

Main federal government concerns centre on energy shortages, development of ocean and northern resources, environmental changes and the productivity of Canadian industry. In federal spending, natural sciences were expected to account for 75% of total expenditures on science in 1977-78. In the natural sciences in 1977-78, 71% of spending was earmarked for R&D while only 30% of the social science expenditures was designated for this activity.

Real growth of scientific activities is undoubtedly less than would appear, since expenditure data do not show the effects of inflation. No completely acceptable method of deflating scientific expenditures has yet been devised. If expenditures are deflated by the implicit price index of the GNE, 1976-77 expenditures were as follows: total, natural sciences, \$1,260.9 million in current dollars (\$786.1 million in 1971 dollars); total, social sciences, \$439.6 million (\$274.1 million).

9.1.4 Science policy

In 1966 the federal government established the Science Council of Canada, a Crown corporation charged with assessing independently Canada's scientific and technological resources, requirements and potential and making recommendations by publication of reports. The council is concerned with both R&D and with application of science and technology to social and economic problems. It draws its membership from industry, universities and government, and its views are independent of those of the internal government structure.

The council has published several reports of its own and others based on commissioned studies from consultants. Topics include energy conservation, technology transfer in construction and a case study of offshore petroleum exploration. The council recommended that Canada focus its scientific and technological effort through major programs designed to help solve social and economic problems. These include a space program, water resources management and development, transportation, urban development, computer applications and scientific and technological aid to developing countries.

In 1967, a special Senate committee on science policy was formed to consider and report on the scientific policy of the federal government. The first report, published in 1970, describes what the committee considered major deficiencies in the policy. The second, in 1972, contains specific recommendations on targets and strategies for the 1970s. The third volume recommended changes in federal structures concerned with science and technology. In 1977 the committee published its fourth and final report, concerned mainly with changes in science policy since publication of the first report and with Canadian activities in futures research, surveying human activity as it may develop in the medium- and long-term future.

9.2 Federal agencies

Information on federal government expenditures on scientific activities is secured by annual surveys carried out co-operatively by the Ministry of State for Science and Technology, the Treasury Board Secretariat and Statistics Canada. Each survey covers the costs of scientific programs for the preceding fiscal year and estimates for the following two years. (*Science statistics bulletin*, Vol. 2, No. 1, Statistics Canada Catalogue 13-003.)

Twenty-seven departments and agencies reported natural science expenditures with eight planning to spend over \$50 million in 1977-78. The major funder of natural science R&D was the National Research Council with 25% of current expenditures. The Department of Fisheries and the Environment was the major funder of RSA with 44%.

Table 9.5 shows the expenditures for natural science activities by department or agency and performer. In 1977-78 approximately 61%, or \$844.1 million, of federal government expenditures in the natural sciences was for work done within its own establishments. An estimated full-time equivalent of 23,342 federal employees was engaged in natural science activities, with 15,327 in R&D work.

Most payments to extramural performers for natural science activities go to Canadian industry (53% of 1977-78 extramural expenditures) and to Canadian