

SCIENCE AND TECHNOLOGY DATA

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ABBREVIATIONS

BERD	Business enterprise expenditure on research and development
GDP	Gross domestic product
GERD	Gross domestic expenditure on research and development
GOVERD	Government expenditure on research and development
HERD	Higher education expenditure on research and development
PNP	Private non-profit organization
PRO	Provincial research organization
R&D	Research and development
S&T	Science and technology

A publication of this type is a snapshot, freezing information at a particular point in time. New data are constantly becoming available and old data are constantly being revised. Data in tables may not add to the totals shown due to rounding.

DEFINITIONS

High-technology industries

- Aircraft and spacecraft
- Pharmaceuticals
- Office, accounting and computing machinery
- Radio, television and communications equipment
- Medical, precision and optical instruments

Medium-high-technology industries

- Electrical machinery and apparatus, not elsewhere classified (n.e.c.)
- Motor vehicles, trailers and semi-trailers
- Chemicals excluding pharmaceuticals
- Railroad equipment and transport equipment, n.e.c.
- Machinery and equipment, n.e.c.

Medium-low-technology industries

- Coke, refined petroleum products and nuclear fuel
- Rubber and plastic products
- Other non-metallic mineral products

Building and repairing of ships and boats

Basic metals

Fabricated metal products, except machinery and equipment

Low-technology industries

Manufacturing, n.e.c., and recycling

Wood, pulp, paper, paper products, printing and publishing

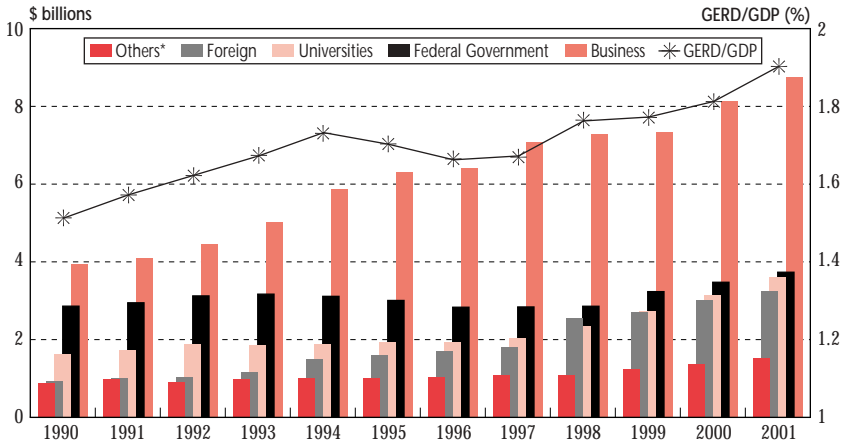
Food products, beverages and tobacco

Textiles, textile products, leather and footwear

R&D Research and development, creative work undertaken on a systematic basis in order to increase the stock of scientific and technical knowledge or to discover new applications for existing knowledge

S&T Research and development plus related scientific activities (scientific data collection, information services, studies, etc.)

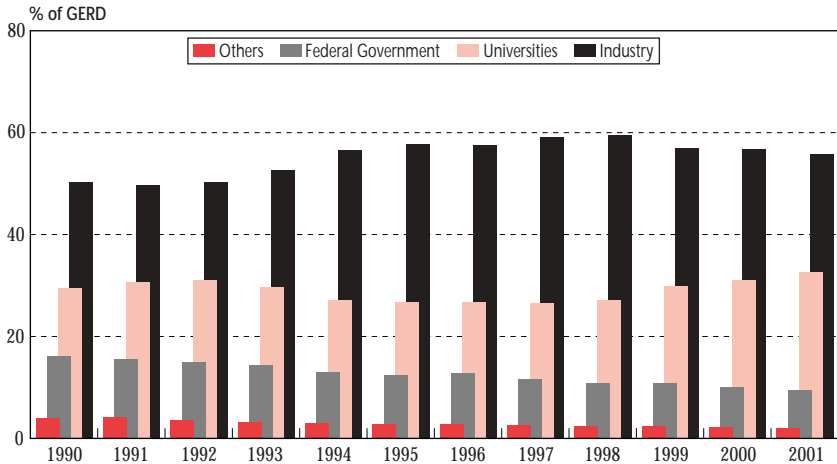
GERD by Major Sources of Funds, 1990 to 2001



*Provincial governments, PROs and PNPs

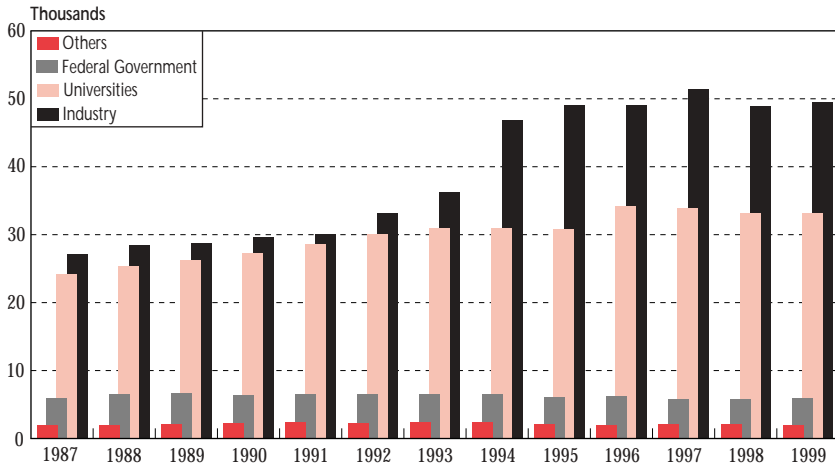
Source: Statistics Canada (2) and estimates by Industry Canada

GERD by Major Performing Sectors, 1990 to 2001



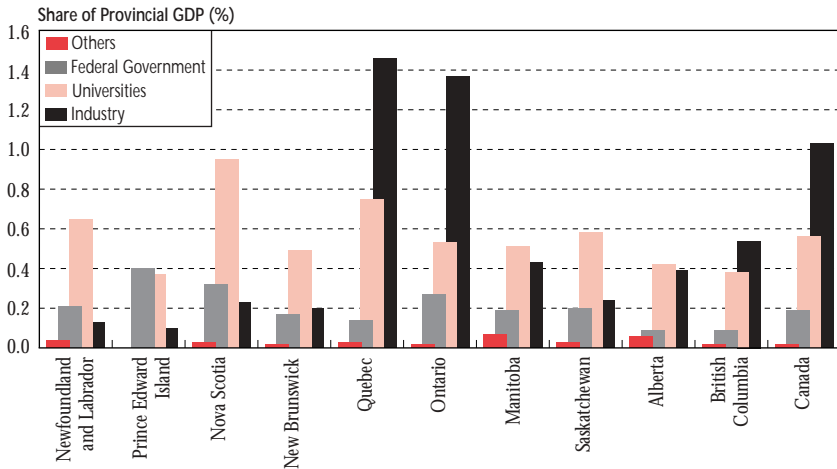
Source: Statistics Canada (2)

Research Scientists and Engineers by Major Performing Sectors, 1987 to 1999



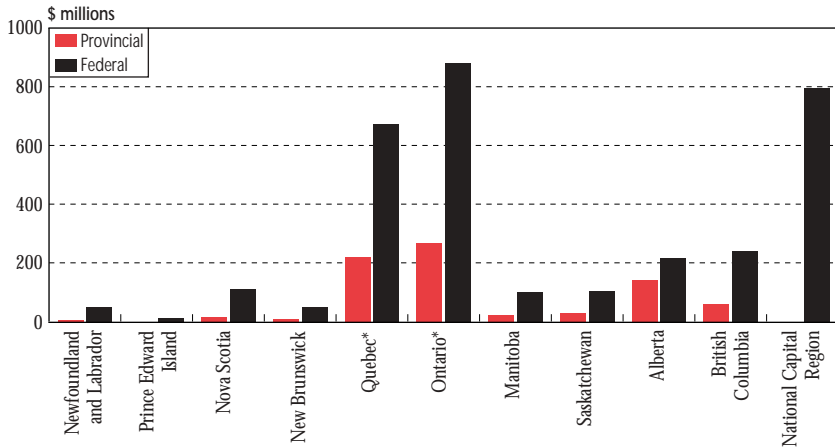
Source: Statistics Canada (3)

Provincial GERD by Major Sectors of Performance, 1999



Source: Statistics Canada (2)

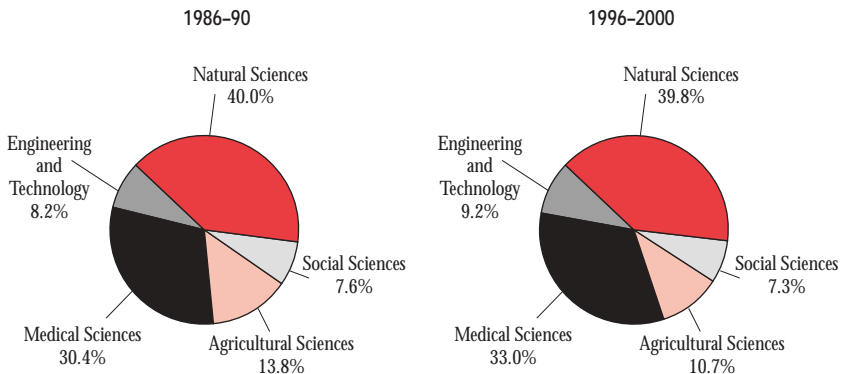
Government Support for R&D, 1999



*Excluding federal intramural expenditures in the National Capital Region

Source: Statistics Canada (2)

Distribution of Canada's Scientific and Technical Articles by Field of Science, 1986-90 and 1996-2000



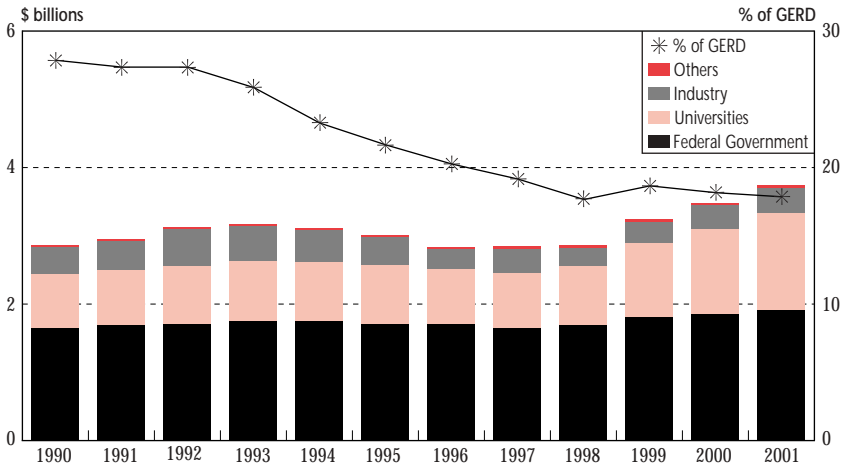
Source: Institute for Scientific Information (ISI)

Estimate of Canada's R&D Expenditures, 2001

Funding Sectors	Performing Sectors						Total	Distribution
	Federal Government	Provincial Governments	PROs	Business Enterprises	Higher Education	PNPs		
	\$ millions							(%)
Federal Government	1 907	0	2	361	1 431	31	3 732	18
Provincial Governments	2	181	42	70	635	22	952	5
PROs	0	0	3	0	0	0	3	0
Business Enterprises	44	0	22	8 078	603	23	8 770	42
Higher Education	0	0	0	0	3 609	0	3 609	17
PNPs	0	0	0	0	462	103	565	3
Foreign	0	0	4	3 147	75	14	3 240	15
Total (\$ millions)	1 953	181	73	11 656	6 815	193	20 871	100
Share of total (%)	9	1	0	56	33	1	100	

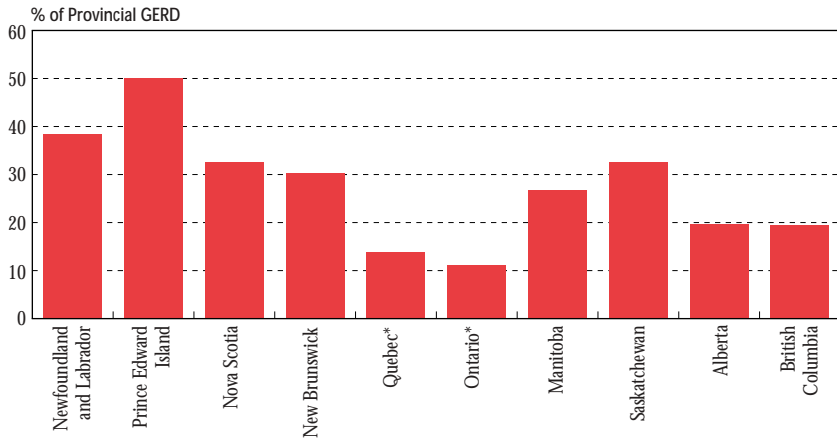
Source: Statistics Canada (2)

Federal R&D Funds by Sector of Performance, 1990 to 2001



Source: Statistics Canada (2)

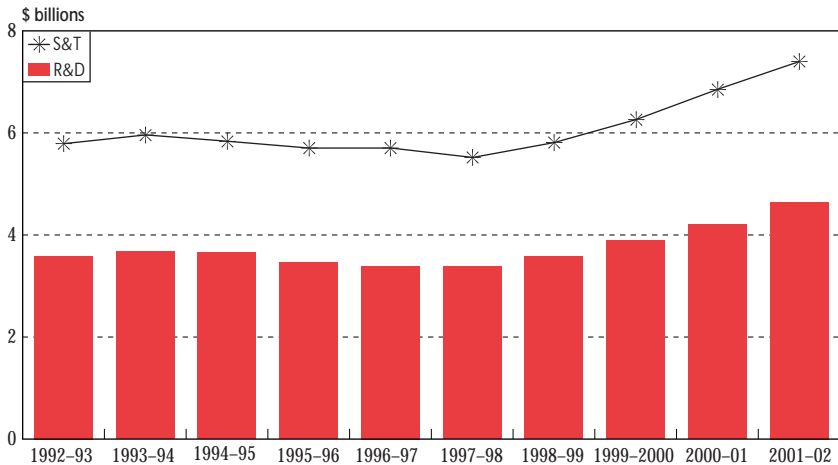
Federal Funding of Provincial GERD, 1999



*Excluding expenditures on federal intramural R&D in the National Capital Region

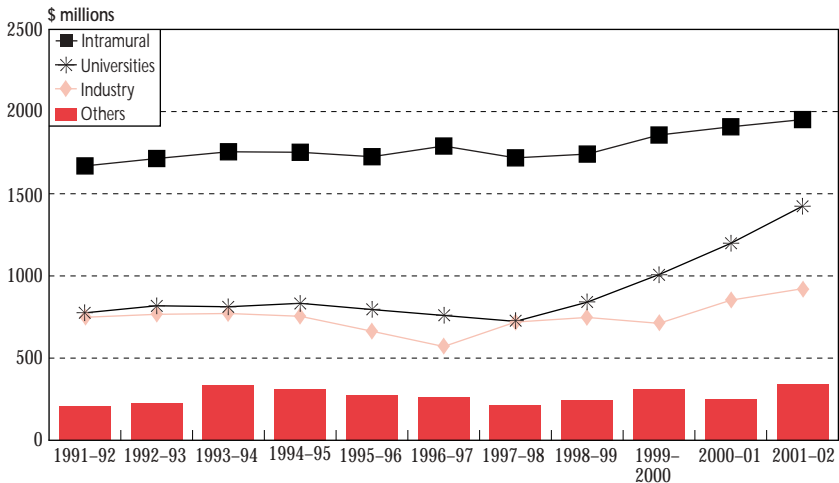
Source: Statistics Canada (2)

Federal Budgetary S&T and R&D Expenditures, 1992-93 to 2001-02



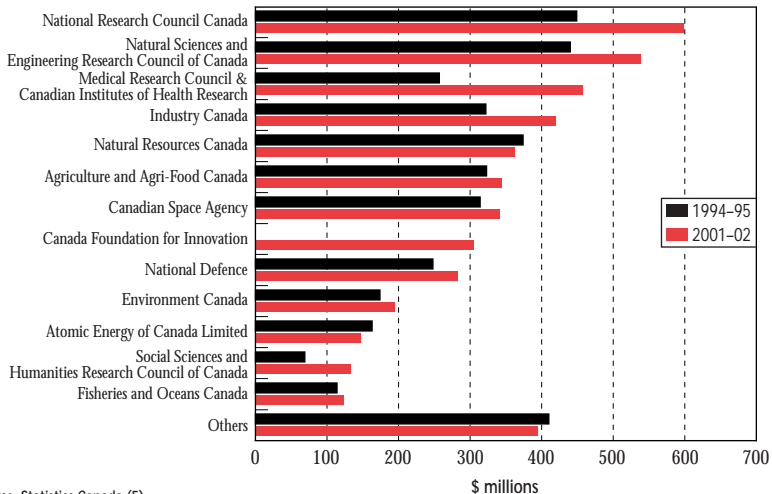
Source: Statistics Canada (5)

Federal Budgetary R&D by Performance Sector, 1991-92 to 2001-02



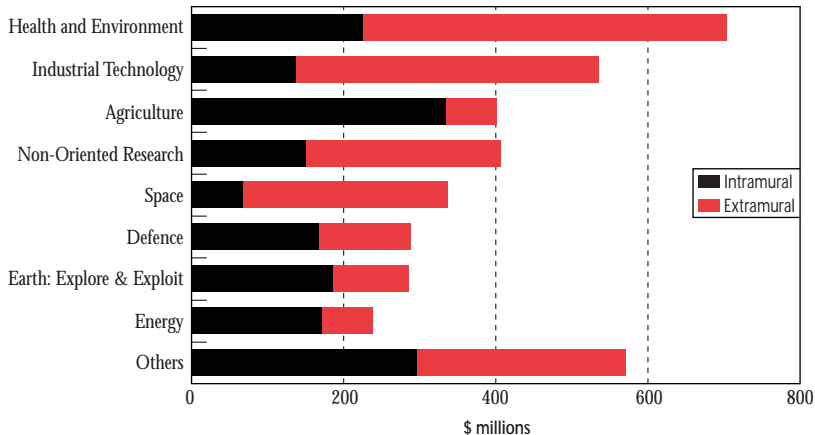
Source: Statistics Canada (5)

Federal Budgetary R&D Expenditures by Major Spenders, 1994-95 and 2001-02



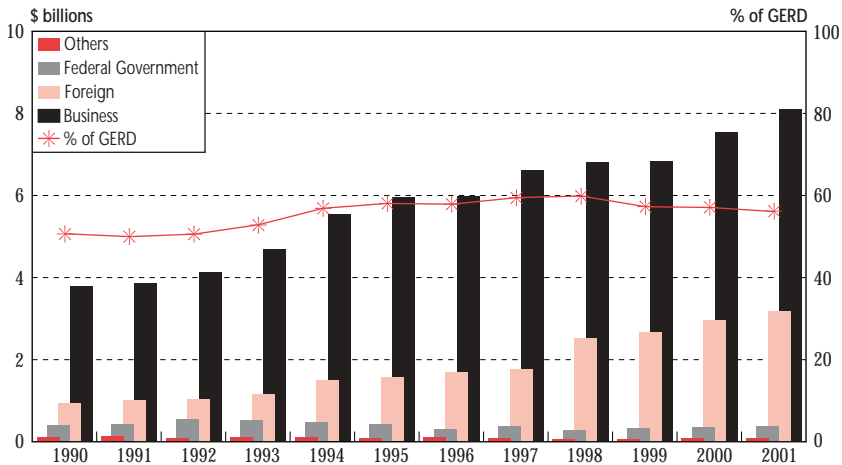
Source: Statistics Canada (5)

Federal Budgetary R&D Expenditures by Major Socio-Economic Objectives, 1999-2000



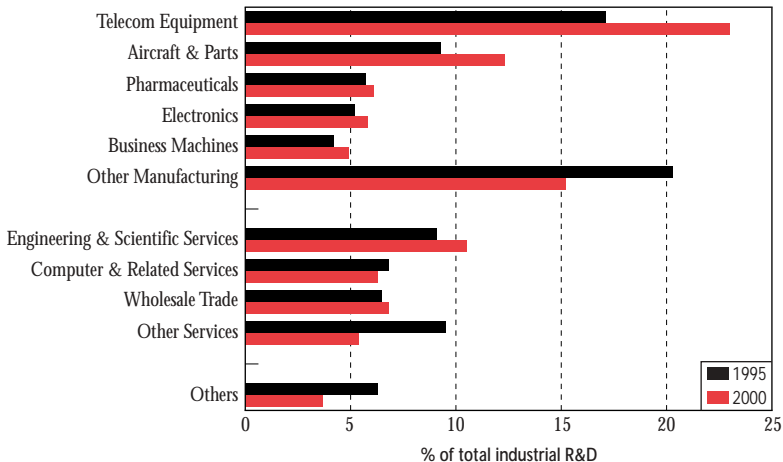
Source: Statistics Canada (5)

BERD by Major Sources of Funds, 1990 to 2001



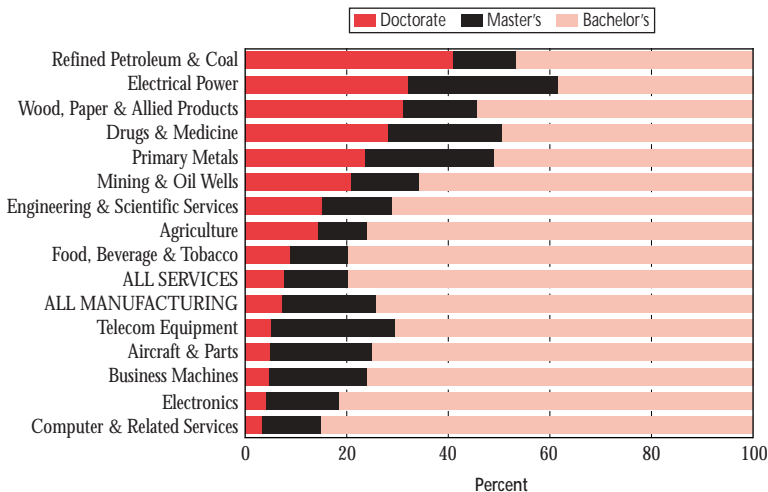
Source: Statistics Canada (2)

Changing Structure of Canada's Industrial R&D, 1995 and 2000



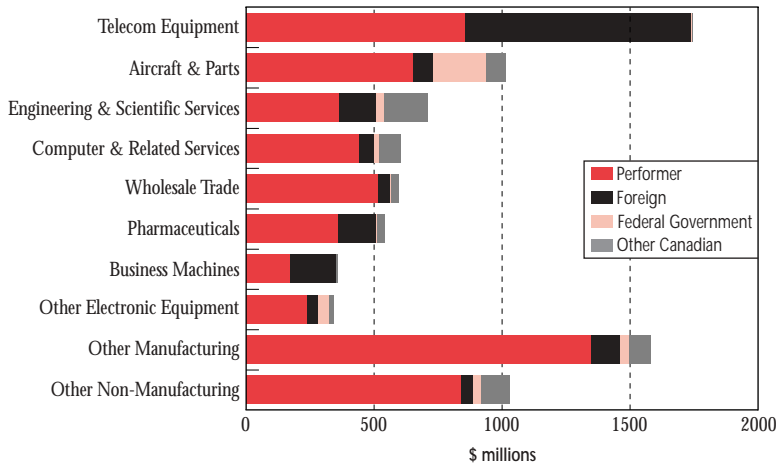
Source: Statistics Canada (6)

Research Scientists and Engineers in Selected Industries by Degree Level, 1998



Source: Statistics Canada (6)

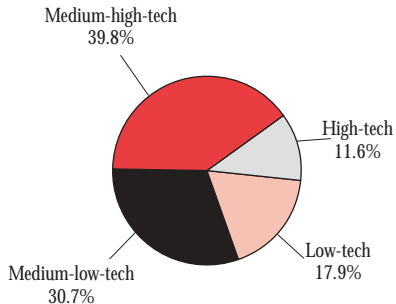
Sources of Funds for Intramural Industrial R&D, Selected Industries, 1997



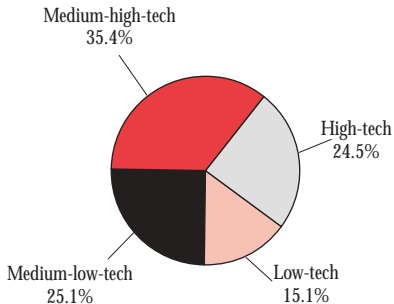
Source: Statistics Canada (6)

U.S. Patents on Canadian Inventions by Technology Group,* 1986-90 and 1996-2000

1986-90



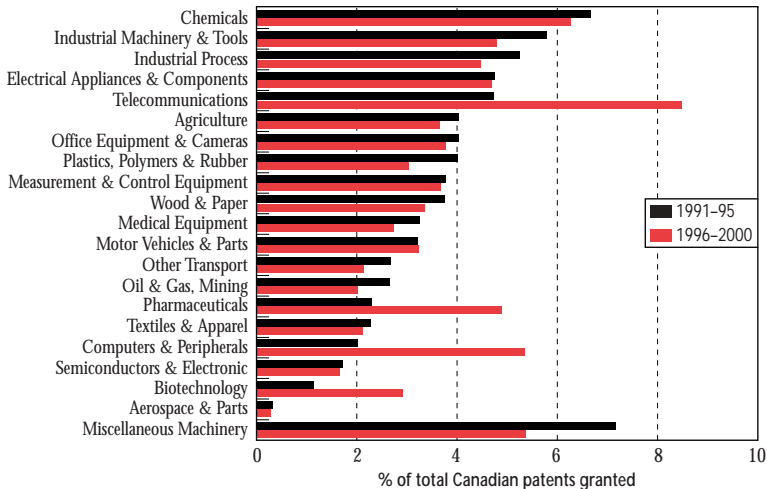
1996-2000



*See definitions

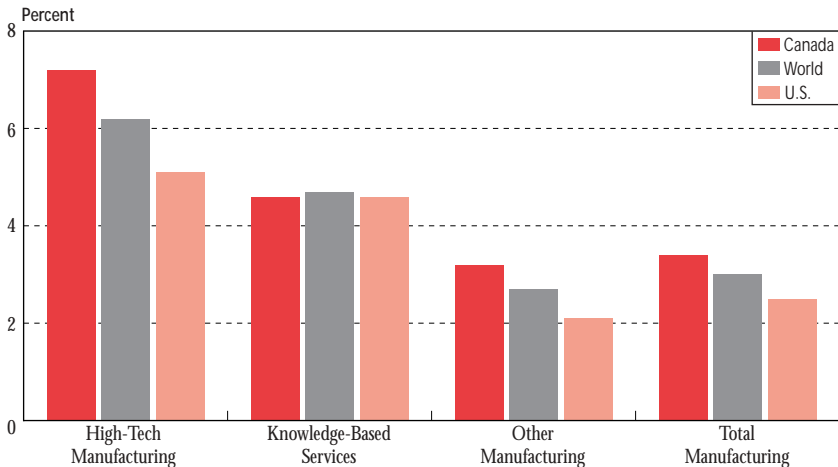
Source: Computer Horizons Incorporated (CHI) and estimates by Industry Canada

Changing Structure of Canadian Patenting in the U.S., 1991-95 and 1996-2000



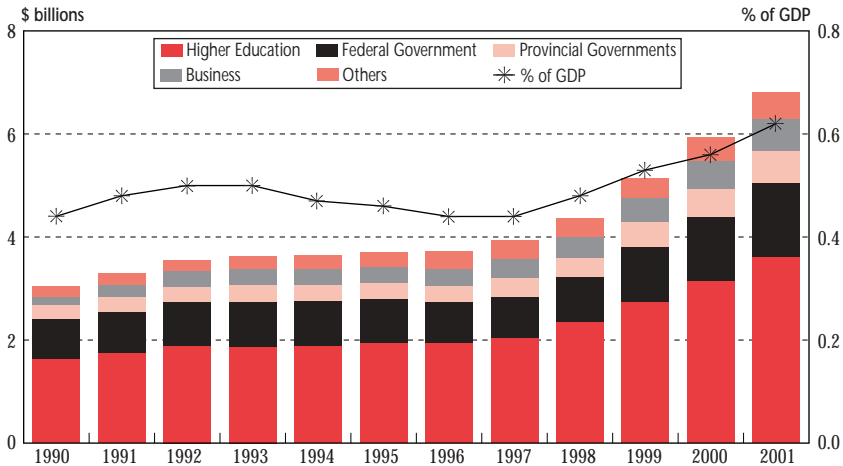
Source: CHI

Average Annual Growth Rates of Major Economic Sectors, 1980–97



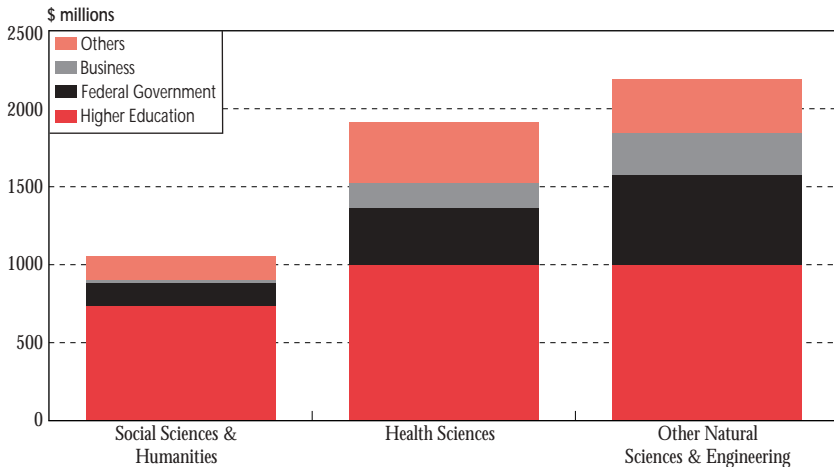
Source: National Science Foundation

HERD by Major Sources of Funds, 1990 to 2001



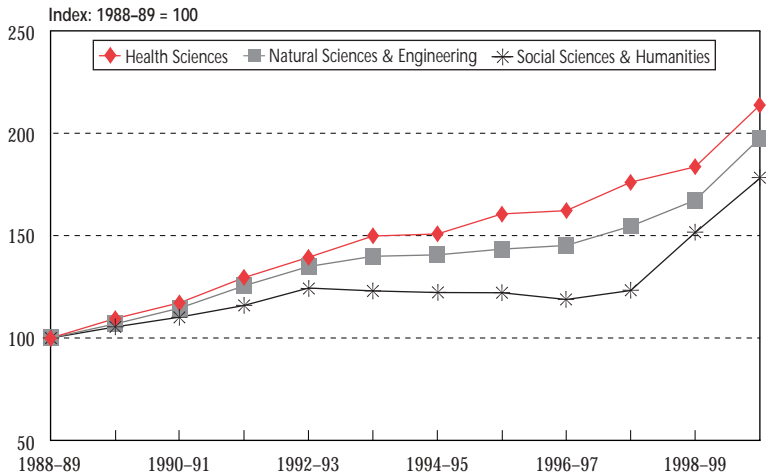
Source: Statistics Canada (2)

HERD by Field of Science and Major Sources of Funds, 1999–2000



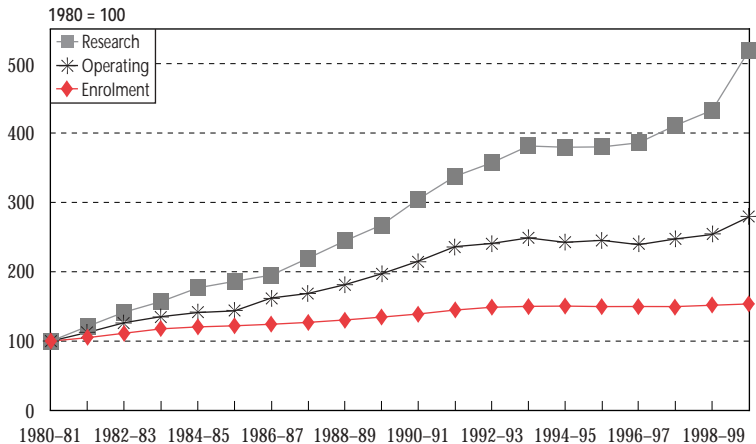
Source: Statistics Canada (4)

Growth in HERD by Field of Science, 1988-89 to 1999-2000



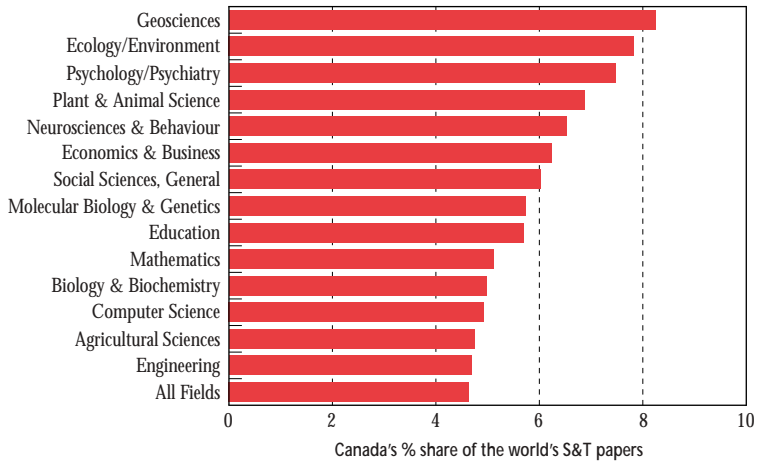
Source: Statistics Canada (4)

Growth in Expenditures for General Operating and Sponsored Research and in Enrolment, 1980-81 to 1999-2000



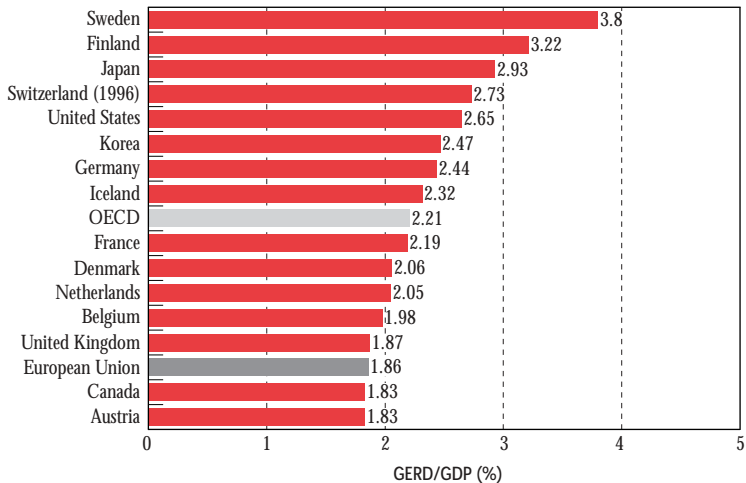
Source: Statistics Canada (1) and Canadian Association of University Business Officers

Canada's Share of the World's S&T Papers in Selected Research Fields, 1996-2000



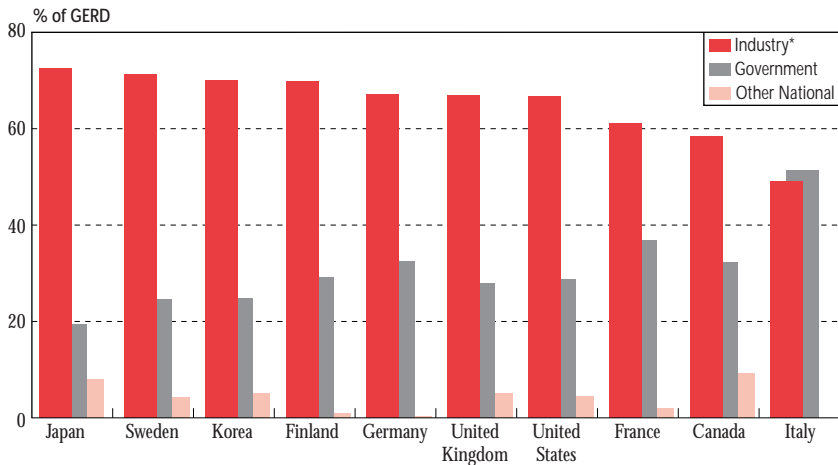
Source: ISI

International Comparison of R&D Intensities, 1999



Source: Organisation for Economic Co-operation and Development (OECD) (2)

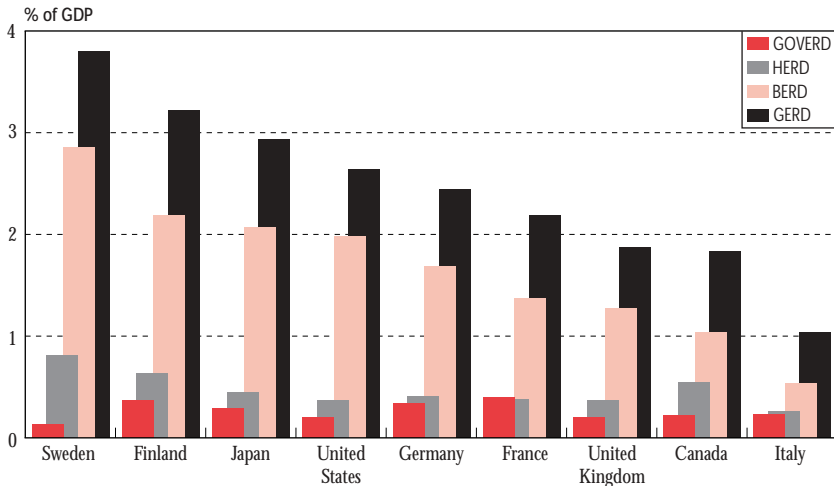
R&D Expenditures by Source of Funds, Selected Countries, 1999



*Business enterprise + foreign

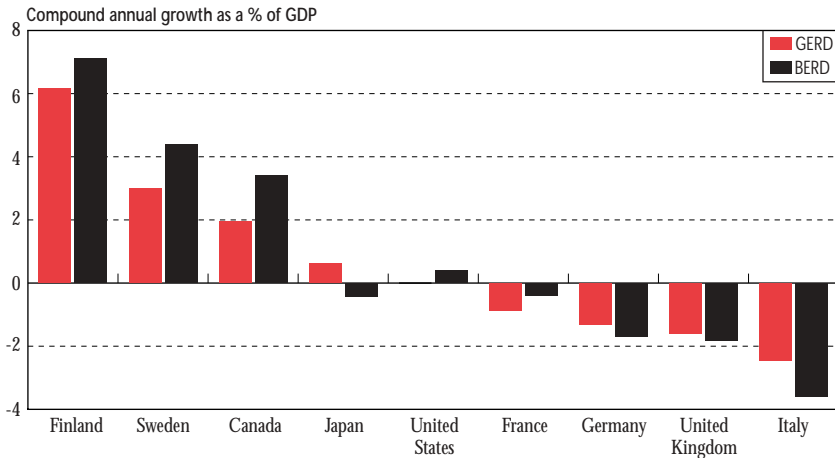
Source: OECD (2)

HERD, BERD, GERD and GOVERD as a Percentage of GDP, Selected Countries, 1999



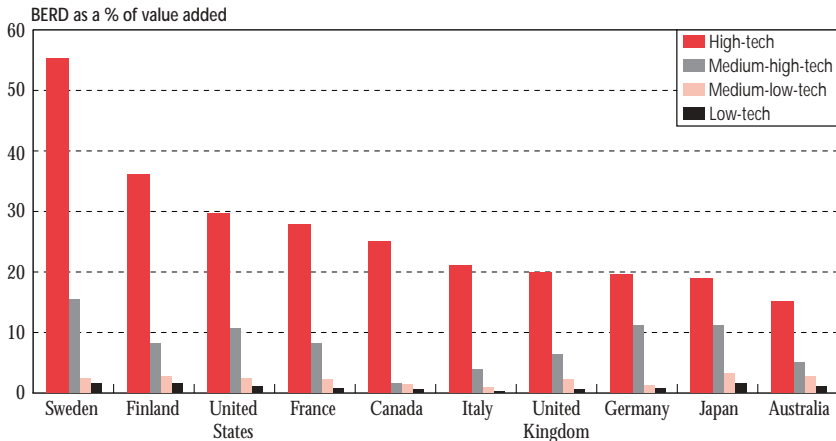
Source: OECD (2)

Growth in Intensity of GERD and BERD during the Nineties, Selected Countries, 1990 to 1999



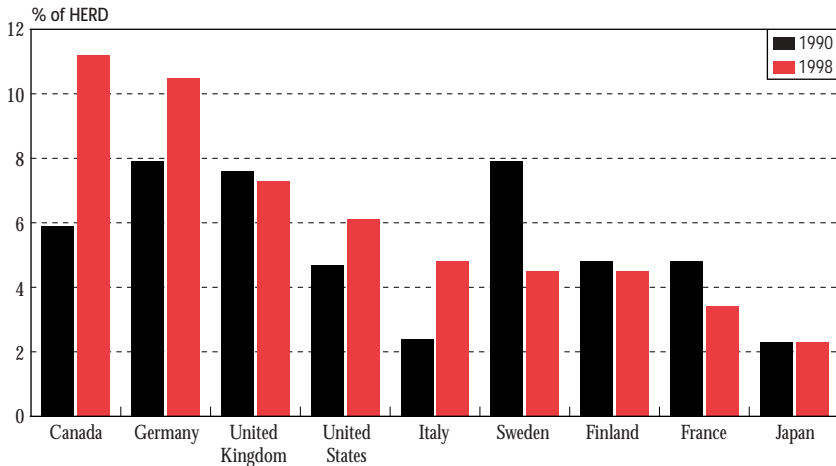
Source: OECD (2)

R&D as a Percentage of Value Added by Technology Group,* 1997 or Nearest Available Year



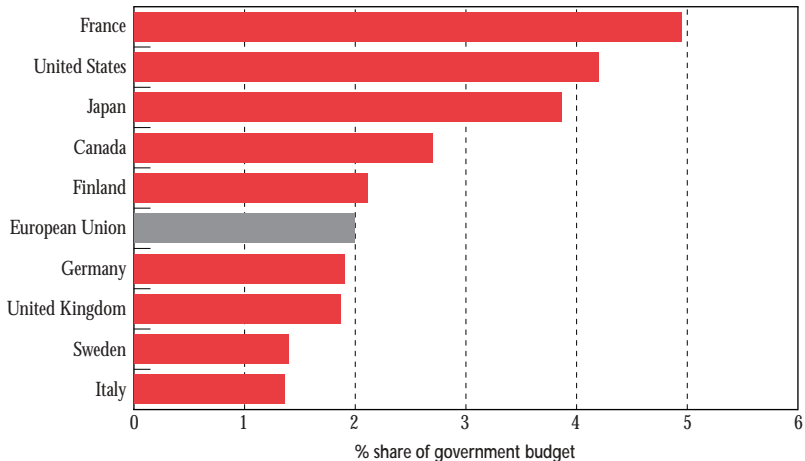
*See definitions
Source: OECD (3)

Business Financing of R&D in the Higher Education Sector, 1990 and 1998



Source: OECD (1)

Share of Government Budget Allocated to R&D, 2000 or Latest Available Year



Source: European Commission

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