nature

27 March 1997 Volume 386 Issue no 6623

Against short-termism: priorities for a new government

Whichever political party wins power in the United Kingdom, it will need urgently to ensure that high-technology industry, investors and government develop capacities to act more strategically.

Like many countries in the West, the United Kingdom looks admiringly at the growth rates of economies in the Far East and perceives a domestic need for skilled workforces and strong value-adding innovation in services and manufacturing. Those tigerish economic statistics partly reflect a number of factors that established Western economies cannot hope to emulate, such as early stages of economic maturity in which high growth is easier to achieve, and a work ethic and national cohesion based on 'Asian values' that Westerners would find repressive.

But other factors are there too, not inextricably tied to the above, to which Western governments, industries and investors need to respond better than they have. Underlying them is a capacity to develop a technologically sophisticated long-term view — and to act on it. True, there is no lack of technological sophistication in the West, nor indeed of strategic ideas. The focus for a new government has instead to be on the obstacles to deploying them in practice.

Encouraging industrialists to invest in research and development is one factor in a long-term strategy. The international trend here is against all-embracing tax incentives. Countries that still apply such policies (of which Australia is a notable example) are tending to reduce the level of such support. Science policy research has yielded mixed evidence as to the success of such incentives. And a downward trend has a lot to be said for it. There is much anecdotal evidence from the United States, for example, that corporate technologists receive little of the money released by tax breaks, and that innovation is thereby fostered in one activity only: corporate accounting. Without imaginative ways of preventing such abuse, for a new UK administration to reintroduce such incentives — as has been suggested in Labour-associated policy circles (see page 314) — would probably prove to be an expensive substitute for meaningful action.

Frustrations

One important measure of a company's willingness to take a long-term view is research and development expenditure as a proportion of its sales. The most recent set of international statistics, published last year, indicates that, in this respect, major UK businesses are failing dismally to match the competition, pharmaceuticals apart. But less publicly noticeable are smaller high-technology companies, with turnovers in the 10s and 100s of millions of pounds, whose chief executives are likely to be technologists rather than accountants, and are all the more capable of a long-term view. Frustratingly, they too find it hard to persuade their investors that, for example, a drop in pre-tax profits is required, in order to develop in-house skills and technology whose benefits are not fully foreseeable but which, in their view, will be required to protect competitiveness in the long term. A look at their competitors in the Far East reveals all too often more sympathetic investors, and governments more willing to pump-prime new technologies.

The main response of the United Kingdom's Conservative government is partnership with academics in several forms, especially in a continuation of the Technology Foresight programme. The commendable vigour in that gigantic exercise in industrial/academic networking, and its more questionably strong influence on research funding in universities, makes the industrial research and development statistics all the more embarrassing for the Conservatives. True, investors are more and more involved in the networks. But the problem of under-investment is too deep-seated to be solved by talking, and is likely to be cracked only by a number of small but effective changes to the investment environment — reduced taxes on capital gains made from company shares held over extended periods, for example.

For smaller companies, a growth in corporate venturing — strategic partnerships in which a large high-technology company invests in new small enterprises in the hope of synergy in the long term — is a welcome trend. With other venture capitalists, a major obstacle, particularly with successful small companies wishing to grow bigger, is one of conflicting interests: too much control and predictability sought by the investors, too much independence demanded by the industrialists.

Science too

Such investment hurdles should loom large in any new government's consideration of the health of the UK high-technology economy. But short-termism has been alarmingly prevalent also in the management of the science base. One example is an inability to implement a strategy for investment in major components of scientific infrastructure, either nationally or multilaterally. To complain, as research council chiefs do, that science funding is both inflexible and stagnant is to avoid a central issue. The science establishment too has to face up to the need to be strategic: to prioritize over a period of years in the certain knowledge that some excellent science will be sacrificed in the process. (One can accordingly expect resistance to suggestions that the advice to the government of the director general of the research councils should be published.)

A second significant problem of government short-termism lies within many of its departments, most notably in another major source of government embarrassment, the Ministry of Agriculture, Fisheries and Food (MAFF). Talk to scientists funded by it, and you hear of funds switched on and off like a tap (see also page 316). That short-termism is a symptom of wider problems in that department. The Labour party has promised to separate consumer protection responsibilities from agricultural industry interests — a welcome but deplorably belated development. That change will not go deep enough, however. Under a new administration, the strength of the Office of Science and Technology will need to be increased in the teeth of political opposition in order, not least, that MAFF's internal networks of science advice and funding, in addition to the quality of its laboratories' research, are subject to adequate external scrutiny. □