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Canada

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CANADA

Canada's innovation performance exhibits both strengths and weaknesses. It scores high in terms of the quantity and quality of scientific articles, but the number of triadic patents remains under the OECD and EU25 averages. It performs well in terms of firms with new-to-market product innovations, especially among SMEs, but the share of turnover due to these products is among the lowest in the OECD area. More broadly, productivity growth has become a concern. While labour productivity grew above the OECD average from 1995 to 2000, it has since weakened, with annual growth of 1% in 2001-06, compared to an OECD average of 1.8%.

These outcomes partly reflect the characteristics of the innovation system. Canada has a highly educated population, a substantial workforce engaged in science and technology occupations, and steady growth in research personnel (annual average growth of over 4% from 1995 to 2004, above the OECD average). The higher education sector accounts for a substantial share of research. However, only a small percentage of innovative firms collaborate with public research organisations, especially universities. Moreover, business expenditure on R&D was just over 1% of GDP in 2006, well below both the OECD average of 1.56% and the 1.84% of the United States. Business investment has declined sharply since 2001 and overall R&D intensity is, at just under 2% of GDP, below the OECD average.

The structural characteristics of the economy – an important resource-based sector and relatively few large firms – may partially account for low business R&D

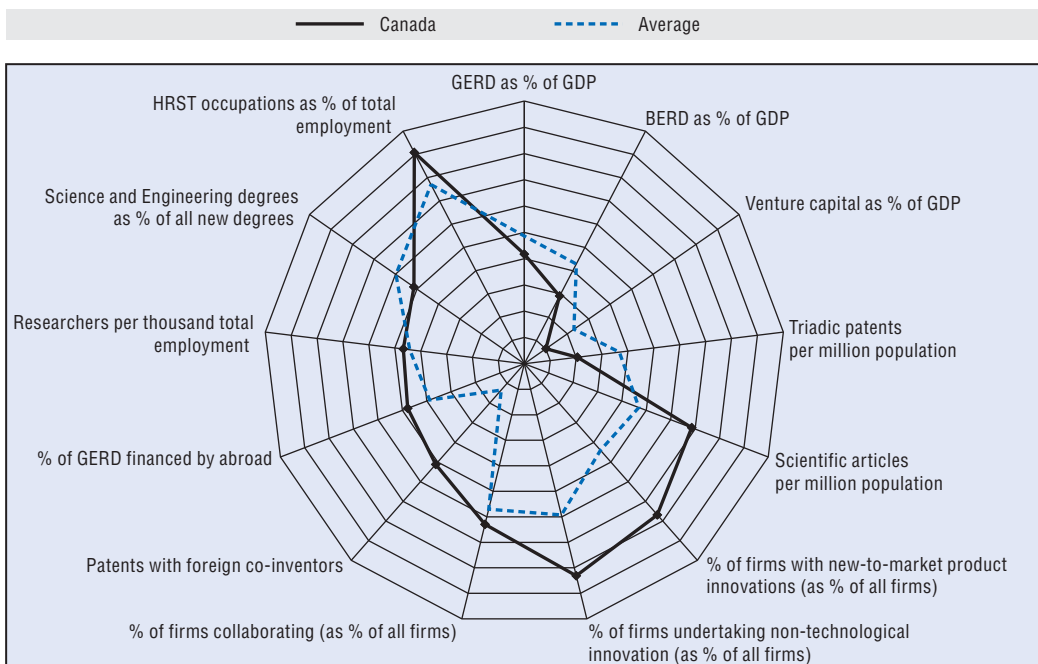
intensity and explain the large concentration of business R&D in a handful of companies. The top ten companies have carried out one-third of all R&D over the past 20 years.

To address these concerns, the Canadian government launched in 2007 Mobilizing Science and Technology to Canada's Advantage, a new framework to guide future national science and technology policy. Its aim is to increase private-sector investment in R&D, to foster practical applications of research performed in Canada, and to create a well-educated, skilled and flexible workforce. It also aims to enhance co-ordination and co-operation between the federal government and the provinces.

These objectives are reflected in the Budget Plan 2007 and several new initiatives, such as the Centres of Excellence in Commercialisation and Research, the decision to make the College and Community Innovation Program a permanent scheme, and the introduction of new business-led research networks in the Networks of Centres of Excellence. These actions all aim at strengthening public-private research and commercialisation partnerships.

In addition, in support of research excellence and skills enhancement, extra resources have been allocated to granting councils and to existing programmes such as the Canada Social Transfer. A new Industrial R&D Internship Program has also been established. Finally, there is a strong commitment to explore and develop new initiatives to boost business R&D and improve the framework conditions for entrepreneurship.

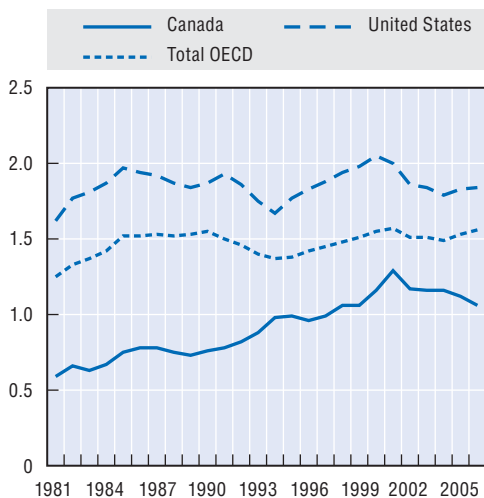
Science and innovation profile of Canada



StatLink <http://dx.doi.org/10.1787/452075145463>

Business expenditure on R&D, 1981-2006

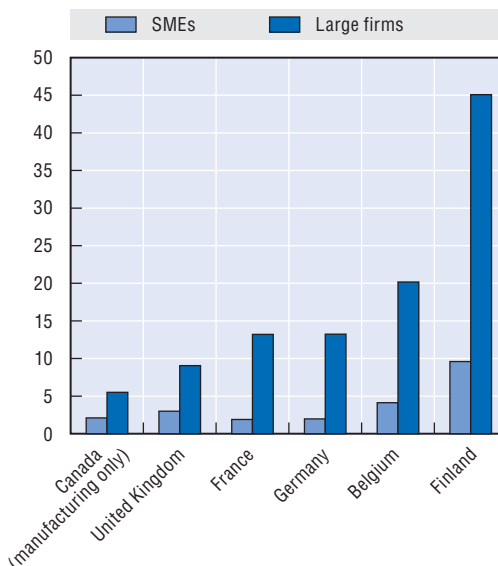
As a percentage of GDP



StatLink <http://dx.doi.org/10.1787/452164665507>

Firms collaborating in innovation, by size, 2002-04 (or nearest available years)

As a percentage of all firms



StatLink <http://dx.doi.org/10.1787/452203167084>

Chapter 3

Science and Innovation: Country Notes

This chapter complements Chapters 1 and 2 by providing an individual profile of the science and innovation performance of each OECD country, as well as observers to the OECD Committee on Science and Technology Policy (Brazil, Chile, China, Israel, Russia and South Africa), in relation to their national context and current policy issues. The graphs enable countries to see some of their relative strengths and weaknesses as compared to other countries' performance.

The common indicators in the first (radar) graphs were selected on the basis of current policy issues. They focus on research and innovation inputs, scientific and innovation outputs, linkages and networks, including international linkages, and human resources. A standard set of indicators is used; however, when data are not available, alternative indicators may be applied. The annex provides a full list and description of the indicators, methodological notes and data sources.

For each indicator in the radar graph, the country with the maximum value is set at 100, taking into account all OECD and non-OECD countries with available data. The average is calculated by taking into account all OECD countries with available data (non-OECD countries are excluded from the average). The annex provides further details.

The radar graphs are accompanied by country-specific figures that further illustrate national characteristics and underpin policy-specific comments. The selection of comparator countries in these graphs aims to highlight the general position of the focal country and, in some instances, data on other countries may also be shown.

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