# 3.11 SWEDEN

*Sweden with a population of approximately 8.5 million and an area of 487 thousand km² invests more than U.S. $4,000 million or about 3% of its GDP in technical and scientific R&D. The Swedish corporate sector accounts for more than 70% of this R&D expenditure.* ● ●

Unlike the other Nordic countries, defence R&D expenditures play an important role in Sweden. Sweden has been enjoying a positive balance of payments in technology in recent years although its percentage growth in GDP (2.5%) has been slightly less than the average for OECD countries (3.3% in 1986). In 1986 machinery and equipment exports accounted for 52% of their total exports.

## TECHNOLOGY TRENDS

A proposal for a new 3-year government R&D program was presented recently by the National Swedish Board for Technical Development (STU). It emphasizes the necessity for Sweden to increase government spending to create new knowledge, new technology and new products. Priority areas for spending are international cooperation (EC, EUREKA and other opportunities), materials technology, and environmental technology. Other main areas of R&D spending are mechanical engineering, biotechnology, biomedical technology, wood-pulp-paper technology, energy technology, and information technology.

## TECHNOLOGY STRENGTHS

World class strength in technology is found in multinational corporations and is not normally available for licensing (e.g. high voltage transmission, industrial robots, small scale nuclear reactors by Asea-Brown Boveri (ABB); radar, telecom switching, mobile radio by Ericsson; car safety design, regeneration bus propulsion by Volvo; non friction movements and bearings by SKF; air treatment technology by Flakt).

## KEY ORGANIZATIONS

The principal technology development institutions are:

- *Swedish National Board for Technical Development (STU) - Stockholm*; The government's central mechanism for providing support for technical research and industrial development, STU with an annual budget of about U.S. $113 million:

  - initiates, coordinates and supports technical research and development at universities and cooperative research institutes;

  - co-operates with universities and industry to develop and speed the introduction of new technology;

  - stimulates and supports inventors, small-medium sized companies and newly-established technology companies with product renewal.

  STU in cooperation with Swedish companies is financing, over a three year period (SEK 55.5 billion), in such areas as computer science, digital communications, computerized image technology, operation development systems for the processing industry, technology for the handicapped, and civil-aviation research.