
Science Policy News

Science policy in Finland

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In Finland, the total support for research and development (R & D) was, in 1979, only 1.1% of the gross national product (GNP), placing Finland among the less research-intensive countries according to the terminology of the OECD. The corresponding figure for Switzerland was at that time 2.4%. In 1980 the Science Policy Council of the Finnish Government, considering the significance of R & D for industrial growth and international competitiveness, issued a long-term plan to substantially increase funds available for research so that by 1990 over 2% of the GNP should be used for R & D. This plan was called a 'bold attempt' by outside observers, but has nevertheless been relatively successfully implemented. The preliminary figure for 1988 is about 1.8%, of which approximately 60% comes from the private sector. Furthermore, during the period 1979–1987 the average growth of the GNP was over 3% per year. The result is that expenditure in real terms on R & D in Finland has doubled from 1979 to 1987. Growth is planned to continue so that in the year 2000 the R & D share of the GNP rises to 2.7%.

As in many other European countries the increased support for research has to a great extent been directed to serve technological goals of importance for Finnish industry and to reinforce research in certain priority areas such as biotechnology and electronics. However, emphasis has also been put on a balanced development of the research sector in general, including basic research in all fields.

Most of the basic research in Finland is carried out at the universities. To a limited extent some work is also done at certain governmental research institutes, the main task of which, however, is applied research in particular fields. Omitting in this context the questions of support for technology and industrial research, external funding for basic and applied research is provided by the governmental research council organization called the Academy of Finland, consisting of 7 research councils (representing the humanities, natural sciences, medicine, technology, agriculture and forestry, social sciences and environmental sciences) and a governing central board. For this year its budget is 308 million FIM.

The support is generally given for 3–5 year projects of varying scope. The assumption is that the universities provide the basic facilities (laboratories and basic equipment) and the Academy funds salaries, special equipment, travel and other expenses. Further, the Academy

of Finland funds almost 500 positions for full-time research: research professors, senior and junior scientists and research assistants. The professors are appointed for 5 years or in some cases permanently; in the other categories appointments are for 3 years but can be renewed for a second period. In principle, a young scientist can start his/her career working within some project led by a senior scientist, even before taking a degree. At the graduate level he/she can secure a post as research assistant and prepare a thesis, and then possibly advance to the rank of junior or senior scientist, many times with interruptions for holding a university teaching post.

As a consequence of the low level of research funding in the years before 1980, Finnish science has suffered from a lack of contact with the international scientific community. Recognizing the vital importance of international contact and cooperation particularly for a small country, the funding for participation in international projects, travel etc. has been strongly and continuously increased during the 1980s. A further consideration is that research in many fields is beyond the economic resources of a single state. With increased funds for research, new opportunities have emerged for Finland to participate in large, international projects. These activities are partly realizable through membership in international organizations and research projects (e.g. the European Science Foundation, EMBL in Heidelberg, the European Synchrotron Facility etc.). There are also bilateral agreements with research councils and academies in Europe (including eastern Europe), the United States, Japan and China. Recently Finland reached an agreement with the European Community to participate in its Science Program, based on cooperation between two or more laboratories in different countries. This program, too, is handled by the Academy of Finland.

More generally, the Academy of Finland has reserved funds particularly for young, post-graduate students to go abroad for some years to finish their scientific training, and also for senior scientists who want to work in a laboratory in some other country. However, it has also been found highly desirable to encourage scientists from abroad to visit Finland to work here. This is possible both for well-established, senior scientists and for post-graduate or postdoctoral students from any country. The procedure here is to establish contact with the laboratory or institute of interest, which can in turn apply to the Academy of Finland for the money required, even for a rather extended stay.

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