

# EURAXESS Country in Focus: Sweden – Inventing Tomorrow's World



Photo: Simon Paulin, imagebank.sweden.se



Photo: Ola Ericson, imagebank.sweden.se

The Nobel Prizes were a bequest from the Swedish scientist, inventor, entrepreneur and pacifist Alfred Nobel, to honour those who "have conferred the greatest benefit on mankind". Many of the world's important inventions originate in Sweden, and the rapid pace of innovation shows no sign of slowing down. The Swedish government continues to invest more than ever in research and innovation (R&I). Sweden's history of recognising and rewarding achievement in research, excellence and innovation is reflected in its status as the home of the Nobel Prize: Sweden itself has produced 34 Nobel Laureates since establishing the prize in 1895.

Sweden's science infrastructure is world-class and the synergies generated by the close connection between Swedish universities, research institutes and the private sector further leverage the R&I output. Not only is Sweden home to the largest number of multinational companies per capita, but it also serves as a base for tomorrow's emerging industries.

The Global Innovation Index 2024 (GII) ranks Sweden as the second most innovative country in the world. There are several reasons for that.





Photo: Sofia Sabel, imagebank.sweden.se

Al and supercomputing are among the cutting-edge research fields in Sweden. The country is recognised as one of seven Al 'Factories in Europe' in 2024. Since 2023, Sweden has also hosted one of nine supercomputers in Europe, at Linköping University.

- The historic tradition of inventors, a commitment to gender equality, and a strong belief in the individual.
- Close collaboration between research institutes, universities and the private and public sectors stimulates entrepreneurship and investment in companies with an international outlook.
- Sweden was number one in the EU for gross domestic expenditure on R&D (GERD), and is among the top-ranking OECD countries. Medicine and bioscience, AI and sustainability are examples of areas where Sweden has made strategic investments in cutting-edge research.
- Sweden has around 50 universities and university colleges.
- Sweden is the second-highest performing country in the world when it comes to reaching the UN's SDGs, according to the 2024 Sustainable Development Report.

#### 7 Reasons to choose Sweden for your research experience

- 1. Sweden is an innovative and competitive economy.
- 2. Sweden has a long and proud history of academic excellence, with outstanding universities dating back to the 15<sup>th</sup> century.
- 3. Sweden offers excellent research infrastructure with continuous investments in cutting-edge facilities, including Science for Life Laboratory (SciLifeLab) and the MAX IV Laboratory.
- 4. Higher education and research quality in Sweden is among the best in the world.
- 5. Sweden offers an open and international climate where influences and competences come together, creating new ideas and solutions.
- 6. Swedish society is known for its inclusiveness and the possibility for a good work-life balance.
- 7. Close collaboration between industry and academia facilitates innovation, encouraging new ideas and critical thinking.

## Research-funding in Sweden

Government investment and other public investment in research and development totalled about SEK 47 billion (EUR 4.1 billion) in 2023. The central government is the largest source of research funding in higher education institutions. Other major sources include the Swedish Agency for Innovation Systems, research foundations, municipalities, county councils, and of course European funding programmes. Industry invests more than three times as much as the central government in research and development. Almost all of that investment remains within the business sector.

#### **Research-funding agencies**

There are four major research-funding agencies. The largest is the Swedish Research Council (Vetenskapsrådet), which in 2023 shared out about SEK 7.4 billion to basic research in natural sciences, technology, medicine, the humanities and social sciences.

The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas) supports basic and needs-driven research in landbased industries, spatial planning, and the environment. In 2023, Formas allocated about SEK 1.8 billion.

The Swedish Research Council for Health, Working Life and Welfare (Forte) issued SEK 0.8 billion in 2023. It initiates and supports basic and needs-driven research in the fields of the labour market, work organisation, work and health, public health, welfare, the social services, and social relations.

The Swedish Governmental Agency for Innovation Systems (Vinnova) issued about SEK 3.4 billion in 2023, primarily to needs-driven research in the fields of technology, transport, communications, and working life.

Other agencies are busy funding specialty areas, including a variety of research subjects.

#### **Research foundations**

A number of foundations that fund research were established in the mid-1990s using capital from the former wage earner investment funds. These include the Swedish Foundation for Strategic Research (SSF), the Foundation for Strategic Environmental Research (Mistra), the Knowledge Foundation (KK), the Foundation for Baltic and East European Studies, and the Swedish Foundation for International Cooperation in Research and Higher Education (STINT).

Support from public research foundations is an important component of central government investments in research. In 2023, these foundations are estimated to have invested around SEK 1.5 billion in research. The Bank of Sweden Tercentenary Foundation (Riksbankens Jubileumsfond) is another investment vehicle created with public funding to support research in humanities and social sciences.

#### Private research funders

In addition to funding from the business sector, there are several other private financiers of Swedish research. These include the Knut and Alice Wallenberg Foundation, which in 2023 assigned SEK 2.2 billion to scientific research and education. The Swedish Cancer Society granted around SEK 1 billion in 2023 for research in its field.

#### Research and development performance in Sweden

According to Statistics Sweden (SCB), total Swedish R&D investment amounted to SEK 224 billion in 2023. This corresponds to 3.6% of GDP, making Sweden one of highest investors in R&D. The business sector accounts for around 74% of total GERD, while the university and higher education sector accounts for about 21%.

For more information and enquiriesEURAXESS Sweden: www.euraxess.seSwedish Research Council: www.vr.seSwedish Research Council: www.vr.seVinnova: www.vinnova.seFormas: www.formas.seForte: www.forte.seSweden.se - The official gateway to Sweden: www.sweden.se/engNationwide Swedish research website: www.forskning.seSwedish Foundation for Strategic Research: www.stratresearch.se/enSwedish Agency for Economic and Regional Growth:<br/>www.growthanalysis.se/enOfficial website of the Nobel Foundation: www.nobelprize.orgSwedish Space Corporation: www.ssc.se

### EURAXESS

Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development. This pan European effort is currently supported by 43 countries, of which we will profile one in our quarterly enewsletter.