UK research

Review of research by numbers

THE Prime Minister, Mrs Margaret Thatcher, announced in the House of Commons last week the publication of the first of a series of annual reviews of government-supported research and development. The need for such a review was argued in 1981 by the House of Lords Select Committee on Science and Technology, which doubted the ability of the Treasury adequately to judge individual departments' research programmes against their responsibilities.

The science and technology secretariat at the Cabinet Office has carried out the first review which enables some trends to be discerned. As a public document, the review is ostentatiously laconic, replete with figures showing the sums of money spent by various government departments (which are listed consecutively) but entirely free from value judgements.

Nevertheless, the review touches base with most of the issues now causing anxiety within the British system of research and higher education. It refers to the dual-support system (but does not say whether it has broken down), mentions the problems encountered by the research councils in paying overseas subscriptions (but recommending no specific remedies), and so on.

It is not immediately apparent whether this is the kind of document for which the House of Lords was asking two years ago, although the political problems that would arise if the Cabinet Office were seen publicly to have a view on how government departments conduct their affairs are readily appreciated.

In one respect, however, the review does break new ground in Britain by adopting as the basis for its calculations a set of definitions of basic research, applied research and development which were first promulgated by the Organization for Economic Cooperation and Development (OECD) in its "Frascati Manual".

Evidently the Cabinet Office intends to apply these definitions to the classification of British research and development, raising in the process questions such as whether the collection of data as part of some routine operation, or the application of known knowledge to concrete tasks, should be classified as research.

On the figures now published, in which the most recent records are for 1981–82, defence spending shows the biggest increase between 1973/74 and 1981/82 while the proportion of all government-supported research and development by the Trade and Industry and Energy departments fell from 21.5 to 15.4 per cent over the same period. Expenditure by the Department of Education and Science shows a modest increase, from 24.6 to 27.4 per cent of the total.

The decrease in the figures for the Department of Trade and Industry is attributed to the running down of the programmes of support for the RB-211 aeroengine and Concorde civil aircraft. The large figure for defence includes the cost of development of specific items of equipment. □

● The increase in the share of the Department of Education and Science is a surprise. At a meeting in London last week, Dr John Burnett, Principal of the University of Edinburgh, argued that in the university sector, forward commitments on research equipment now exceed the ability of the system to pay for them. But the steep drop of support from the University Grants Committee in 1981 was preceded by a period of declining support for equipment and consumables, according to Sir David Philips, chairman of the Advisory Board for the Research Councils. And Professor John Kingman, chairman of the Science and Engineering Research Council, said that the diminished ability of his council to accede to all first-rate project grant applications was in part a consequence of the increasing sophistication of equipment but that government support for particular initiatives, such as that in information technology, had come out of the science budget. Not every body agrees that academic research is being hurt however. Drs Ben Martin and John Irvine of the Science Policy Research Unit at the University of Sussex argued that the evidence for a decline is largely anecdotal, and advocated a new approach to monitoring research output: the peer-review system, they said, might not be an adequate way of making decisions about closures.

Tim Beardsley

Spending in £ million
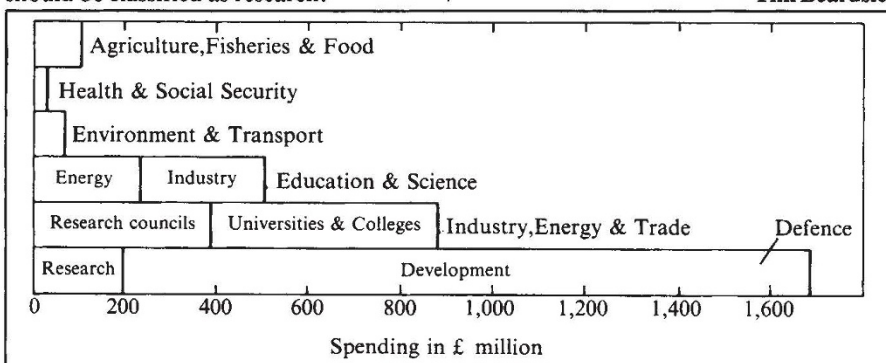
Information technology

Europlan in doldrums

ESPRIT, Europe's £1,000-million three-year plan for joint pre-competitive research in information technology, hung in the balance earlier this week as foreign ministers clashed in Brussels over the future finances of the European Communities. Esprit was to begin on 1 January, but the wrangles over British and German contributions to the EEC budget, and over Europe's enormous agricultural surpluses (bought in by Brussels at supported prices) have brought the project to a halt. On Monday the EEC commissioner for research, Viscount Etienne Davignon, was berating ministers for ignoring Esprit and he claimed, in effect, that the economic future of Europe might depend on it.

Davignon's future certainly does, for Esprit is the *leitmotif* of his efforts to use the Brussels machinery to establish a truly European high-technology industry and infrastructure. But is his moment passing?

Esprit is already formally approved, but will have no money, probably until Britain and West Germany agree to disentangle the issue from the wider problems of the community. British officials have been hopeful, West German officials non-committal, about the prospects of this happening. Meanwhile both countries have been forging ahead with their own national plans. In both countries, companies are clearly divided about allegiance to Esprit or a national programme.

And beyond that, three European companies — Britain's ICL, France's Bull and Germany's Siemens — have already established a joint research centre (in Munich) said to be going so well that other companies are beginning to see the advantages of purely private cooperation.

In Britain, the "Alvey directorate", running a five-year £500 million programme in information technology, is getting wind of a new industrial view: that Brussels should concern itself more with the problem of setting standards (communications and design protocols and so on) than with research itself. This is but a minor part of the Esprit concept as it stands.

What seems to have happened is that the seductive possibility that one nation might win the information battle alone has taken hold. According to Mr Brian Oakley, director of the Alvey programme, Britain, with by far the fastest-growing population of microcomputers in Europe, is faced with "an incredible opportunity". This may be for the wrong reasons — people are playing "Pac-man" and "Space Invaders" rather than writing programs. But Oakley believes there is no smoke without fire.

Oakley is also proud of his team in the directorate, most of them on secondement from industry and still paid by their original employers. This arrangment has