

9.1.3 Government, business and university sectors

The federal government has a decisive impact on Canada's scientific progress as the major source of funds for activities carried out in other sectors, i.e. other levels of government, universities and business enterprises. It is also responsible for major programs in areas such as space, nuclear energy, natural resource identification and development, agriculture and economic and social data collection.

The business enterprise sector is primarily concerned with using science in order to produce new products or processes for industrial operations. The university sector trains manpower required by all three sectors and carries out fundamental research which has yet no obvious application in the fields of interest of the other two sectors.

The current concern with possible energy shortages, with the development of ocean and northern resources, with environmental changes, and with the productivity of Canadian industry ensures that government involvement with scientific investigation will continue into the foreseeable future.

In federal spending, the natural sciences were expected to account for 75% of the total expenditures on science in 1976-77. R&D is a relatively more important activity in the natural sciences; in 1976-77, 71% of the natural sciences expenditures was earmarked for R&D while only 28% of the human sciences expenditures was designated for this activity.

Expenditures in the human sciences are increasing at a greater rate than those in the natural sciences. The human sciences expenditures have been increasing at an average annual rate of 21% a year since 1970-71 (the first year for human sciences statistics) while the natural sciences have been increasing at 9%. Some portion of the human sciences increase is due to improved reporting as respondents gained experience. Nonetheless, there has been a significant increase in the emphasis placed on human sciences activities by the federal government.

The real growth of scientific activities is undoubtedly less than would appear, since the expenditure data do not show the effects of inflation. No completely acceptable method of deflating scientific expenditures has yet been devised. Although the support for human sciences activities is at a considerably lower level than that of the natural sciences, in constant dollar terms the human sciences expenditures have continued to increase while natural sciences expenditures are actually declining.

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 thereon by publication of reports. The Science Council is concerned with both R&D and with the application of science and technology to Canada's social and economic problems. It draws its membership from industry, the universities and government, and its views are independent of those of the internal government structure.

The council has published several reports based on commissioned studies from consultants on different areas of science and has also published its own reports. Some of the topics include energy conservation, technology transfer in construction and a case study of offshore petroleum exploration. In addition, the council recommended that Canada focus its scientific and technological effort through the creation of "major programs" designed to help solve some of the country's social and economic problems. These programs include a space program for Canada, water resources management and development, transportation, urban development, computer applications and scientific and technological aid to developing areas of the world.

In 1967, the Special Senate Committee on Science Policy was formed to consider a report on the scientific policy of the federal government with the object of appraising its priorities, organization, budget and efficiency. The first report,