

Canada Foundation for Innovation
Fondation canadienne pour l'innovation

Health Policy Conference Centre for Health Services and Policy Research

Scientific Innovation, The Economy, and Health

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Canada Foundation for Innovation
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www.innovation.ca



Role of Government in Making Canada Competitive on the World Stage

- 1997 – 2007
- 2007 – going forward



1997 – A TURNING POINT IN CANADA

- federal budget surpluses
- the innovation agenda



CHARACTERISTICS OF INNOVATIVE REGIONS/SOCIETIES

- cutting-edge research and development enterprise
- highly-educated and skilled workforce
- business, regulatory, and social environment that encourages entrepreneurship and creative thinking

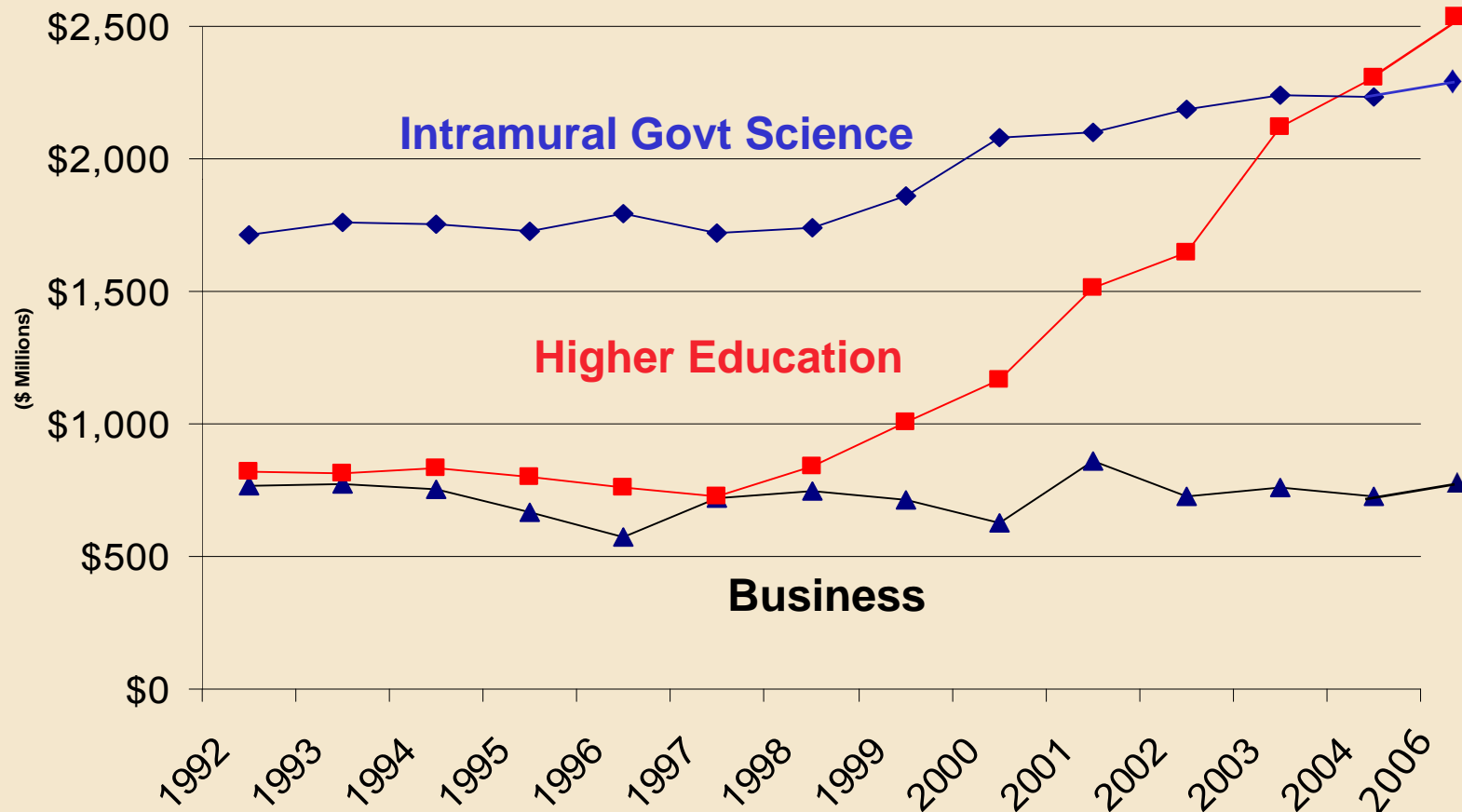


1997 – A TURNING POINT IN CANADA

- federal budget surpluses
- the innovation agenda
 - a key strategy: invest in higher
education research*



Federal R&D Funding by Sector



Source: Statistics Canada, Sciences Statistics, Vol. 30, No 6, September 2006



UNIVERSITY RESEARCH IN CANADA

circa 1997

Challenge

- deficit in infrastructure
- the brain drain
- rising indirect costs of research

Solution

- Canada Foundation for Innovation
- Canada Research Chairs Program
- Indirect Costs Program

Investment

- \$400M/yr
- \$300M/yr
- \$300M/yr

University research

Canadian scene

Researchers and
Students

Institutions

Themes

Federal level

Granting Councils:
NSERC
SSHRC
CIHR
NCE

Canada Research
Chairs
Canada Foundation
for Innovation
Indirect costs

Genome Canada
Climate and
Atmosph. Res.
Sustainable Dev.

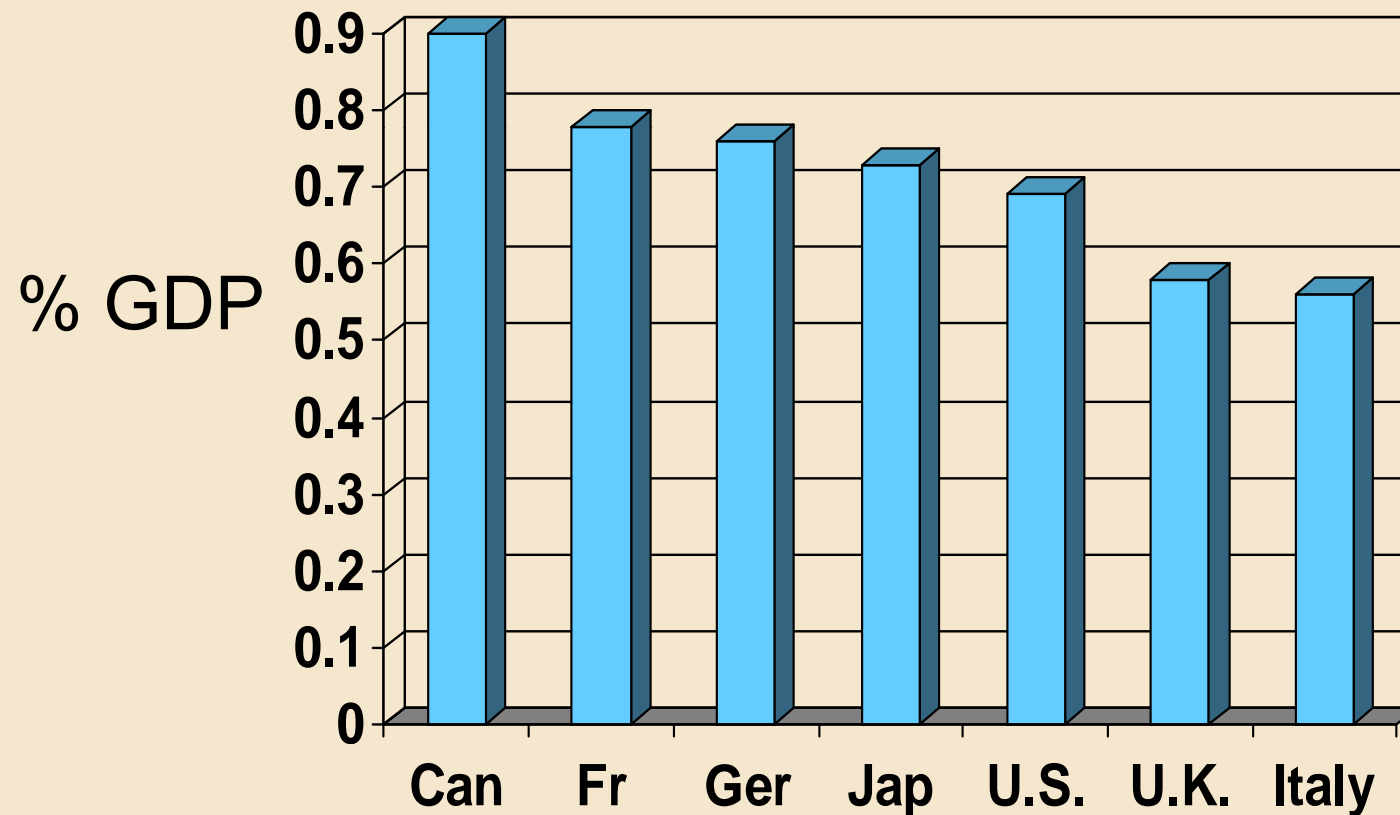
Provincial
level

University
facilities
and services

Direct costs of research
(Councils, foundations and
government programs)



GOVERNMENT EXPENDITURES ON R&D

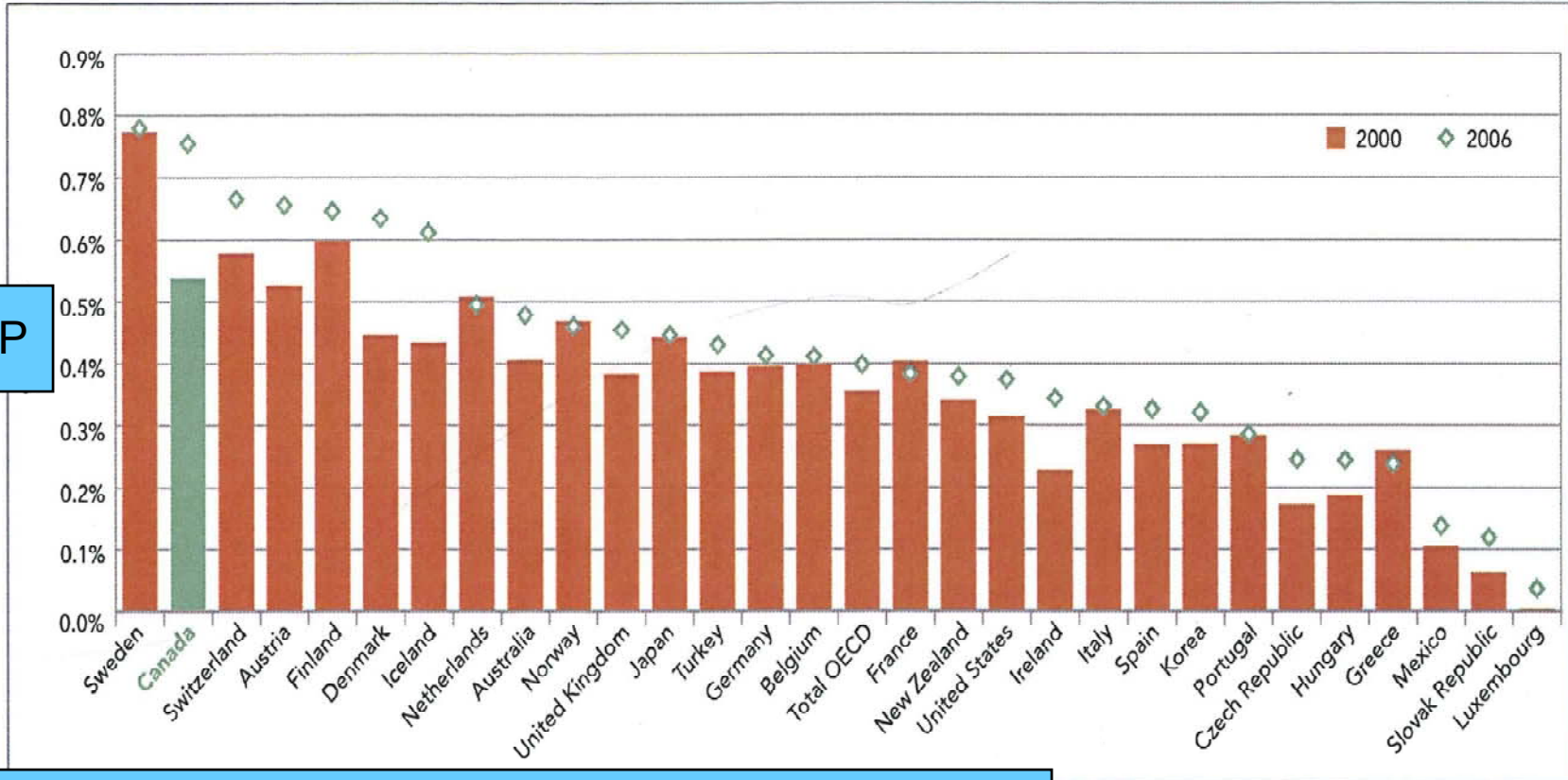


OECD 2006



HIGHER EDUCATION R&D

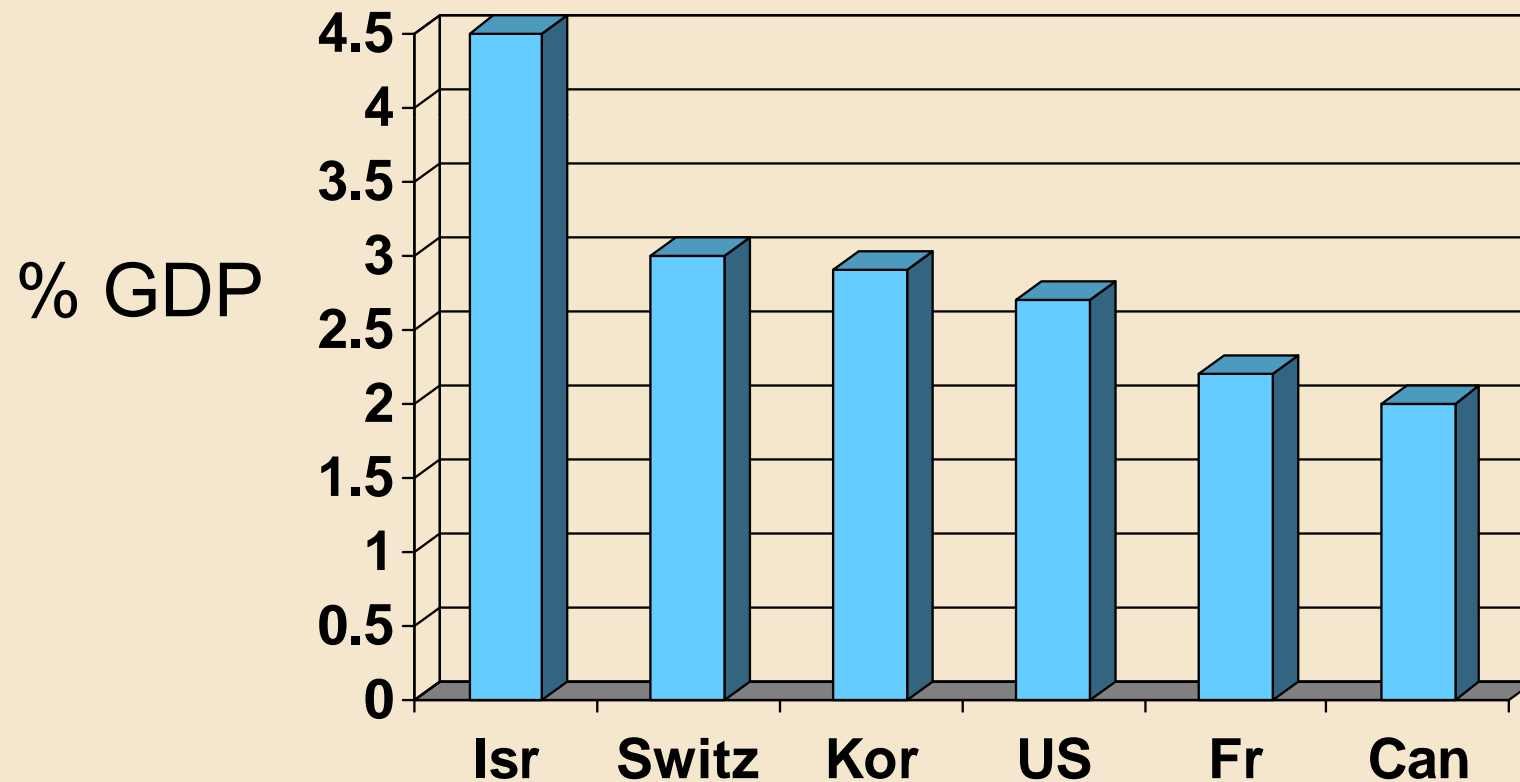
%GDP



OECD Main Science and Technology Indicators, 2007



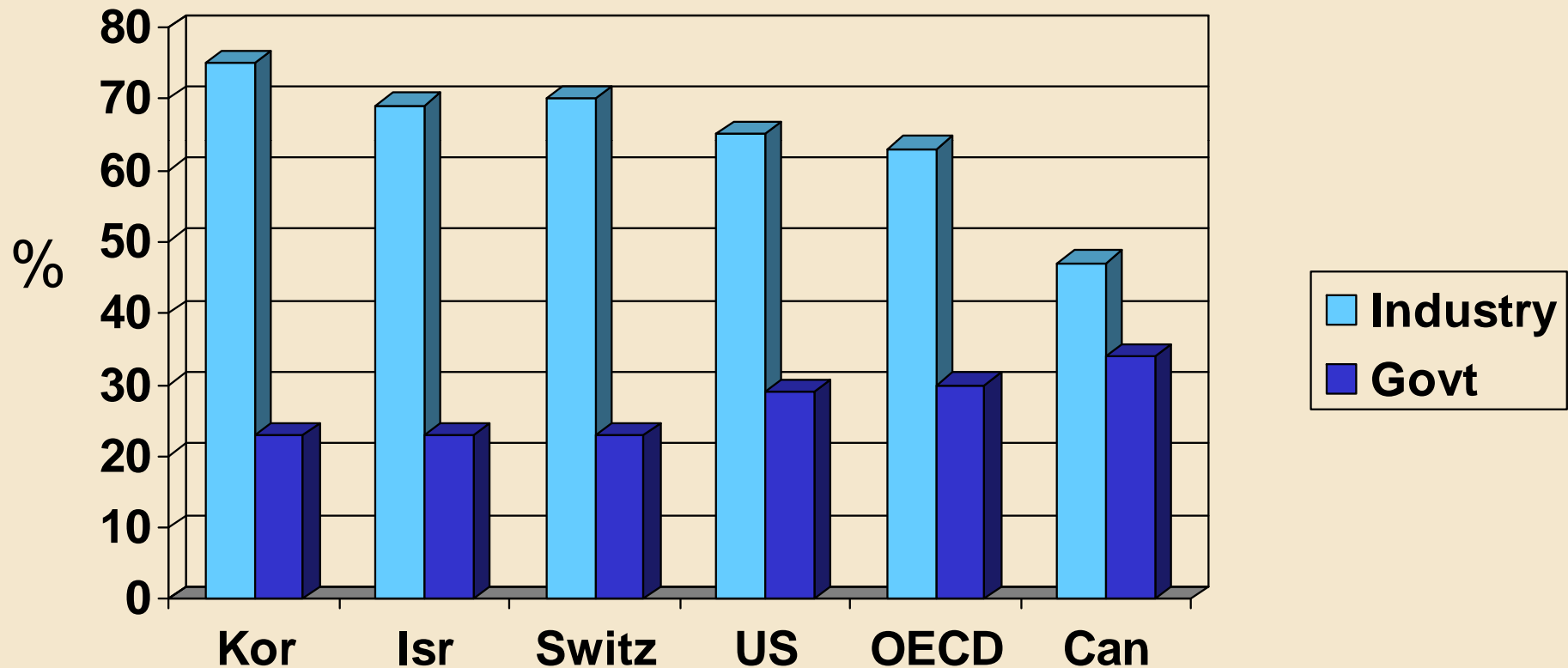
GENERAL EXPENDITURES ON R&D



OECD 2006



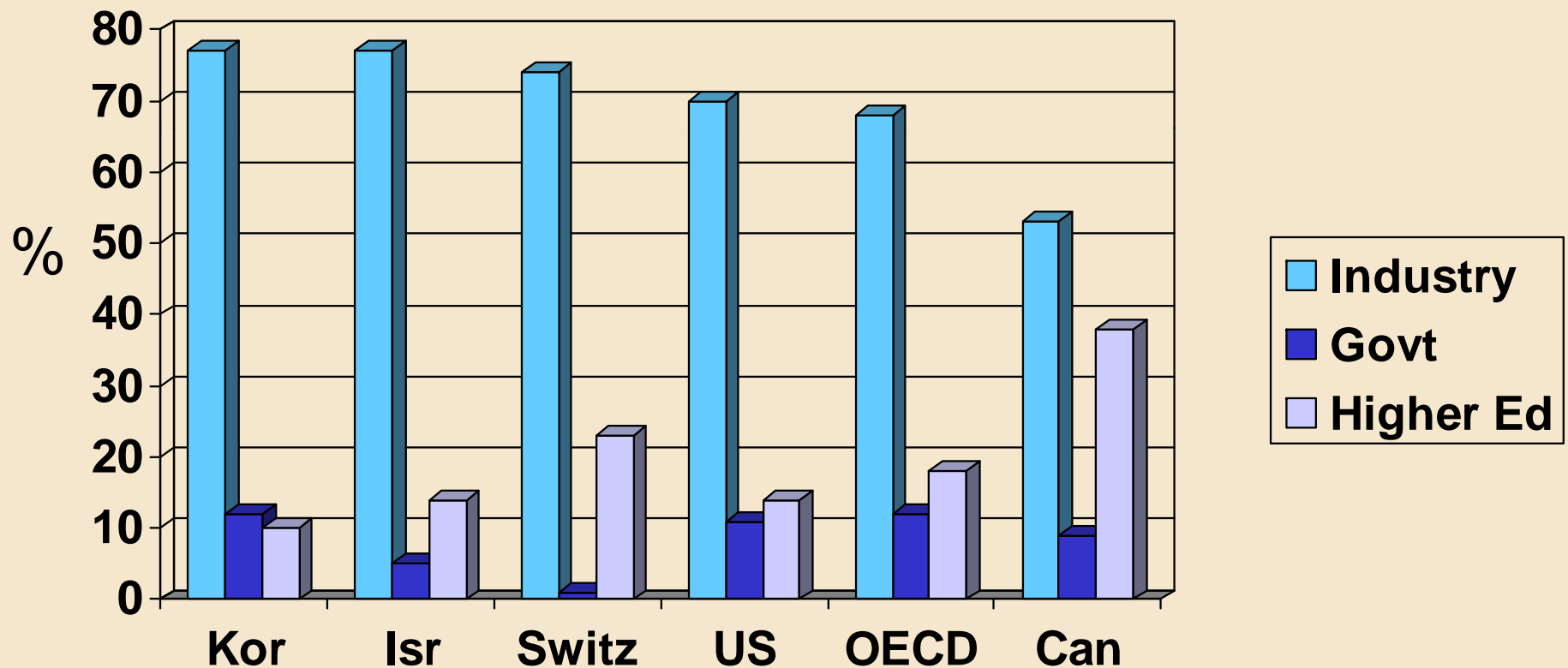
R&D EXPENDITURES BY FUNDING SECTOR



OECD 2007



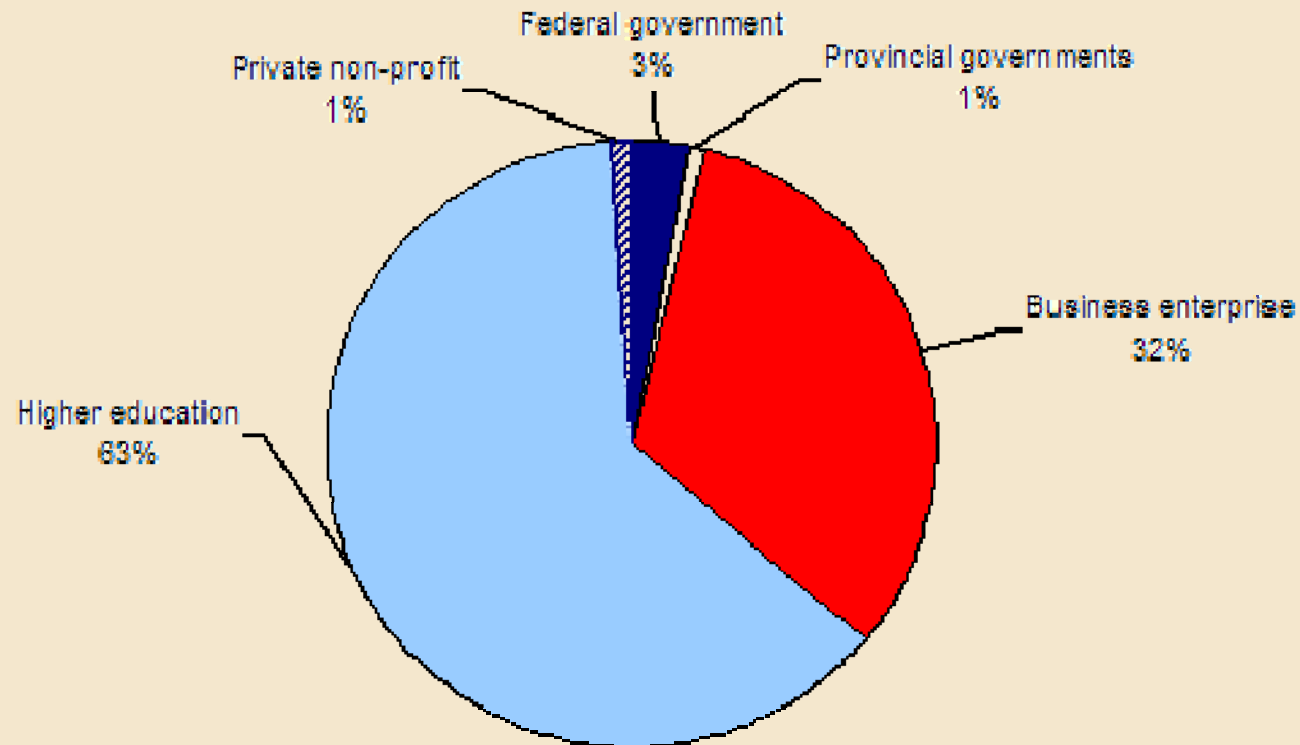
R&D EXPENDITURES BY PERFORMING SECTOR



OECD 2007



R&D EXPENDITURES IN HEALTH BY PERFORMING SECTOR



Statistics Canada 2007



CITATION OF S&E PUBLICATIONS

Country	All Citations (% world share)*	Top 1% (% world share)**
United States	42	63
United Kingdom	8	13
Japan	7	7
Germany	7	10
France	5	7
Canada	4	6

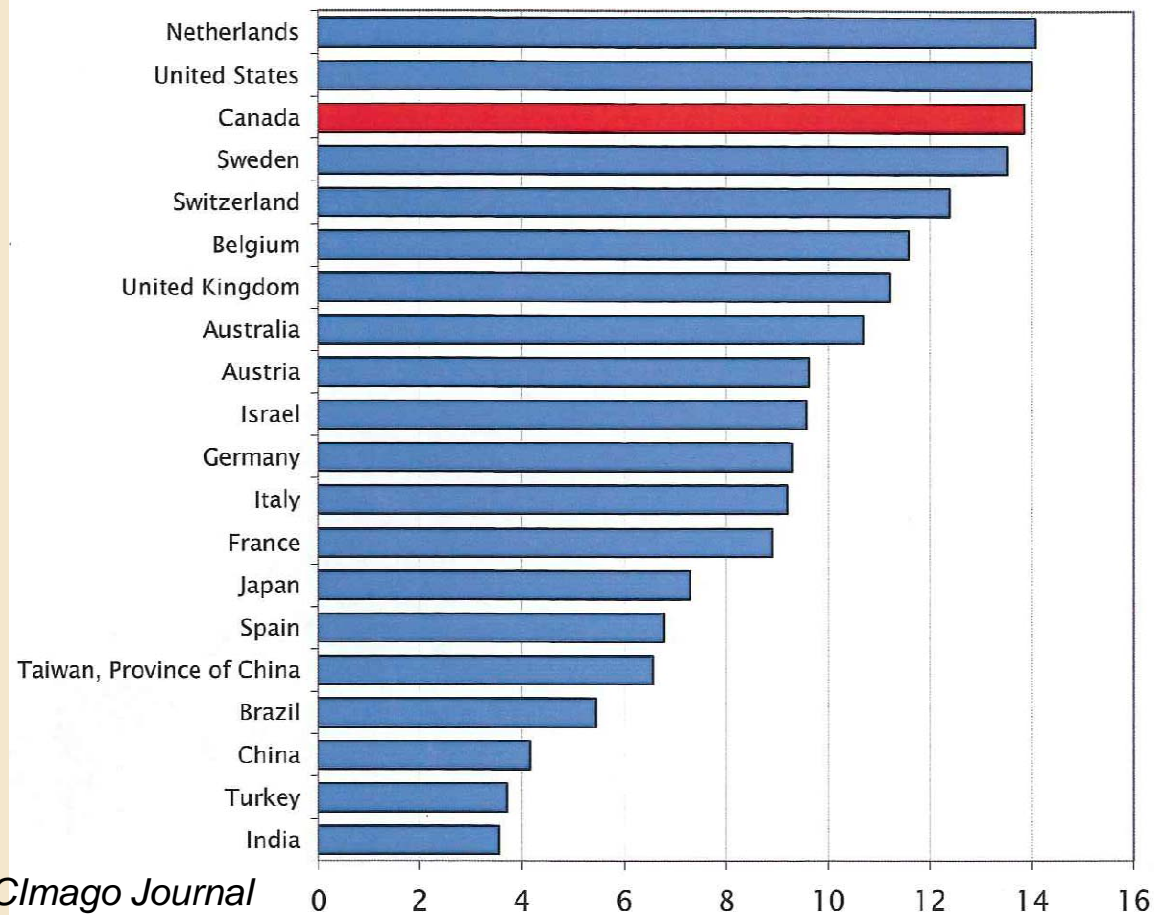
* National Science Board
*Science & Engineering
Indicators, 2006*

** D King, The Scientific Impact of
Nations, *Nature* 2004, 430:311-316



Medical Research Publications, 1996-2006

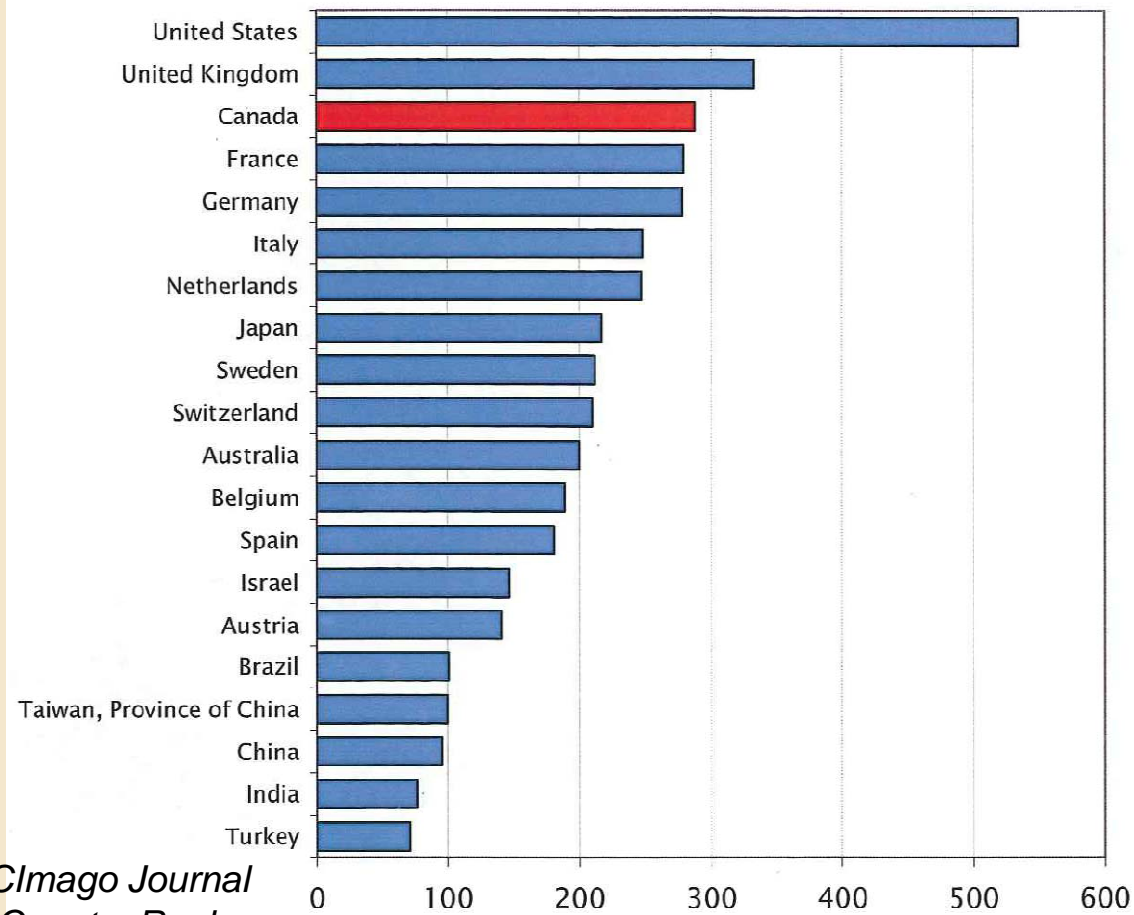
(Mean Number of Citations per Publication)



*SCImago Journal
& Country Rank*



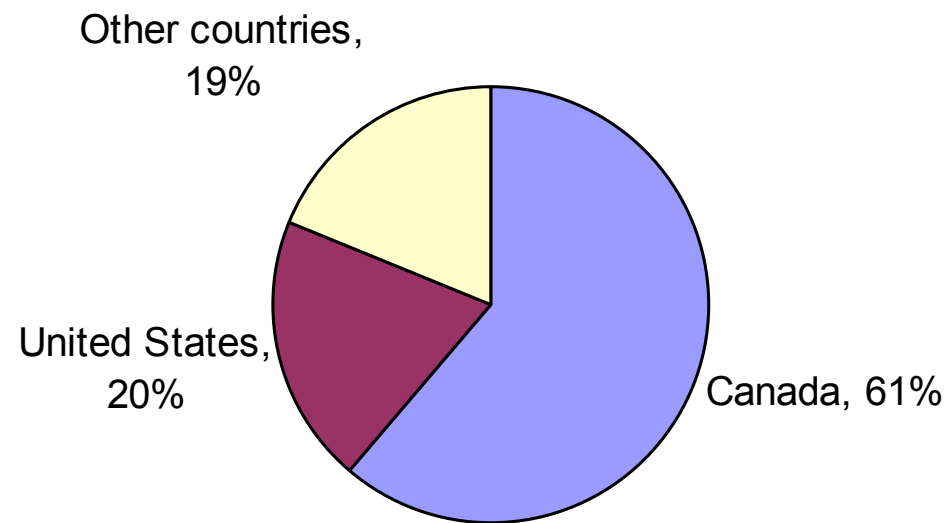
Medical Research Publications, 1996-2006 (H Index)



*SCImago Journal
& Country Rank*



Origin of Researchers Recruited to Canadian Institutions, 2003-2008*



* recruitment facilitated by availability of CFI-funded infrastructure; n = 7060



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“It is not the strongest of the species
that survives, nor the most intelligent,
but the one most responsive to change.”

Charles Darwin



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THE CHANGING RESEARCH ENVIRONMENT

- increasingly competitive
- increasingly strategic at national and regional levels
- increasingly collaborative across disciplines, sectors, and jurisdictions
- enhanced focus on outcomes and benefits



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GOVERNMENT OF CANADA S&T STRATEGY

Mobilizing Science and Technology to Canada's Advantage

Core Principles

- promoting world class **excellence**
- focusing on **priorities**
- encouraging **partnerships**
- enhancing **accountability**



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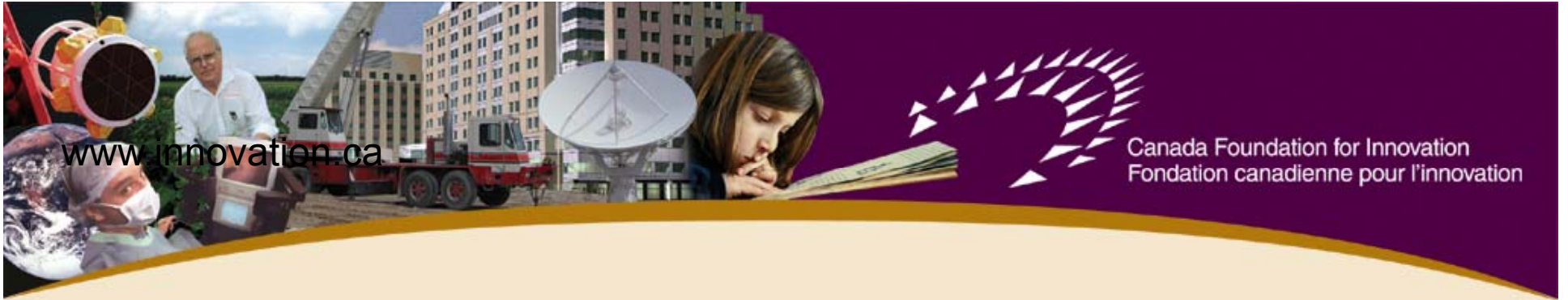
THE RETURN ON INVESTMENT IN HEALTH R&D

- academic sector – publications, citations, patents; recruitment and retention of HQP
- private sector – added value
- health care industry – efficiencies, improved safety
- patients, public – cures, enhanced quality of life
- governments – economic and social benefits



CONCLUSIONS

- Government has played a critical role in the past decade in enhancing Canada's S&T competitiveness.
- Canada is competing well in the changing research environment, but continuing adaptation will be required.
- There is reason for optimism, but no room for complacency.



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thank you !
merci !

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