

Science and Technology Data - 2011

Industry

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Science and Technology Data is published yearly by Industry Canada's Science and Innovation Sector. This publication presents a snapshot of the state of science and technology in Canada in an accessible and convenient format.

This year, the format has been changed to five two-page documents. "National" provides a summary of Canada's R&D. "Government," "Industry" and "Higher Education" each cover a specific component in the national S&T system. "Canada & the World" describes links between Canada's S&T activities and those in other countries around the world.

Due to the varied approaches to national collection and multilateral compilation of data, the figures used for international comparisons will often be for earlier periods than those used for domestic trends. All figures are based on the most recent, reliable data.

In Canada, as in most other OECD countries, the business sector accounts for the largest share of the R&D performed in the country. BERD has trended downward since the 2009 financial crisis but rose 1.6 percent in 2011, reaching \$15.4 billion. Nevertheless, BERD remained 8 percent below its 2007 peak.

In 2010, Canada's BERD-to-GDP ratio stood at 0.93 percent, below the OECD average (1.6 percent) and ranked 20th among OECD countries. Canada's two largest provinces accounted for 76 percent of Canada's BERD and lead all others in BERD intensity.

The business sector funds its R&D through a variety of sources, including governments. In Canada, the largest share of government support for business R&D is provided indirectly through the tax system.

Patents are an output indicator of business R&D. In 2010, Canada ranked 16th among OECD countries for its triadic patent intensity (expressed per unit of BERD). Nevertheless, Canada and Japan are the only two G7 countries whose patenting intensity was higher in 2010 than in 2005.

Acronyms and Abbreviations

BERD	Business enterprise expenditure on research and development
GDP	Gross domestic product
GERD	Gross domestic expenditure on research and development
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing power parity

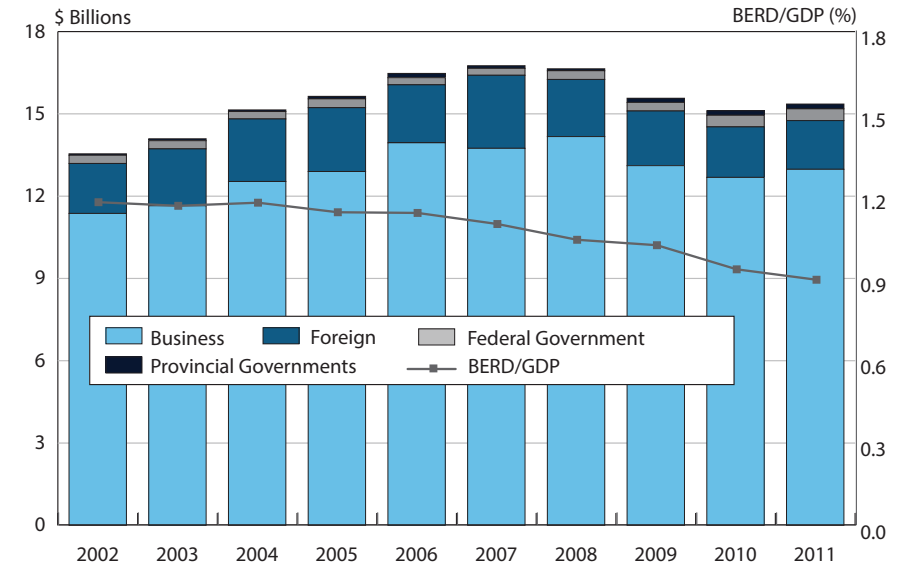
Definitions

R&D "Research and development" is creative work undertaken on a systematic basis to increase the stock of knowledge, including knowledge of humankind, culture and society, and the use of this stock of knowledge to devise new applications.

RSAs "Related scientific activities" complement and extend R&D by contributing to the generation, dissemination and application of scientific and technological knowledge.

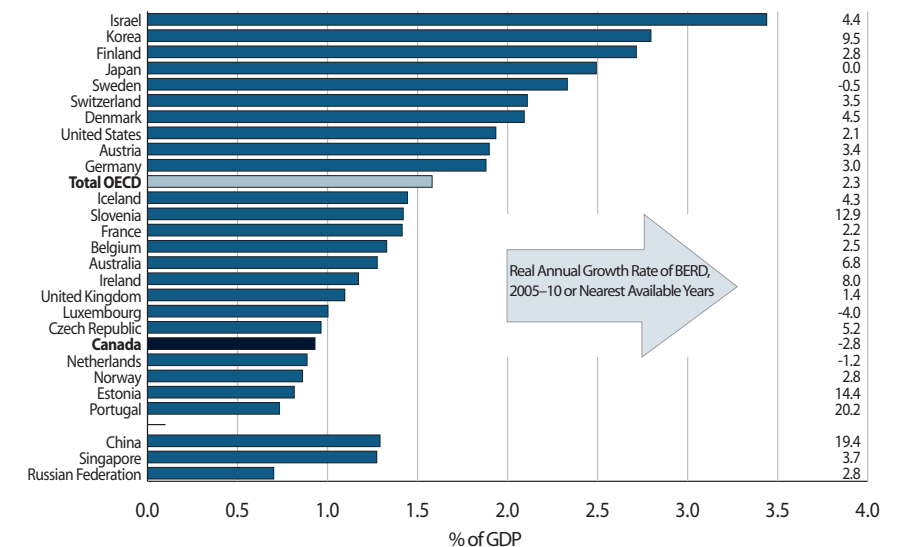
S&T "Science and technology" includes both R&D and RSAs.

Canada's BERD by Major Source of Funds, 2002 to 2011



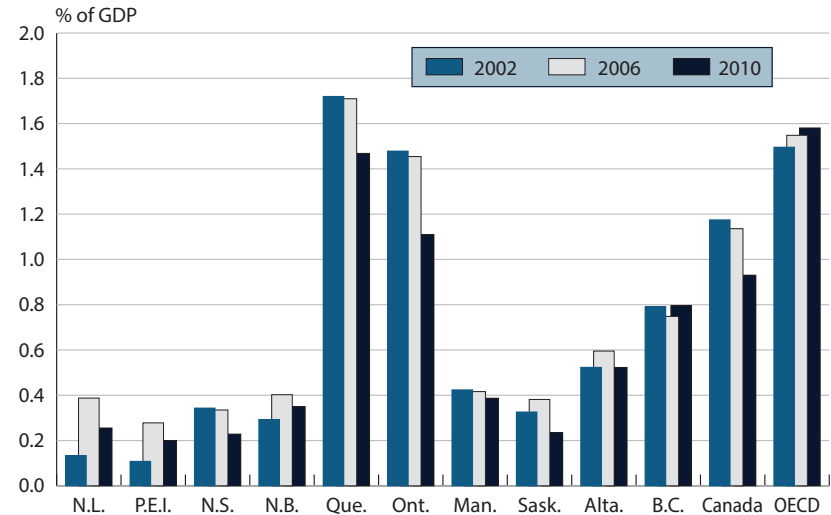
Source: Statistics Canada, *Gross Domestic Expenditures on Research and Development in Canada (GERD), and the Provinces*, Catalogue no. 88-221-X, December 2012.

BERD as a Percentage of GDP, Top OECD Countries and Selected Non-OECD Countries, 2010



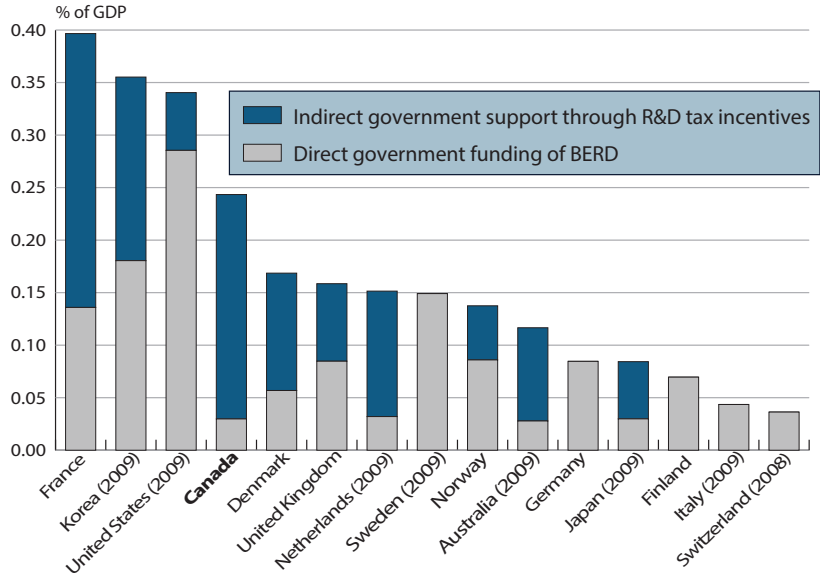
Source: OECD, *Main Science and Technology Indicators: 2012/2*, January 2013.

BERD Intensity at the Provincial Level, 2002, 2006 and 2010



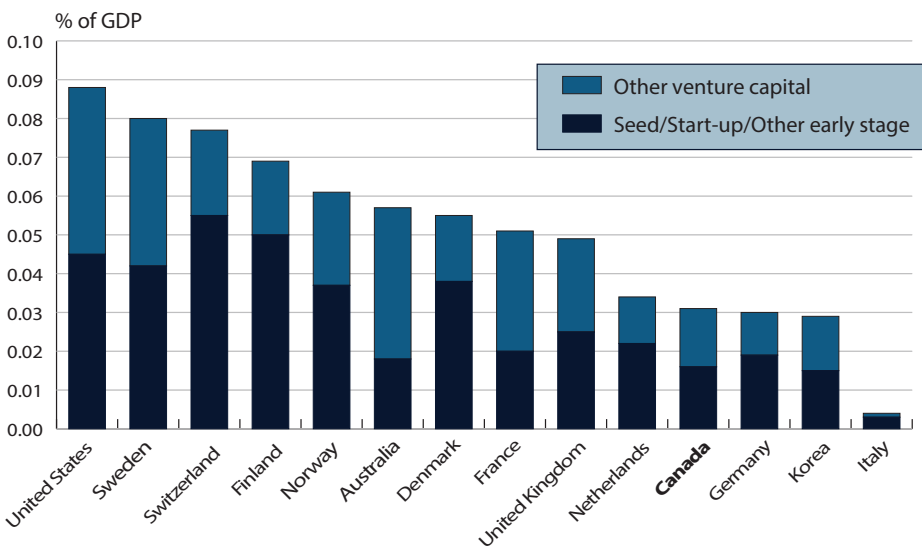
Sources: Statistics Canada, *Gross Domestic Expenditures on Research and Development in Canada (GERD), and the Provinces*, Catalogue no. 88-221-X, December 2012. OECD, *Main Science and Technology Indicators: 2012/2*, January 2013.

Direct Government Funding of Business R&D and Tax Incentives for R&D, Selected OECD Countries, 2010



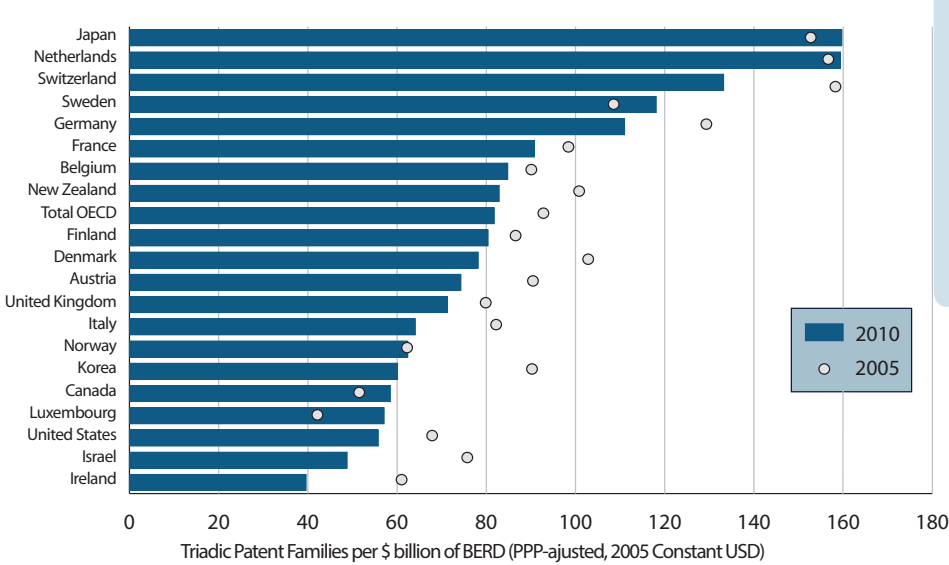
Note: The estimates of R&D tax incentives do not cover sub-national R&D tax incentives. Finland, Germany, Sweden and Switzerland do not provide R&D tax incentives. Italy provides R&D tax incentives, but cost estimates are not available. Source: OECD, *Science, Technology and Industry Outlook 2012*, 2012.

Venture Capital Investments, Selected OECD Countries, 2009



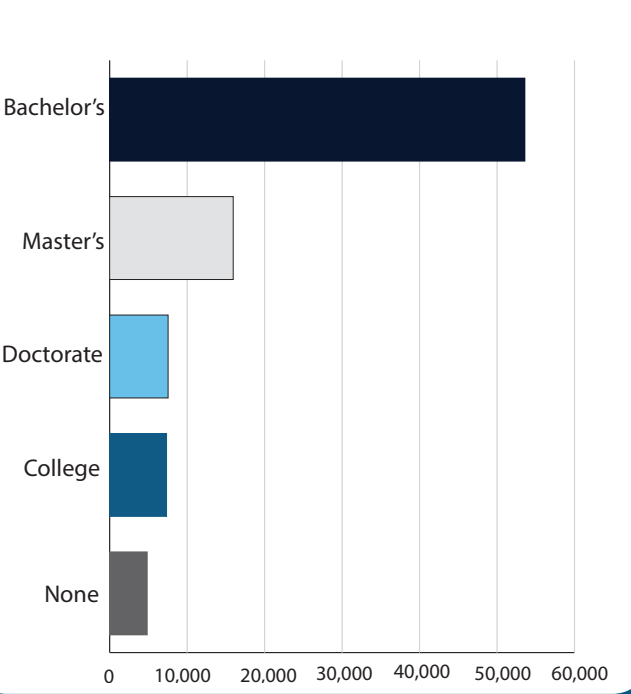
Source: OECD, *Economic Survey Canada 2012*, 2012.

Triadic Patent Families per Unit of Business R&D, Top OECD Countries, 2005 and 2010



Source: Calculation based on data from the OECD, *Main Science and Technology Indicators: 2012/2*, January 2013.

Professional Personnel Engaged in R&D, Business Sector, by Degree Level, 2010



Source: Statistics Canada, *Industrial Research and Development: Intentions 2012*, Catalogue 88-202-X, October 2012.