of any real management incompetence, but because of its opposite. The 8-inch drives offered smaller margins and a far smaller market, and the customers didn't want them. The book firmly establishes the concept of 'value networks', in which customers and supplier develop a shared interest in a given technology which suits both their purposes - including their profit objectives. The folly of ignoring the new emerging market is only clear in hindsight.

UP-MARKET PROFITS

At the time, dismissal of the down-market potential was true wisdom: that way, neither profit nor revenues lay in wait. Going up-market, however,

offered both. Here again is the standard business school and industry lesson. Every manager is urged to head for the top left-hand corner of the price/performance matrix, where you win the highest price for the highest quality. That optimises the present - but may undermine, and even eliminate, the future.

To express the position another way, firms and individuals naturally play to their strengths - what they are good at, which has worked well in the past and still works well. The time comes, however, when these strengths are threatened by obsolescence - even though they are still paying off.

That was IBM's recurrent nightmare. The company may have deserved its sky-high management reputation, at least in part, but it derived its vast profits and massive market strength from serving large corporate customers. Although it eventually reacted very effectively to the rise of both the minicomputer and the PC, its natural bent was towards those same customers. But the phenomenal growth in PC sales lay outside the large corporates - and IBM's market share, once 80%, slumped to single figures.

Again, this isn't a failing peculiar to IBM. In disk drives, Seagate, the 5.25-inch leader, came late into 3.5-inch disks - and by 1991 hadn't sold a single product to what turned out to be their prime users, manufacturers of portable, laptop and notebook computers. So there is everybody's problem. The biggest opportunity and the greatest threat may well lie outside your existing business and value network. You can't, however, just abandon the latter, because that network provides your current highly satisfactory profits.

The whole organisation, and the management mind-set, are geared, quite rightly, to what is. How can the same organisation react effectively to what isn't - and may never be? Christensen's unequivocal answer is that it can't. The existing organisation will never succeed with a disruptive technology. The book cites Woolworth in the US, which attempted to combat the

discount stores by opening its own Woolco outlets and simultaneously expanding the traditional variety stores.

The effort failed even more abysmally than IBM's move to absorb its phenomenally successful PC operation into the mainstream organisation. The Woolcos disappeared completely. IBM, as noted, lost massive amounts of market share. Yet originally the PC operation was a model response to the innovator's dilemma. It's a solution that I've advocated for many years, and to which Christensen's meticulous studies give added force.

KEY PRESCRIPTIONS

The PC activity was sited well away from any other IBM centre, in Boca Raton, Florida, under independent management with a distinct mandate. It met excellently most of the book's key prescriptions:

1. Match the size of the organisation to the size of the market.
2. Learn about the market and its customers as you go along.
3. Get in early, while the market has still to be proved.
4. Accept the inevitability of mistakes.
5. Recognise the weaknesses of disruptive technologies and their strengths.

This sounds like an argument for the 'skunk works', an R&D organisation given a specific task and located in a site which makes interference unlikely. Many a skunk-works failed, however, usually because either the sponsoring management didn't have real faith in the project, or the R&D wasn't linked to manufacture and marketing. The catastrophic failure of Xerox to exploit any of the brilliant, epoch-making PC discoveries at its Palo Alto Research Center sprang from separation of the scientists from manufacturing and marketing.

There's an apparent contradiction between what happened to PARC and the argument for siting new activities well away from existing ones. But it is only apparent: the spun-off activity should be a fully integrated operation,

not (like PARC) a self-contained outfit with no commercial affiliations. Without a sponsor, even brilliant research and development will be lost. Even with a sponsor, though, the independent operation may not produce the right disruptive technology or market it appropriately to the different categories of customers who become involved.

The innovators have to learn how to play from weakness. Since they can't compete with the established business for the established customers, and initially have little or no idea of where their products will sell, they have to create new strength. They have to learn how to find new customers and open up new markets - from which brilliant success can spring. That, however, doesn't make it any easier to encompass disruptive change when those markets, in turn, become established.

What happened to the 14-inch disk drive makers was repeated again and again every time a generation of new boy entrepreneurs reduced disk sizes. The rich old boys proved incapable of resisting the competition, even though it used the identical approach that had made their own wealth (and killed their competition). The main antidote is to accept that in every business disruptive technologies or the equivalent lie in wait - developments which will one day enlarge and upset the market to your disadvantage.

One of Britain's classic entrepreneurial success stories, that of J. C. Bamford, came from disruption. In 1947 Joe Bamford produced the very first hydraulic excavator - a little machine, designed to go on the back of tractors, that was entirely unsuitable for the major construction jobs. These were dominated by cable-actuated systems.

DIDN'T NEED, COULDN'T USE

Their makers studied the hydraulic newcomers, but, to quote Christensen, 'Hydraulics was a technology that their customers didn't need - indeed couldn't use.' When hydraulic machines could finally match cable, it was

too late for the cable champions to react. JCB and the other hydraulic manufacturers took most of the market. In the process, Joe and his son Sir Anthony took sales to great heights: £700 million in 1995. Their combined fortunes, created by a company that remained resolutely private, hit £800 million in 1996.

At the start, the main strength of challengers like the Bamfords lies in their highly adaptive approach. In these disruptive businesses, with their uncertain markets, there is no alternative to the points made earlier: to learn as you go along, and to make false starts and mistakes, but react swiftly until you find the better path. For perfectly sound reasons, big companies discipline this behaviour out of existence in their mainstream operations. That's why, as IBM showed, by far the best way for them to avoid the 14-inch fate is to establish and finance some imitation start-ups themselves - independent outfits that can attack small emerging markets in the style of small emerging companies.

That style involves eight principles that separate the winners from the also-rans, and the corpocrats from the entrepreneurs. The Opportunity Octet is highly valuable in any business, but in start-ups it is decisive. Winners in the start-up stakes....

1. Reward risk-taking and don't punish failure
2. Give new ideas top, top priority
3. Allow those ideas to develop freely
4. Put great performance above good order
5. Compete fiercely with themselves
6. Enlist professional managers in good time
7. Share financial rewards widely and richly
8. Go for market share first and foremost

Much of the Octet (derived from a Business Week study of Silicon Valley) has been strongly advised for all managers in *Thinking Managers*. Out of

sheer necessity, the IT whiz-kids have been forced to abandon traditional, hierarchical ways and have learnt to live with chaos in the interests of 'super-speed and can-do culture.' That pair form the pure milk of entrepreneurship, which produces an unprecedented flow of cream in the hands of unconventional managements.

Thus, to gain its potent market position on the Internet (8) start-up Netscape famously just gave away its browsers. You simply have to forget old inhibitions. For instance, competing with yourself (2) means not being afraid to cannibalise your existing products: if you don't eat your children, someone else will. Seagate's Al Shugart, the ace entrepreneur of the disk drive, is only half-joking: 'Sometimes I think we'll see the day when you introduce a product in the morning and announce its end of life at the end of the day.'

FOUR DIFFERENCES

The Opportunity Octet are tactical necessities. But they should rest on four strategic principles which mark out winning strategies from the runners-up and flops. Winners concentrate on the winning hand; cover every bet; work with strong partners; and think really big. A wondrous example of big thinking is Finland's Nokia, whose cellular phone technology has taken it to a market value of \$9 billion. Once the Finns had spotted their winning opportunity in the cellular potential, they poured in resources to achieve a quarter of world phone sales.

That meant intense concentration. For the sake of cellular, Nokia abandoned paper, tyres, metals, other electronics, cables, TV sets and its PC interests - sold to ICL. That tight focus, however, is only part of the story. It won't save you from Christensen's Paradox. That's where covering every bet comes in. The failed market leaders trapped by the Paradox actually saw that necessity - they not only developed the disruptive technologies themselves, but often took the development to the point of a business proposal. But it never made economic sense to take the

technology to market - not within the established organisation. So don't try.

Independent start-ups are not the only answer. You can also take partners. The Silicon Valley giants have formed the good habit of investing in small start-ups that have promising ideas. Cisco Systems has bought or invested in 34 of them in three years: Intel has set aside \$500 million for similar purposes. If the investment succeeds with a new technology, the investor is in on the ground floor; if the start-up succeeds financially, the investor cashes in; and the odds are, of course, that technological and financial breakthroughs will go hand-in-hand.

If the 14-inch drive makers had invested in the 8-inch disrupters, the leaders wouldn't have lost out - provided, of course, that they had allowed the challengers to follow their own logic. Hewlett-Packard did precisely that when setting free a new organisation to make ink-jet printers that would challenge its own immensely profitable position in laser printers. The disruptive technology then worked to H-P's overall advantage and followed the logic of Christensen's Paradox. Anything else invites eventual disruption by others - followed, if you're 14-inched, by destruction.

WWW.Thinkingmanagers.com