INPUT INDICATORS OF THE BRITISH COLUMBIA HIGH TECHNOLOGY SECTOR

2010 EDITION PREPARED BY BC STATS

Western Economic Diversification Canada
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Prepared for:
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Western Economic Diversification Canada works with the provinces, industry associations and communities to promote the development and diversification of the western economy, coordinates federal economic activities in the West and represents the interests of western Canadians in national decision-making.

Table of Contents

Executive Summary

The 2010 edition of the *Input Indicators of the British Columbia High Technology Sector* report is prepared by BC Stats, and is the ninth in a series of annual reports. This series of reports highlights some conditions affecting British Columbia's high technology sector from a supply-side perspective. This year, the report tracks the evolution of 41 business and economic climate indicators for the development of the high technology sector in the province and provides comparisons to other provinces and Canada as a whole. These indicators cover key aspects of the educational, business, government, external and labour sectors from the point of view of their impact on high technology firms.

The indicators in this report, which can be termed "input" measures, are chosen for their relevance and general acceptance, as well as their availability on an ongoing basis. All indicators have been updated to the latest year for which data were available as of January 2011.[1] Two new indicators have been added to this edition to expand the scope of measurement in the business sector—Venture Capital by Sector and Information and Communication Technology Investment as a share of gross domestic product (GDP). There are also three new supporting tables in Appendix III, which add further detail to indicators in this section.

Another new feature included in this edition of the report is a 'snapshot', using data from the most recent Census (2006), focusing on the immigrant labour pool and its role in filling labour demands for the high technology sector. It includes a look at post-secondary qualifications of immigrants by field of study, location of study by immigrants in Canada and immigrant labour force by occupation.

Indicators of the success, or "outputs", of the high technology sector are covered by a companion report, Profile of the British Columbia High Technology Sector.[2] The Profile contains information on high technology GDP, employment, wages and salaries, revenues, establishment counts, and exports and imports.

The picture of British Columbia that emerges from the input indicators is varied. In many areas, British Columbia compares quite favourably with other provinces and has shown notable growth. On the other hand, performance has lagged in other areas. As such, the detailed indicators have great potential for offering tangible direction for government policies and industry growth strategies.

[1] Some of the data come from reports, studies, and/or surveys that are only released biannually and, in other cases, less frequently. Every effort has been made to use the most recent data possible.

[2] Available at http://www.bcstats.gov.bc.ca

The 41 indicators covered in this report span available data for the most recent reporting years and, in many cases, date back at least a decade. Where available, data are included for the other provinces, particularly for those supporting the bulk of Canada's high technology sector. British Columbia, Alberta, Manitoba, Ontario and Quebec have been designated as provinces with a substantial presence in the high technology sector and are referred to throughout the text as the "designated provinces."[3] Regional data for British Columbia have not yet been incorporated into the report, due mostly to data restrictions and gaps in information. However, this remains a key area of significance and the prospect for compilation of such data is conceivable for reports in the future. Similarly, international statistics have not been included at this stage, mostly because of the difficulty of making valid comparisons of indicators collected with varying definitions and against very different backdrops of social and economic organization.

INDICATOR SUMMARIES

An ongoing feature of this publication is the simple description of the trends in each indicator as up, down or stable (indicated in summary tables as: ↑, ↓ or →). The assessment is made with regard to the trend over the span of time for which the data are available and for the latest period.[4] New to this edition is a comparison ranking B.C. with the designated provinces for each indicator as well as an overall ranking. Since the last edition (2008), the trend in some indicators has been re-evaluated, based on the latest information. Table 1 provides a quick summary of trends and rankings for each indicator. Summary results for each sector are presented at the start of each section in the body of the report. More detailed statistical information is contained in the tables in Appendix III.

HIGHLIGHTS

EDUCATION SECTOR

In general, British Columbia fares quite well in terms of performance in the education sector. British Columbia's universities have excelled in terms of technology licenses and patents issued. The University of British Columbia continues to lead all other Canadian G-13 universities in terms of gross income from technology licenses. UBC has also been a long-time leader in the number of U.S. patents it has been awarded. The province also fares relatively well in terms of funding for researchers in its educational institutions.

On the other hand, the province tends to lag other provinces in indicators of overall education attainment. Although the data for the last reporting year show that B.C. continues to have the highest percentage of the population with high school education, a rank it has held for nearly two decades, there is a very significant deficiency with respect to the training of new graduates in the areas of architecture, engineering and related technology, mathematics, computer and information sciences, and physical and life sciences and technologies. In architecture, engineering and related technology, for example, B.C. has fewer than half the number of graduates per capita than Ontario and Alberta. Similarly, higher education research and development as a percent of GDP in the province is low by Canadian standards.

BUSINESS SECTOR

Compared to other Canadian provinces, British Columbia returns below average ratings in about half of the business stimulus indicators, but there have also been some positive developments in recent years. In 2007, the ratio of research and development (R&D) performance by business to provincial GDP remained at about half that of Quebec, but B.C. still holds a solid ranking of third among the provinces. British Columbia also scores below average on some other business

[3] The addition of Manitoba as a designated province is new to this edition. Manitoba has developed a world class aerospace industry and in 2009, high technology exports from Manitoba exceeded those from Alberta, such that Manitoba should now be considered in the same category as the other designated provinces

[4] Note that the fact an indicator may be rising in relation to other provinces does not necessarily indicate an advantage for British Columbia. For example, above average taxes would normally be viewed as a negative indicator from the point of view of the high technology sector. With this edition of the Input Indicators report, the summary arrows are colour-coded to indicate positive (green), neutral (yellow) or negative (red) trends.

stimulus indicators, such as patents awarded per capita, but showed signs of resilience in the face of the global economic downturn, with growth in the number of high technology businesses in 2008 and 2009. In 2010, B.C. scored above average in venture capital investment per capita, a rate more than double that of neighbouring Alberta, and did well in attracting venture capital investments to key growth sectors, including life sciences and information technology.

GOVERNMENT SECTOR

Individual, small business and corporate taxation continues to be more favourable in B.C. than in most other parts of the country. All three levels of tax rates in the province shrank over the last decade, and in 2010, remain among the lowest in the country. As a share of GDP, combined federal and provincial government R&D activities are by far the lowest in the country. However, the province fares much better in terms of gross expenditure on R&D as a share of GDP.

EXTERNAL SECTOR

In relation to the size of its population, British Columbia is relatively on par with other provinces in attracting skilled immigrants, but their average level of education is slightly lower than in some other parts of the country. After having experienced an outflow of people from B.C. to other parts of Canada between 1998 and 2003, increased in-migration from other provinces over recent reporting years has begun to bolster the province's supply of workers. Net immigration to the province eased slightly in 2010, but was still, by far, the largest of any of the provinces. B.C. imports of high technology goods—which can be an indicator of future production since imported components are often used to produce high tech products—slumped in 2009, likely as a result of the slowdown in the economy.

LABOUR

Unemployment rates among workers in the natural and applied sciences dropped to a record low in 2008, but climbed substantially in 2009 in the face of the economic downturn. Nonetheless, rates remain substantially lower than for the economy as a whole. In 2007 (the latest year for which data are available) British Columbia maintained a third place ranking in terms of researchers per 100,000 population. The province's research workforce grew substantially between 2006 and 2007, while many other parts of the country saw numbers decline. B.C.'s largest city remains among the most desirable places to live in the world, ranking fourth in the Americas for quality of life, despite its somewhat high cost of living.

TABLE 1: QUICK SUMMARY OF INDICATORS

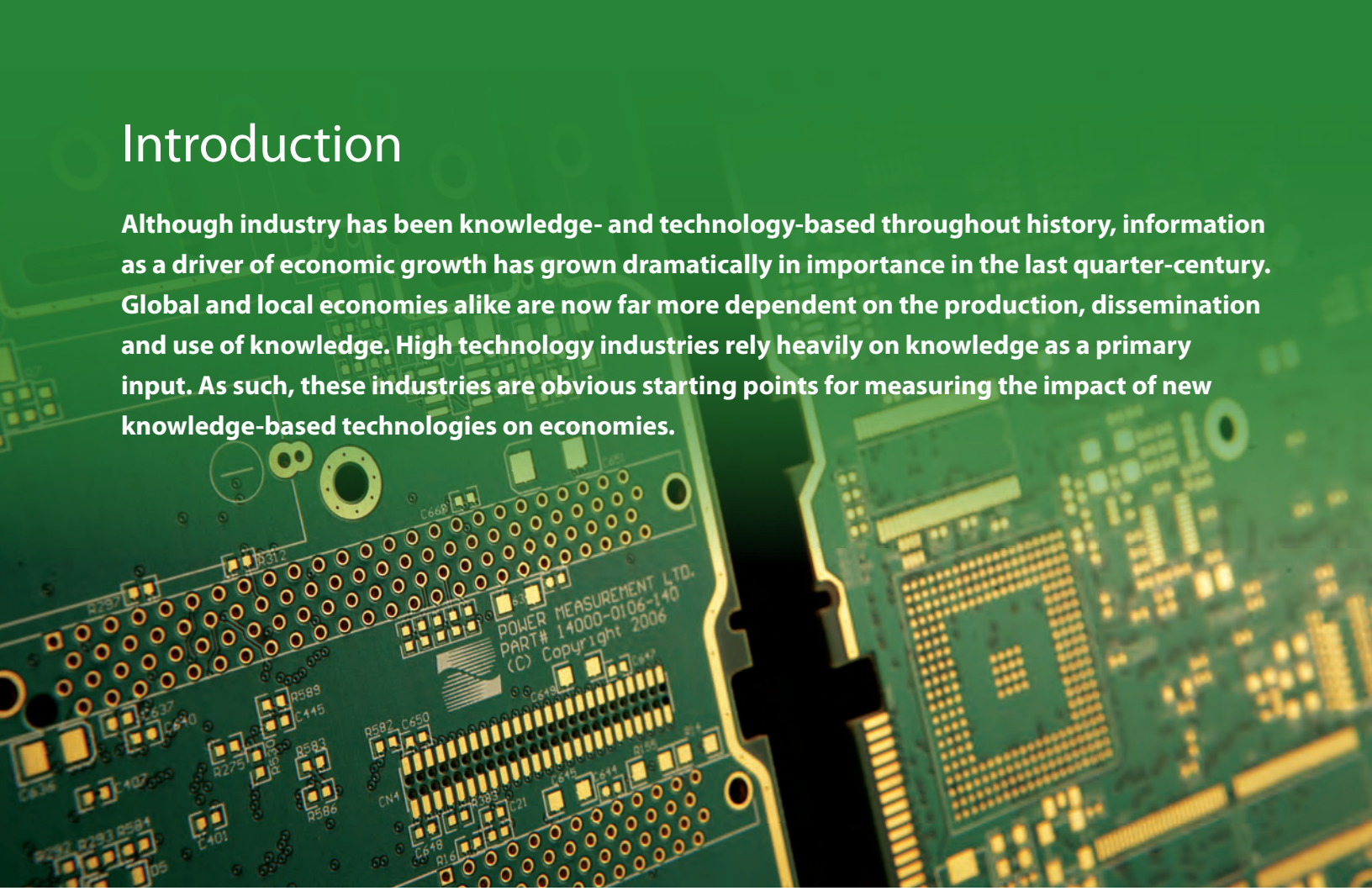
INDICATORS	Trend		Ranking	
	Long-Term	Latest Year	Five Desig-nated Provs.	Overall
EDUCATION SECTOR				
E-1: Percentage of population with a high school diploma	↑	↑	1 of 5	1 of 10
E-2: Percentage of pop. with post-secondary credentials	↑	→	4 of 5	5 of 10
E-3: 13 year-old student achievement in science	n/a	n/a	4 of 5	5 of 10
13 year-old student achievement in math	n/a	n/a	4 of 5	4 of 10
E-4: Total undergraduate degrees awarded per 100,000	↑	↑	4 of 5	8 of 10
E-5: Total graduate degrees awarded per 100,000	↑	↓	3 of 5	4 of 10
E-6: Undergrad degrees awarded in engineering*	↑	↓	5 of 5	9 of 10
E-7: Undergrad degrees awarded in computer science*	→	↓	2 of 5	3 of 10
E-8: Undergrad degrees awarded in physical & life science*	↑	↓	3 of 5	7 of 10
E-9: Percentage of households with computers	↑	↑	2 of 5	2 of 10
E-10: Percentage of households using the Internet	↑	↑	1 of 5	1 of 10
E-11: Income from technology licenses at G-13 universities†	→	↓	n/a	1 of 13

E-12: Cumulative U.S. patents issued to G-13 universities‡	↓	↓	3 of 4 (Tied)	3 of 5 (Tied)
E-13: University start-up companies formed‡	→	↓	3 of 4 (Tied)	3 of 5 (Tied)
E-14: Higher education performance of R&D (HERD) to GDP	↑	↑	4 of 5	6 of 10
E-15: Per capita grants and awards funded by CIHR	n/a	n/a	4 of 5	4 of 10
E-16: Per capita projects funded by CFI: Health	n/a	n/a	3 of 5	4 of 10
Per capita projects funded by CFI: Nat. Sci. & Eng.	n/a	n/a	3 of 5	6 of 10
E-17: NSERC grant & scholarship expenditures	↑	↓	1 of 5	3 of 10
E-18: Canada Research Chairs	n/a	n/a	3 of 5	3 of 10
BUSINESS SECTOR				
B-1: Patents per 100,000 persons	↑	↓	4 of 5	5 of 10
B-2: Patents granted as a % of applications, 3 year average	↑	↓	4 of 5	8 of 10
B-3: Entries to the high tech sector	→	↓	n/a	n/a
B-4: Exits from the high tech sector	→	↓	n/a	n/a
B-5: High growth high tech companies	↓	↓	n/a	n/a
B-6: Venture capital investment, total#	→	↑	3 of 5	3 of 7
B-7: Venture capital investment: share of Canadian total#	↑	↑	3 of 5	3 of 7
B-8: Venture capital by sector: life sciences#	→	↑	1 of 5	1 of 7
Venture capital by sector: information technology#	↓	↑	3 of 5	3 of 7
B-9: ICT investment as a share of GDP	↑	↑	5 of 5	9 of 10
B-10: Business expenditure on R&D (BERD) to GDP	→	↓	3 of 5	3 of 10
GOVERNMENT SECTOR				
G-1: Personal tax index individual with $80,000 income	↓	↑	2 of 5	2 of 10
G-2: Small business tax rate	↓	→	2 of 5	3 of 10
G-3: Corporate income tax rate	↓	↓	2 of 5	2 of 10
G-4: Government expenditure on R&D (GOVERD) to GDP	↓	↓	5 of 5	10 of 10
G-5: Gross expenditure on R&D (GERD) to GDP	→	↓	3 of 5	4 of 10
EXTERNAL SECTOR				
X-1: Percentage of immigrants with higher education	↑	↓	4 of 5	7 of 10
X-2: Median years of schooling of immigrants	→	↓	4 of 5	7 of 10
X-3: Net inter-provincial migration	↑	↓	1 of 5	1 of 10
X-4: High technology imports	→	↓	n/a	n/a
LABOUR				
L-1: Unemployment rate for natural and applied sciences	→	↑	5 of 5	7 of 10
L-2: Research personnel per 100,000 population	↑	↑	3 of 5	3 of 10
L-3: Quality of life, Vancouver∞	→	→	n/a	4 of 235
L-4: Cost of living×	↓	→	n/a	3 of 6

* The tables for these indicators are split into part (a) for Undergraduate degrees and part (b) for Graduate degrees. Data for degree area of engineering include architecture, engineering and related technologies; data for degree area of computer science include mathematics, computer and information sciences. Ranking is measured on a per capita (per 100,000 persons) basis.
† The ranking compares UBC to all G-13 universities.
‡ These indicators are a sum of the G-13 universities. The ranking is out of 5 because only five provinces have G-13 universities. Since Manitoba has no G-13 universities, the ranking for the designated provinces is out of 4.
# The overall ranking is out of 7 because the Atlantic Provinces are grouped together as one.
∞ The ranking compares Vancouver to 235 other cities worldwide.
× The ranking compares Vancouver to five other Canadian cities.

Introduction

Although industry has been knowledge- and technology-based throughout history, information as a driver of economic growth has grown dramatically in importance in the last quarter-century. Global and local economies alike are now far more dependent on the production, dissemination and use of knowledge. High technology industries rely heavily on knowledge as a primary input. As such, these industries are obvious starting points for measuring the impact of new knowledge-based technologies on economies.



The first edition of this report, *High Technology Input Indicators: the 1990s,* was released in 2000. The purpose of the report was to monitor the high technology sector from the input side, by measuring and analyzing the production and application of knowledge, and the climate, institutions and funding arrangements that make this knowledge available for the development of the provincial high technology sector. The report has been updated regularly since then, this being the ninth edition.

BACKGROUND

A companion report, *Profile of the British Columbia High Technology Sector,*[5] has been produced annually since 1994. The profile focuses on measures of gross domestic product (GDP), employment, wages and salaries, revenues, establishments, and exports and imports. Such measures could be referred to as the "outputs" of the high technology sector and aim to give a broader overview of where B.C.'s high technology sector has been and where it might be heading.

While there is obvious value in monitoring the output of the high technology sector, information about the processes that give rise to that output are also of key importance, both for potential investors interested in the infrastructure available in the province and for policy-makers that require this data to make informed policy decisions. In fact, the high technology sector and the surrounding infrastructure are a complex system with many players and interactions. Understanding this system is a matter of identifying the various parts and collecting information that shows how these parts behave and interact over time. (See Appendix I for a more detailed description of the high technology system. A list of industries that are included in the high tech sector is available in Appendix II.)

Information on the high technology system can help shed light on the best ways to foster growth

[5] Available at http://www.bcstats.gov.bc.ca

in the sector, including parts of the system that are only indirectly linked to actual production and often removed from them in time. For example, improvements to the secondary school system may seem very different from output subsidies or tax cuts for high technology firms, but both may have the effect of promoting growth in the high technology sector over the long run. Good information provides policy-makers with the tools to assess the current situation, as well as an indication of where more effort may be needed to provide an environment in which high technology and other knowledge-based industries can thrive.

COMPARISON WITH OTHER JURISDICTIONS

Wherever possible, the indicators selected for this publication use comparisons to other provinces and show the range of what is possible, or what has been achieved, in the high technology sector within a Canadian context. The publication focuses on trends in British Columbia as they compare to those in Alberta, Manitoba, Ontario and Quebec. These five provinces have the largest populations, economies and the most extensive high technology sectors in the country. They are referred to as the "designated provinces" in this report.

THE "QUICK SUMMARY" TABLES

The 41 indicators selected for this publication represent only a fraction of the information base that is available for the high technology sector. However, even this number of indicators measured over time and across provinces poses a challenge. To meet this challenge, this report is first divided according to the four sectors outlined in the model diagram (see Appendix I). One of the inputs, labour, is also covered in a separate section. Each of the five resulting sections covers a number of individual indicators. These indicators are listed on the first page of each section, providing a quick summary. The summary makes use of up, down and horizontal arrows (↑, ↓ or →) to show whether the indicator has risen, dropped or remained relatively stable. The assessment is made with regard to the trend over the span of time for which the indicator is available and for the latest period. With this edition of the Input Indicators report, the summary arrows are colour-coded to indicate positive (green), neutral (yellow) or negative (red) trends. Wherever possible, British Columbia is also ranked against other provinces for each indicator.

Since the arrow indicators show only the direction of change, the summary report gives no indication of the size of changes or their detailed pattern over time. This information is found in the graphs and text included in each section. More comprehensive data tables for each indicator are located in Appendix III.

Some indicators are not available as a time series; however, they provide information that better reveals the big picture with regard to the condition of high technology in British Columbia and in other parts of the country. Although included in the Quick Summary tables for reference purposes, these indicators do not have corresponding arrow symbols, but are instead marked with 'n/a', where comparisons over time or to other regions are not possible.

Educational Indicators

The educational sector provides inputs to high technology firms in three ways:

1. **When individuals acquire skills and knowledge required for product development and production,**
2. **During the commercialization of research performed in the educational sector, and**
3. **Funding and performance in research and development**

The indicators listed below are measures of these roles. Many are presented on a per capita basis (expressed as rates per 100,000 population where per capita figures are quite small), as regional shares of national totals or as a share of gross domestic product (GDP) to allow meaningful comparison with other provinces

TABLE 2: QUICK SUMMARY OF INDICATORS FOR THE EDUCATION SECTOR

INDICATORS	Trend		Ranking	
	Long-Term	Latest Year	Five Desig-nated Provs.	Overall
E-1: Percentage of population with a high school diploma	↑	↑	1 of 5	1 of 10
E-2: Percentage of pop. with post-secondary credentials	↑	→	4 of 5	5 of 10
E-3: 13 year-old student achievement in science	n/a	n/a	4 of 5	5 of 10
13 year-old student achievement in math	n/a	n/a	4 of 5	4 of 10
E-4: Total undergraduate degrees awarded per 100,000	↑	↑	4 of 5	8 of 10
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E-6: Undergrad degrees awarded in engineering*	↑	↓	5 of 5	9 of 10
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E-8: Undergrad degrees awarded in physical & life science*	↑	↓	3 of 5	7 of 10
E-9: Percentage of households with computers	↑	↑	2 of 5	2 of 10
E-10: Percentage of households using the internet	↑	↑	1 of 5	1 of 10
E-11: Income from technology licenses at G-13 universities†	→	↓	n/a	1 of 13
E-12: Cumulative U.S. Patents issued to G-13 universities‡	↓	↓	3 of 4 (Tied)	3 of 5 (Tied)

E-13: University start-up companies formed‡	➔	⬇	3 of 4 (Tied)	3 of 5 (Tied)
E-14: Higher education performance of R&D (HERD) to GDP	⬆	⬆	4 of 5	6 of 10
E-15: Per capita grants and awards funded by CIHR	n/a	n/a	4 of 5	4 of 10
E-16: Per capita projects funded by CFI: Health	n/a	n/a	3 of 5	4 of 10
Per capita projects funded by CFI: Nat. Sci. & Eng.	n/a	n/a	3 of 5	6 of 10
E-17: Per capita NSERC grant & scholarship expenditures	⬆	⬇	1 of 5	3 of 10
E-18: Canada Research Chairs	n/a	n/a	3 of 5	3 of 10

* The tables for these indicators are split into part (a) for undergraduate degrees and part (b) for graduate degrees. Data for degree area of engineering include architecture, engineering and related technologies; data for degree area of computer science include mathematics, computer and information sciences.

† The ranking compares UBC to all G-13 universities.

‡ These indicators are a sum of the G-13 universities. The ranking is out of 5 because only five provinces have G-13 universities.

Historically, British Columbia's general population has had particularly strong educational attainment. Data for the most recent reporting year show that the province continues to boast the highest percentage of its population with a high school education. Despite the high proportion of high school graduates, B.C. exhibits somewhat of a deficiency with respect to the training of new graduates in engineering, computer science, and physical and life sciences. Similarly, the provincial ratio of higher education research and development (R&D) to GDP is low when compared to national standards. Nevertheless, in terms of providing a hospitable landscape for innovation in scientific research, B.C. presents itself relatively favourably.

EDUCATIONAL ATTAINMENT

The indicators understood

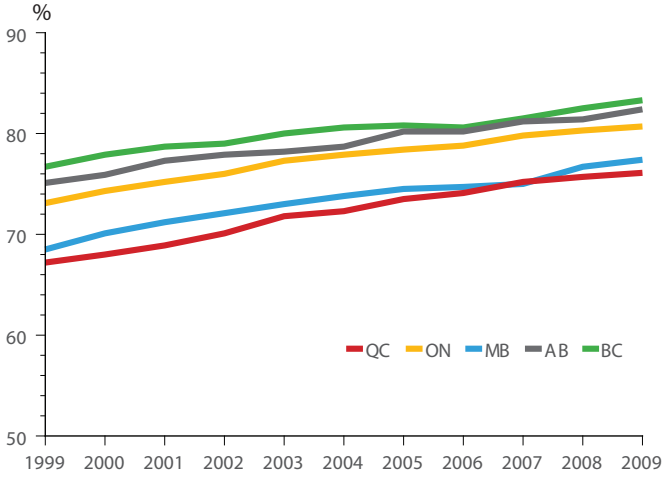
Higher levels of educational attainment enable high technology firms to draw from a broader, more highly-developed skill base. Higher levels of educational attainment also suggest a more knowledgeable population that is better able to understand and participate in the complexity of the high technology economy.

As in other parts of the country, the number of British Columbians that have completed high school and have continued their education by obtaining post-secondary credentials has been on the rise. Four indicators of educational attainment—the percentage of the population aged 15 and older with a high school diploma, the percentage with post-secondary credentials, and the ratios of undergraduate and graduate degrees awarded in the provinces—have all shown steady increases across most of the country in the last ten years.

In 2009, at 83%, B.C. continued to lead the country with the highest percentage of its population having a high school diploma, as it has since at least 1990. In that year, 72% of its population aged 15 and over had graduated from high school, compared to the Canadian average of 64%. However, the gap between B.C. and the other designated provinces is gradually narrowing. In 1990, a full seven percentage points separated British Columbia (72%) and Ontario (65%), and there was an even larger gap between B.C. and Quebec (58%). By 2009, nearly 20 years later, the share of B.C.'s population with a high school diploma was only two percentage points higher than in Ontario (81%), almost six points higher than Manitoba (77%) and seven percentage points higher than Quebec (76%). Alberta also used to lag B.C., but the gap between the two provinces has since tapered, such that Alberta was almost on par with B.C. in 2009.

INDICATOR E-1

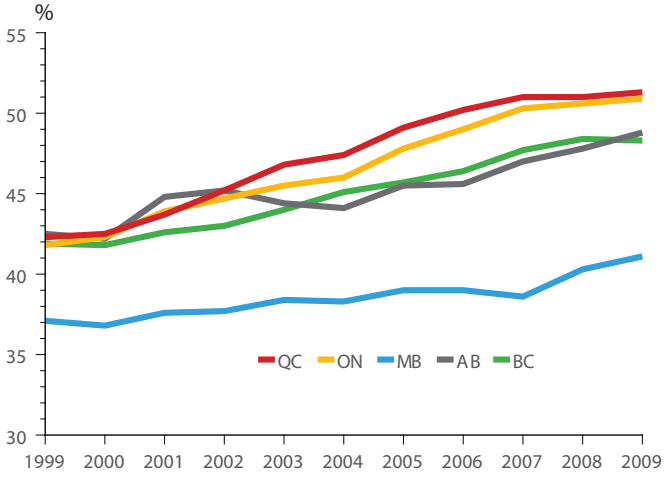
PERCENTAGE OF THE POPULATION 15 YEARS AND OLDER WITH A HIGH SCHOOL DIPLOMA



Data Source: Statistics Canada

INDICATOR E-2

PERCENTAGE OF THE POPULATION 15 YEARS AND OLDER WITH POST-SECONDARY CREDENTIALS



Data Source: Statistics Canada

B.C. leads the country in share of population with a high school diploma

The percentage of B.C.'s population with post-secondary credentials continues to rise

British Columbia has improved its post-secondary achievement over the past decade, though at a somewhat slower pace than some other provinces. Among the five designated provinces, the gaps in proportion of population with post-secondary credentials[6] remain relatively small, but have widened slightly in the period observed. Throughout the 1990s, Alberta consistently had the most post-secondary degrees per capita. In 1999 and 2000, B.C., Alberta, Ontario and Quebec were even, each with 42% of their respective populations having a post-secondary education, while Manitoba (37%) had one of the lowest rates in the country. Since then, B.C.'s rate has remained relatively on par with that of neighbouring Alberta, while both Ontario and Quebec have jumped ahead. Manitoba (41%), on the other hand, continued to score below the rest of the country. In 2009, the disparity between the other designated provinces remained slight, with just over 48% of the adult population in B.C. having post-secondary degrees, compared with somewhat higher percentages for Alberta (just under 49%), Ontario (51%) and Quebec (51%).

[6] The measure of the population with post-secondary credentials includes persons who attended a public or private institution after high school and obtained a certificate, diploma or degree. This measure also includes trade and vocational certificates, and apprenticeship programs. People who have enrolled and quit or who have not yet completed a program are not included.

ACHIEVEMENT ON CANADIAN STANDARDIZED TESTS

The indicator understood

Standardized testing offers a comparable nation-wide measure for the demonstrated skills and knowledge of students of a given age. School programs differ from one part of the country to another, so making comparisons of results from these various programs is a complex task. However, young Canadians in different provinces and territories learn many similar skills in mathematics and science. The School Achievement Indicators Program (SAIP) was a cyclical program of pan-Canadian assessments of student achievement in mathematics, reading and writing, and science that was conducted by the Council of Ministers of Education, Canada (CMEC) between 1993 and 2004. The Pan-Canadian Assessment Program (PCAP) has since replaced SAIP, with its first assessment conducted in the spring of 2007 and the first report released in spring of 2008. PCAP is administered every three years and the second cycle of PCAP was conducted in the spring of 2010. This report will be published in the spring of 2011, too late to be included in this edition. The Pan-Canadian Assessment Program evaluations help to determine whether students across Canada reach similar levels of performance at about the same age. Students' total scores in each subject area are transformed onto a common scale, ranging from 0 to 1000, with the average for the pan-Canadian population set at 500.[7]

For the purposes of PCAP, three competencies are associated with demonstrating scientific literacy: science inquiry, problem solving and decision-making. Each of these competencies requires an understanding of the nature of science, applying relevant scientific knowledge, using skills and demonstrating attitudes as a reflection of scientific literacy.

Mathematics curricula within the various Canadian jurisdictions are similarly structured and based on a number of mathematical processes deemed essential to the effective study of the subject. These generally include problem solving, reasoning and justifying thinking, reflecting, using appropriate tools and computational strategies, making connections within and outside the discipline, representing and communicating mathematically.

INDICATOR E-3 (a)
CANADA-WIDE RANK OF 13 YEAR-OLD ACHIEVEMENT IN SCIENCE (MEAN SCORES)

	2007	2007 rank
New Brunswick	564	1
Alberta	524	2
Quebec	511	3
Ontario	499	4
British Columbia	488	5
Newfoundland and Labrador	485	6
Nova Scotia	480	7
Saskatchewan	480	7
Manitoba	476	9
Prince Edward Island	464	10
Canada	500	n/a

Source: Council of Ministers of Education, Canada

B.C.'s young people rank fifth in the country in achievement in science

[7] Since this is a new assessment program, 2007 is the only reporting year for which data has been released to date. Also, the only age-group measured thus far is 13 year-old students. As a result, the scores reflect a mere snapshot of the provincial standing in standardized tests. It remains to be seen, as the program progresses and further data are collected, how the provinces fare in terms of improvements or changes on a comparative and time-series basis.

In 2007, the mean scores in science for students in Alberta (524) and Quebec (511) were much higher than those obtained by Canadian students overall (500). With a mean score of 488, B.C. students did not fare as well. Thirteen year-old students in Ontario (499) also scored under the Canadian average, though the mean was still more than 10 points higher than that of British Columbia. In terms of provincial ranking, British Columbian students were positioned fifth among the 10 provinces, directly behind Ontario. British Columbia's students fared slightly better in science achievement tests than in mathematics.

In 2007, the designated provinces took the top five places nation-wide in student achievement in mathematics. Students in Quebec ranked first among the regions, with a mean score of 517, followed by Ontario (506). British Columbian students ranked fourth (484), 15 points behind third place Alberta (499), but ahead of Manitoba (479). Despite their low ranking among the designated provinces, 13 year-old students in B.C. recorded an average mean higher than that of their counterparts in all the remaining provinces.

INDICATOR E-3 (b)
CANADA-WIDE RANK OF 13 YEAR-OLD ACHIEVEMENT IN MATHEMATICS (MEAN SCORES)

	2007	2007 rank
Quebec	517	1
Ontario	506	2
Alberta	499	3
British Columbia	484	4
Manitoba	479	5
Newfoundland and Labrador	478	6
New Brunswick	461	7
Saskatchewan	461	7
Nova Scotia	457	9
Prince Edward Island	450	10
Canada	500	n/a

Source: Council of Ministers of Education, Canada

B.C. students rank fourth in the country in mathematical achievement

DEGREES AWARDED

The indicator understood

In a healthy economy, local industry provides jobs and the community provides the workforce to sustain the growth of the economy. Jobs in the high technology industry require specialized skills training. The number of degrees awarded within a given population is directly indicative of the potential human resources available to the province. Focusing on the degrees awarded on a per capita basis provides some indication of the overall education level of the province and the ability of the high tech sector to use these educated individuals. It is equally important to acknowledge the number of degrees awarded in absolute numbers. This is an indicator of the size of the domestic labour pool available from which high technology firms can draw and, ultimately, whether a province has sufficient qualified people to support an industry. Engineers, computer and information scientists, and physical and life scientists are driving forces behind the high technology sector. They provide a highly specialized form of labour that is integral to research and development. Looking at how well B.C.'s universities are doing to meet workforce demand and the interest in technology-related careers provides some measure of the province's capacity to supply the high tech economy. The geographical availability of people trained in these fields lowers the search costs for firms that demand these skills. Furthermore, individuals educated in such fields are often engaged in the design and integration of new technologies into a firm's business model.

The likely presence of skilled and educated professionals in a high technology economy is indicated by the number of graduates per 100,000 persons aged 15 years and older who hold undergraduate and graduate degrees. For these indicators, British Columbia continues to rank below the Canadian average.[8]

While the actual number of undergraduate degrees granted has generally been rising in B.C. over the past ten years, the province has consistently remained the lowest of the designated provinces in terms of degrees granted per 100,000 persons. However, in 2008 (the latest year for which data are available), the number of undergraduate degrees awarded in B.C. per 100,000 people (551) was up substantially from 2007 (537). This was due, in part, to the upgrading of several institutions to university status.[9] Meanwhile, Manitoba (663) also recorded a significant rise, but Alberta (506), Ontario (768) and Quebec (743) all posted decreases.

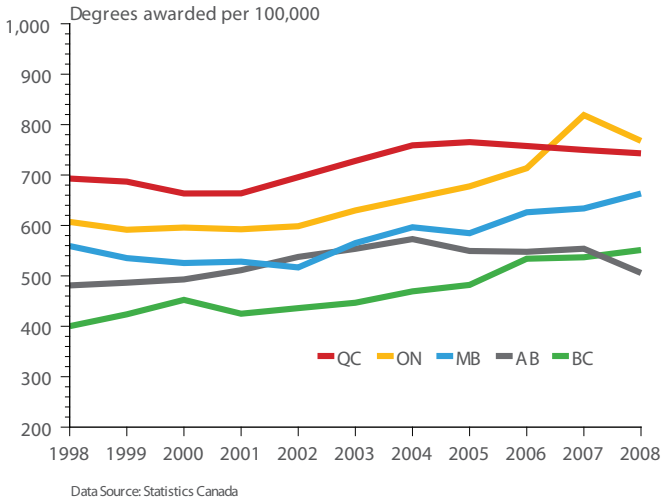
As a result, B.C. managed to surpass Alberta for the first time on record, but remained a fair distance behind Ontario, Quebec and Manitoba. B.C. also fares well in absolute terms, awarding the third highest number of degrees in the country. In 2008, universities in the province granted 20,385 undergraduate degrees, compared to 14,823 in neighbouring Alberta.

[8] It is important to note that measuring the number of degrees awarded by British Columbia's institutions does not only measure degrees awarded to British Columbians. As such, this is not a perfect measure of the overall educational level of the population of British Columbia. Given the fact that students travel to various locations to pursue a post-secondary education, it is extremely difficult to measure how many British Columbians acquire a specific degree in a given year, and it is not feasible to know whether they return to B.C. after completing a degree elsewhere. Nonetheless, much of the student-body who attend the province's universities are, in fact, permanent residents of B.C. and the number of degrees granted by B.C.'s institutions is a direct indicator of the expertise of the labour pool available to the high technology sector regardless of where a student comes from. The number of degrees granted in B.C. is also an indicator of the appeal of the province's higher-education institutes and how many students from other provinces and around the world choose to pursue an education in British Columbia. Using a per capita calculation is a better gauge of B.C.'s performance in degree granting relative to other provinces.

[9] The following institutions, previously colleges, now have the status of universities and are included in the 2008 counts for British Columbia: Capilano University, Vancouver Island University, Emily Carr University of Art and Design, Kwantlen Polytechnic University and University of the Fraser Valley.

INDICATOR E-4

TOTAL UNDERGRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER



Data Source: Statistics Canada

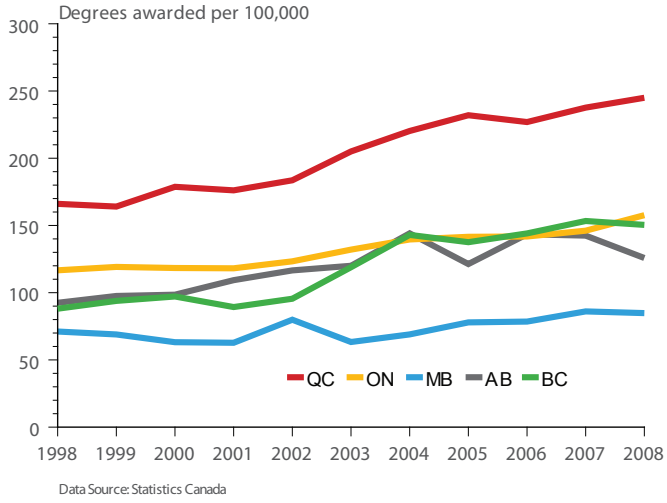
In 2008, B.C. surpassed Alberta for the first time on record, awarding more undergraduate degrees per capita

British Columbia has also seen a rise in the actual number of graduate degrees granted in recent years, with 2008 marking the third consecutive year of increases. In 2008 (the latest year for which data are available), the province's institutions awarded 5,562 graduate degrees, up slightly from 5,556 in 2007. Quebec and Ontario also awarded more masters' and doctorates in 2008, while Alberta and Manitoba saw numbers decline. The number of masters' and doctorates awarded in B.C. has experienced strong growth over the past ten years, up more than 2,700 between 1998 and 2008. This steady increase has allowed B.C. to retain a third place ranking among the designated provinces, well ahead of Alberta (3,687 in 2008) and Manitoba (828).

In terms of graduate degrees awarded per capita, Nova Scotia (260 degrees per 100,000 persons) soared above the rest of the country in 2008. Among the designated provinces, Quebec (245) remained the leader, while Ontario (158) also reported numbers higher than in B.C. (150), Alberta (126) and Manitoba (85). Despite retaining its overall standing in 2008, B.C. recorded a decline (-1.9%) in the number of graduate degrees awarded per 100,000 population, as did Manitoba (-1.5%) and Alberta (-11.7%).

INDICATOR E-5

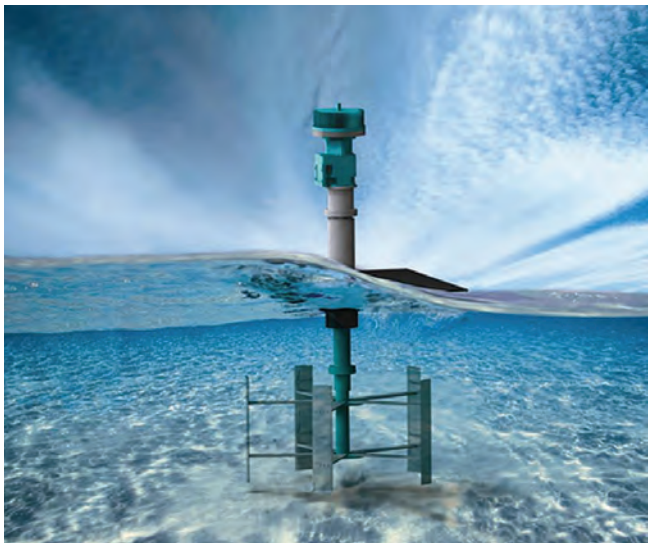
TOTAL GRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER



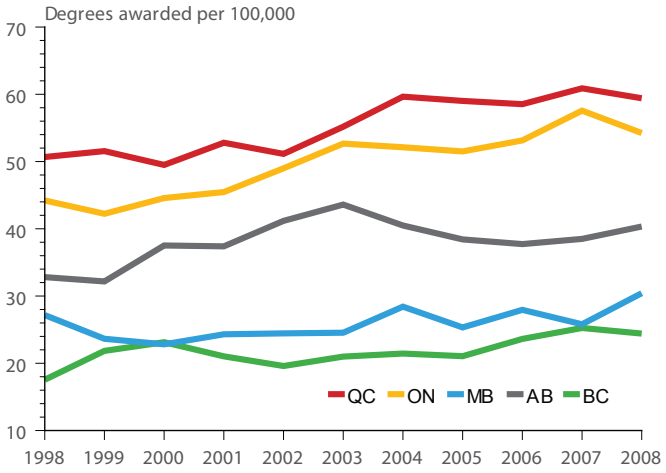
Data Source: Statistics Canada

The actual number of graduate degrees awarded per year in B.C. increased by 2,700 over the past decade

Among specific disciplines, British Columbia tends to lag other designated provinces in the number of undergraduate and graduate degrees awarded per year. In 2008, on a per capita basis, the province ranked last among the designated provinces in number of both graduate and undergraduate degrees awarded to students of architecture, engineering and related technology. However, in actual numbers, the province has seen a noteworthy increase in graduates (of all levels) from this field over the past decade.



INDICATOR E-6
UNDERGRADUATE DEGREES AWARDED IN ARCHITECTURE, ENGINEERING AND RELATED TECHNOLOGY PER 100,000 PERSONS AGED 15 AND OLDER



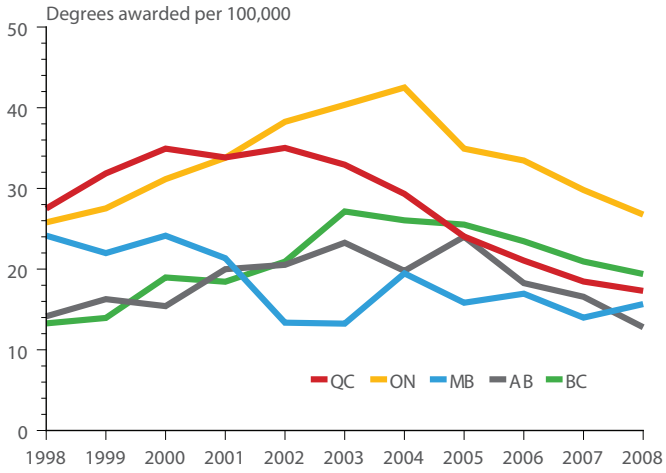
Data Source: Statistics Canada

B.C. remains last among the designated provinces in architecture and engineering degrees awarded per capita

The province fares slightly better in terms of the number of undergraduate degrees awarded in the area of mathematics, computer and information science. British Columbia's ratio (degrees per 100,000 population) is much higher than it was a decade ago and, since surpassing Alberta and Manitoba in 2002 and then Quebec in 2005, continues to rank second among the designated provinces. However, the province has seen rates slip in recent years and, in 2008 (19.4 per 100,000 persons), sat slightly below the Canadian average (20.6) for this indicator.

In terms of graduate degrees awarded per 100,000 persons in this field of study, B.C. (7.1 in 2008) ranks fourth among the designated provinces.

INDICATOR E-7
UNDERGRADUATE DEGREES AWARDED IN MATHEMATICS, COMPUTER AND INFORMATION SCIENCE PER 100,000 PERSONS AGED 15 YEARS AND OLDER



Data Source: Statistics Canada

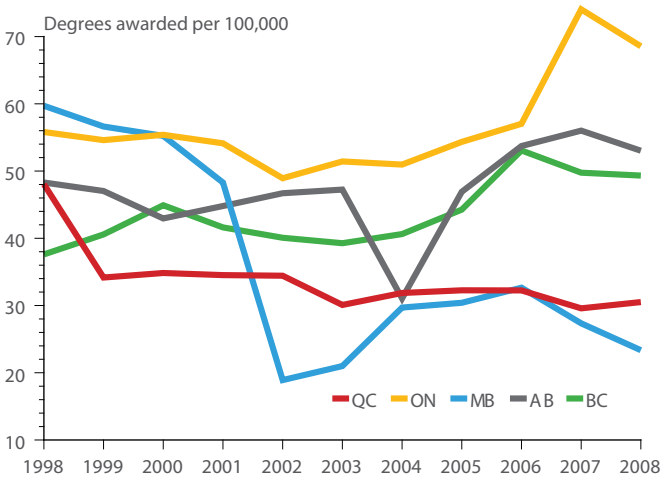
While performance across all provinces is in a decline, B.C. ranks second among the designated provinces in undergraduate degrees awarded per capita in math, computer and information sciences

In 2008, at 49.3 per 100,000 persons, the number of British Columbians granted an undergraduate degree in the area of physical and life sciences and technologies also fell short of the Canadian average (52.7). However, B.C. has ranked third among the designated provinces since 2002 when it overtook Manitoba.

In the same year, B.C. awarded 11.4 graduate degrees per 100,000 persons in physical and life sciences and technologies, also below the Canadian average (14.5).

INDICATOR E-8

UNDERGRADUATE DEGREES AWARDED IN PHYSICAL AND LIFE SCIENCES AND TECHNOLOGIES PER 100,000 PERSONS AGED 15 YEARS AND OLDER



Data Source: Statistics Canada

Per capita degrees awarded annually in physical and life sciences and technologies fluctuate significantly in most provinces

TECHNOLOGY ADOPTION

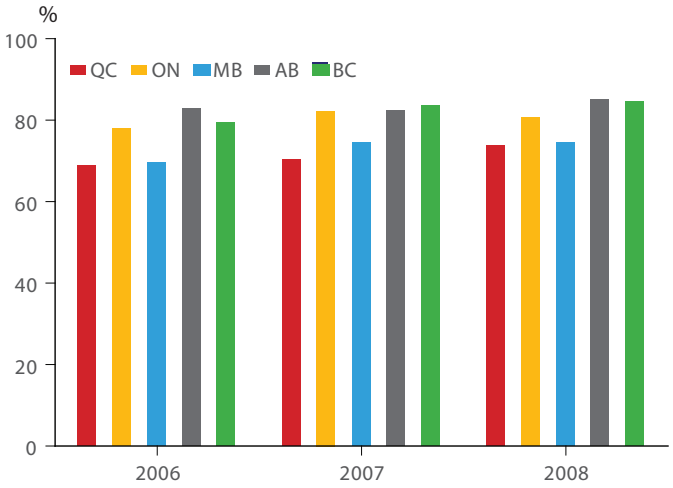
Why are these indicators important?

The rate of technology adoption is an indicator of the willingness of the population to employ the advantages afforded by high technology. High technology businesses are attracted to locations where the population tends toward higher rates of technology adoption. Greater familiarity with technology—for example, computer literacy—is likely to strengthen local market demand for high tech goods and services. Also, the acceptance of Internet and e-business technologies means small businesses can reach a world-wide market, reduce the time and cost per transaction and eliminate much of the capital investment required in typical operations.

With increased globalization, and the rising popularity of new and innovative forms of communication, Canadians continue to make greater use of new information technologies at home and in the workplace. For instance, households in every province across the country have recorded significant increases in the use of personal computers. In 2008 (the latest year for which data are available), well over three quarters (79%) of the nation's homes reported having a home computer, up from a mere 45% in 1998. The prevalence of home computers in B.C. has historically been among the highest in the country. This held true in 2008, when 85% of the province's households had computers. This was slightly behind Alberta (86%) but well ahead of Ontario (81%), Manitoba (75%), Quebec (74%) and every other province in the country.

INDICATOR E-9

PERCENTAGE OF HOUSEHOLDS WITH HOME COMPUTERS



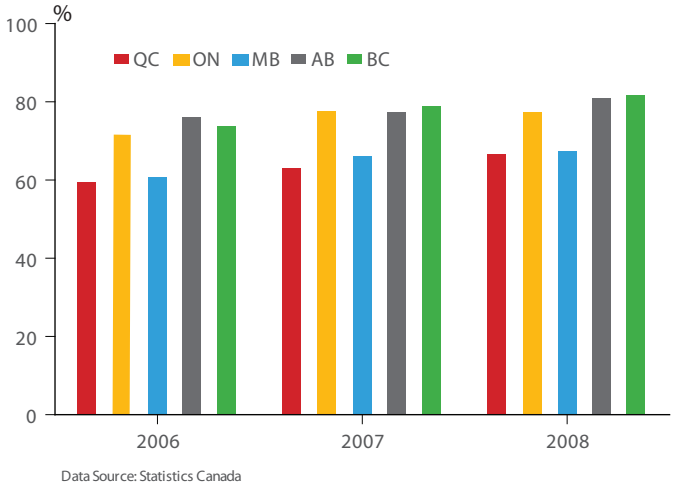
Data Source: Statistics Canada

The westernmost provinces appear to have a larger share of households with home computers

British Columbia also has a higher than average share of households with Internet access from home. In 2008, 82% of households in B.C. had online connections, an 11 percent jump from just three years prior (71% in 2005) and well above the Canadian average (75% in 2008). Although the percentage of people using the Internet is comparatively low in Quebec (67%), this province also had the highest growth rate for this measure among the designated provinces.

INDICATOR E-10

PERCENTAGE OF HOUSEHOLDS WITH INTERNET ACCESS FROM HOME



Data Source: Statistics Canada

Households in B.C. are the most likely in the country to have in-home internet connections

TECHNOLOGY LICENSING

Why are these indicators important?

University faculty members are at the forefront of research and their work often involves partnerships with the private sector for either expertise or equipment. This collaboration has many outcomes, including grants, contribution agreements and negotiated contracts whereby the institution and the researcher share in the payoffs. One way of measuring successful collaboration and research productivity is through university technology licenses. These licenses allow the institution to 'spin-off' the commercial aspect of the researcher's discovery, which provides income. Looking at the income per license provides a picture of the commercial success of the research. The number of U.S. patents issued to Canadian institutions and the creation of university start-up companies are also important indicators of future revenues.[10]

In the mid-1980s, universities across Canada began opening industry liaison offices. Primarily, these offices are responsible for negotiating research and development collaborations with businesses and public and private organizations. They also work to ensure the protection of research work developed at the university, especially that with commercial potential. The University of Toronto's office opened in 1980; the University of British Columbia's (UBC) University-Industry Liaison Office (UILO) opened in 1985; the UILO of Université de Sherbrooke opened its doors in 1986; and the University of Alberta office opened in 1987. These offices work with industry to spin-off technology developed at the university into successful start-up companies.

Due in part to the volatile nature of innovative research, there has been a great deal of shuffling of ranks among Canada's major G-13 (formerly G-10)[11] universities over the past decade. However, B.C.'s largest university has pulled in more income from technology licensing than any other university in the country for seven straight reporting years. With a gross income of nearly $6.6 million from technology licences in 2008 (the latest year for which data are available), UBC remains ahead of the country's top research universities in technology licensing. The University of Calgary, which has shown notable increases in recent years, was ranked second, with $5.0 million in income from technology licensing, followed by the University of Western Ontario ($4.0 million).

In 2008, the University of British Columbia also led other universities in the number of licenses received, but lost out to the University of Western Ontario in terms of the average gross income per technology license. Despite

[10] As a caution, one must keep in mind that a key purpose of universities is to conduct "primary" research—work that does not have any immediate commercial application. This work, when successful, becomes the foundation of further applied research and development. A good example is the Human Genome Project, which recently completed mapping out the genetic structure of the human being. Thus, licensing only provides a partial view of the importance of university research in the high tech sector.

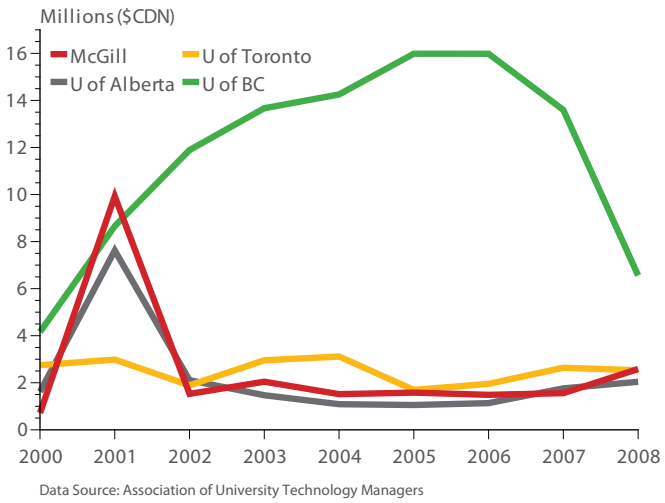
[11] G-13 Universities are the leading research universities in Canada and originally included: University of British Columbia (B.C.), University of Alberta (Alberta), University of Toronto (Ontario), Queens University (Ontario), University of Waterloo (Ontario), McMaster University (Ontario), University of Western Ontario (Ontario), Université de Montréal (Quebec), McGill University (Quebec), and Université Laval (Quebec). As of April 2006, three more universities were added to the group, expanding it from 10 institutions to 13. The three universities added were: University of Calgary, Dalhousie University and University of Ottawa. The data for these and some other universities do not go back as far as the original 10. Note also that there are some other Canadian institutions that are highly active in technology research, but are not members of the G-13 group and, as such, are not included in this analysis.

UBC's number one standing, it yielded substantially less income from licenses and options than it had in the previous year ($13.6 million in 2007). However, this drop-off was not unique to UBC as a similar pattern was seen in many of the nation's institutions.

Licensing income may have been negatively impacted by the beginning of the economic slowdown, as well as the appreciation of the Canadian dollar against its American counterpart. The revenue associated with many of the licenses entered into by participant institutions are calculated and paid in U.S. dollars.

B.C.'s Simon Fraser University (SFU) and the University of Victoria (UVic), though not classified as G-13 universities, have shown great promise in technology licensing, particularly given the economic obstacles encountered in 2008. Despite the downward trend among the country's top universities in 2008, both institutions recorded notable increases in income from technology licensing. SFU received a gross income of $339,000 from its licenses and options, up 14.0% from $297,000 in 2007, while UVic received $328,000, more than double (+105.8%) the previous year's return ($160,000 in 2007). SFU yielded an average of $67,800 per technology license in 2008, slightly higher than UVic's average ($46,900).

INDICATOR E-11
GROSS INCOME FROM TECHNOLOGY LICENSES (IN MILLIONS OF $CDN) AT TOP-PERFORMING G-13 UNIVERSITY IN EACH DESIGNATED PROVINCE



Data Source: Association of University Technology Managers

Licensing income has decreased at UBC, but remains well above other leading Canadian institutions

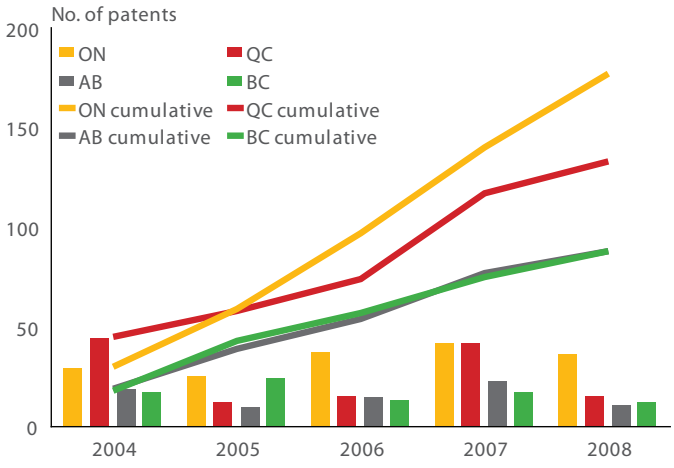
Over the past decade, B.C. has consistently had strong results in terms of the number of U.S. patents awarded to its top institution (UBC). In 1999, UBC was issued 50 U.S. patents, surpassing the total for Ontario's five G-13 (G-10 at the time) universities combined. In the decade that followed, the number of patents awarded to UBC has gradually returned to a more modest number, but it remains among the top players in the country. Acquiring a cumulative 88 patents between 2004 and 2008, B.C. ranked third (tied with Alberta) among the designated provinces in terms of the number of patents granted to G-13 universities in the last five reporting years. Over the same period, Ontario (177) led the pack, followed by Quebec (133).

When one considers that B.C. is home to only one of Canada's G-13 universities, whereas Quebec and Ontario each house several and Alberta is home to two, the number of patents issued in the province is even more impressive. In fact, on an individual institution basis, UBC (88) was first among all Canadian institutions in cumulative patents awarded between 2004 and 2008. As these patented discoveries are developed, so too is the potential for technology licenses that should translate into higher revenues for B.C. in future years.

Beyond national borders, UBC has been gaining ground on some U.S. institutions in patent acquisitions. The 13 U.S. patents issued to B.C.'s top research university in 2008 matched the number granted to five American universities—Dartmouth, Mount Sinai School of Medicine at NYU, Oregon Health and Science University, University of Maryland, Baltimore and the University of Nebraska. Of the 155 U.S. universities included in the survey, only 58 were ranked higher than UBC, with three universities acquiring in excess of 100 patents in 2008. The University of California System was awarded 224 patents, followed by Massachusetts Institute of Technology (140) and Stanford University (132). Following these three institutions, the number of patents issued to American universities drops off significantly, such that the number of patents issued to UBC exceeded that of nearly 100 other U.S. universities surveyed.

INDICATOR E-12

U.S. PATENTS ISSUED TO SELECTED INSTITUTIONS, ACTUAL AND CUMULATIVE [12]

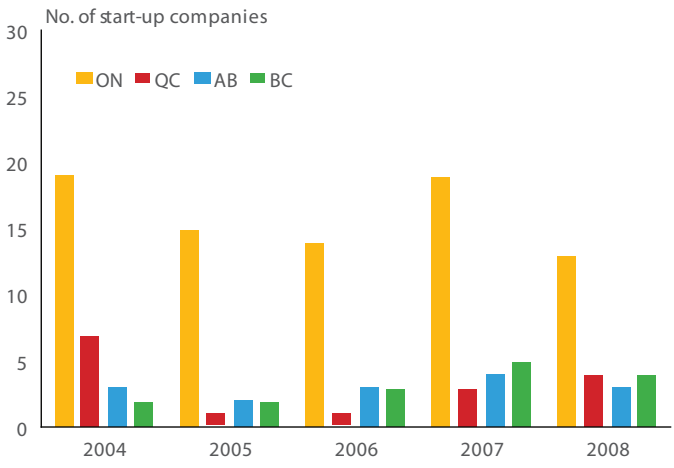


Data Source: Association of University Technology Managers

B.C. is on par with Alberta in cumulative patents awarded between 2004 and 2008

INDICATOR E-13

UNIVERSITY START-UP COMPANIES FORMED BY SELECTED INSTITUTIONS, BY PROVINCE [14]



Data Source: Association of University Technology Managers

In 2008, B.C.'s single G-13 university formed the same number of start-up companies as Quebec's three G-13 universities combined

Academic discovery can fuel the formation of new and innovative businesses. Start-up companies[13] are a major part of the innovation process and their activity is a significant component of the technology licensing process. In 2008, Canada's G-13 universities formed 25 new companies based on academic discovery.

In 2008, with four new start-up companies, the University of British Columbia was behind only two other universities. The University of Toronto ranked first with seven start-ups, followed by the University of Ottawa, which formed five start-up companies in that year. Most institutions saw a decline in numbers from 2007, including UBC (down from five start-ups in 2007).

PERFORMANCE OF R&D BY THE HIGHER EDUCATION SECTOR

Why is this indicator important?

Research and development at universities contribute to high technology's impact on the economy in two ways. Published academic research is available to the public so that it can be used as a resource. Universities are also increasing partnerships with industry to bring the products and processes of R&D to market (see 'Technology Licensing'). The ratio of R&D performed by the higher education sector (HERD) to gross domestic product (GDP) is an indicator of the proportional investment in R&D by this sector relative to the size of the overall economy. A higher proportion of investment is likely to lead to higher rates of discovery.

[12] Data include all G-13 universities from each respective designated province. Note that Manitoba has no G-13 institution and the province is therefore not represented in this data.

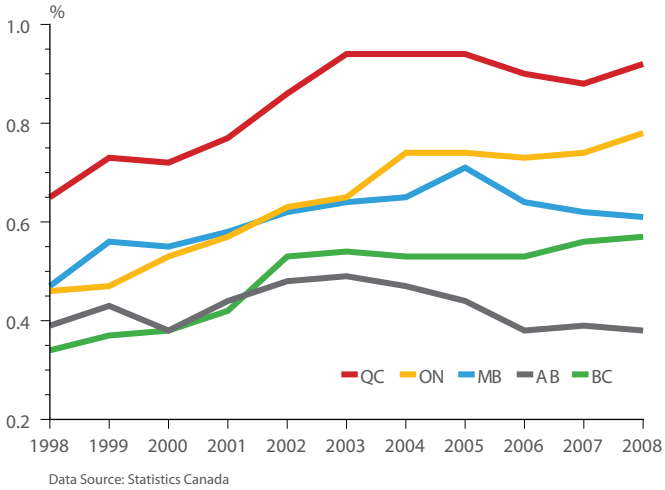
[13] The Association of University Technology Managers' (AUTM) definition for start-up activity relates specifically to a company formed solely around the licensing of technology into a newly formed company. Some new ventures that stem from Canada's institutions are not captured by this definition but are perhaps equally as fundamental to the financial and economic development of the institution as well as the economic region.

[14] See note 12.

In 2008 (the latest year for which data are available), the higher education sector in Canada performed more than $11.1 billion worth of R&D, up from $10.4 billion in 2007. The total in 2008 amounted to 0.7% of Canada's GDP in that year, unchanged from six years prior (0.7% in 2002).

In 2008, of the designated provinces, the ratio of HERD to provincial GDP was highest in Quebec (0.9%) and lowest in Alberta (0.4%). Ontario held on to its second place rank (0.8%) and Manitoba ranked third (slightly over 0.6%), while B.C.'s ratio increased to just under 0.6% ($1.1 billion) to rank fourth for the seventh consecutive year. Relative to the size of the economy, higher education R&D has been trending upwards in B.C. since 1997.

INDICATOR E-14
RATIO OF HIGHER EDUCATION PERFORMANCE OF R&D TO GDP



Data Source: Statistics Canada

B.C.'s ratio of higher education R&D to GDP remains well above that of Alberta, but trails the other designated provinces

RESEARCH FUNDING

The indicators explained

Funding for research in high technology industries not only supports current research within the economy, it also plays an integral role in attracting new researchers and encouraging a more innovative landscape. Funding is crucial in order to enhance Canada's reputation as a destination of choice for researchers and to make universities even more competitive in attracting prominent and competent researchers from around the world. Measurements of overall research funding for sectors pertaining to the scientific community and the distribution of the nation's Research Chairs are good indicators of the attractiveness of B.C.'s research environment.

In 2000, the Government of Canada created a new permanent program to establish 2,000 research professorships —Canada Research Chairs (CRC)—in universities across the country. The Canada Research Chairs Program invests $300 million each year to assist universities in recruiting and retaining the most brilliant and promising scientists and researchers, helping these institutions become global leaders in the fields of advanced science and technology. Chairholders aim to achieve research excellence in engineering and the natural sciences, health sciences, humanities and social sciences. The Chairs Program imposes no restrictions on nominees with regard to nationality or country of residence, and as such, many foreign researchers are taking up chairs in Canada, including in British Columbia. The Canada Research Chairs Program offers eligible Canadian degree-granting institutions the opportunity to nominate outstanding researchers for senior professorships in areas that will further the institution's overall research priorities and enable them to maximize their contributions as centres of research and research training.

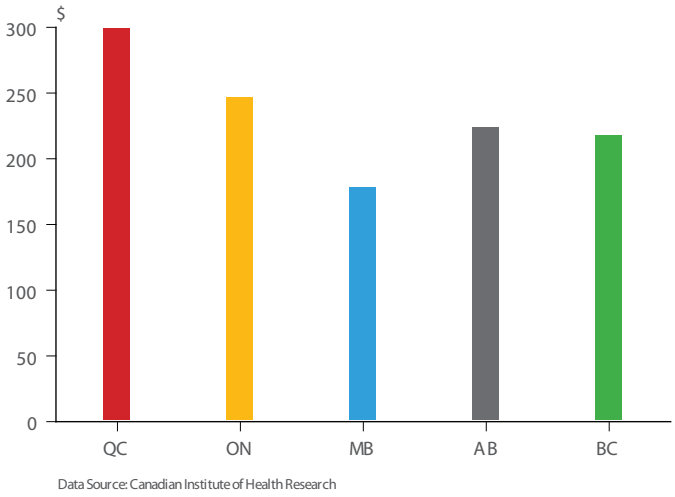
The CRC's Steering Committee includes several organizations that operate separately from the CRC, but which fund research undertaken by chairholders. These organizations are integral to the CRC program. The Canadian Institutes of Health Research (CIHR), the Canadian Foundation for Innovation (CFI), and the Natural Sciences and Engineering Research Council of Canada (NSERC) are among those groups that oversee and contribute to the CRC program.

CIHR is the major federal agency responsible for funding health research in Canada; NSERC is the national instrument for making strategic investments in Canada's capability in science and technology; and CFI is an independent corporation established by the Government of Canada to strengthen national research capability through investments in research infrastructure in Canadian universities, colleges, hospitals and eligible not-for-profit organizations.

Measures of funding for research and skill development in the public and private sectors are direct indicators of the strength and sustainability of a province's research and development status. British Columbia's institutions have consistently received substantial funding from government and arms length organizations for research conducted at its academic institutions. The province receives above average funding in some research areas, while others leave room for improvement.

Since 2000, up to and including the 2010/11 funding year, the province's researchers have received nearly 3,800 grants and awards from the Canadian Institutes of Health Research (CIHR). Combined, these awards amounted to $990 million in funding. On a per capita basis, Quebec ($299) receives the most funding, followed by Ontario ($247). With $218 per capita in funding, B.C. receives substantially more than Manitoba ($178), but slightly less than neighbouring Alberta ($224). Grants and awards acquired in British Columbia averaged nearly $262,000 per award, slightly below the national average of just under $269,500. The largest average awards were granted to institutions in Ontario ($285,000), followed by Alberta ($278,000) and Quebec ($273,000).

INDICATOR E-15
PER CAPITA FUNDING OF CIHR GRANTS AND AWARDS, CUMULATIVE UP TO 2010/11[15]



Data Source: Canadian Institute of Health Research

Over the 11-year period, Quebec has the highest per capita funding from CIHR grants and awards

[15] Cumulative funding since program inception (2000) up to and including fiscal year 2010/11. Per capita totals are calculated using population data as at July 1st, 2010.

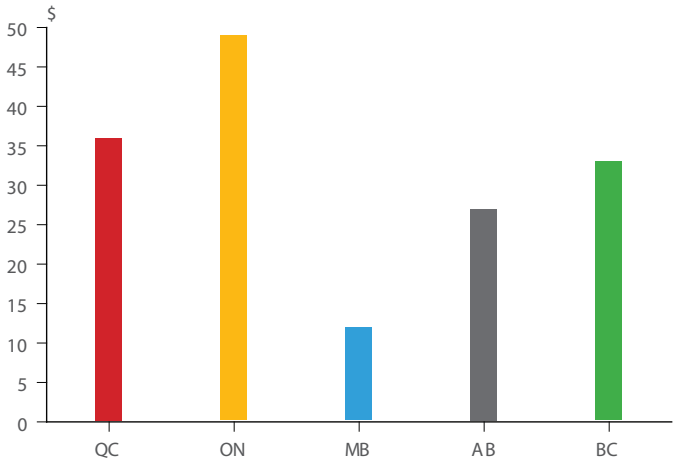
Funding for projects in the technologically-specific research sectors of health science and natural sciences and engineering in B.C. differs significantly. As of 2010/11, the Canadian Foundation for Innovation (CFI) has funded a cumulative 1,248 health science research projects among Canada's institutes, totaling close to $1.3 billion. B.C. was the recipient of funding for 146 of these projects, receiving a total of $149 million (12% of the national funding in this research sector). The average funding per project was $1.0 million in B.C., ranking third among the provinces, after Ontario and Saskatchewan, and slightly above the national average.

Per capita, B.C. ($33) ranked a solid third among the designated provinces, receiving less than Quebec ($36) and Ontario ($49), but more than both Alberta ($27) and Manitoba ($12).

Over the same period, the CFI funded a total of 4,639 projects in the natural sciences and engineering research sector across the country, amounting to more than $2 billion in funds. Although this research sector generally receives funding for more projects, the average per-project rate is well below that for projects in the health science sector. While Ontario receives the largest share, Saskatchewan earns by far the highest average funding ($622,800 per project) for natural science and engineering research, well above the national average ($458,600). B.C. institutions were the recipients of nearly $250 million of this funding (572 projects), 12% of the overall resources.

In terms of dollars per capita, funding received in B.C. translates to about $55, on par with Alberta ($55) and well ahead of Manitoba ($33). Meanwhile, Quebec ($68) and Ontario ($64) had notably higher per capita award amounts in natural sciences and engineering.

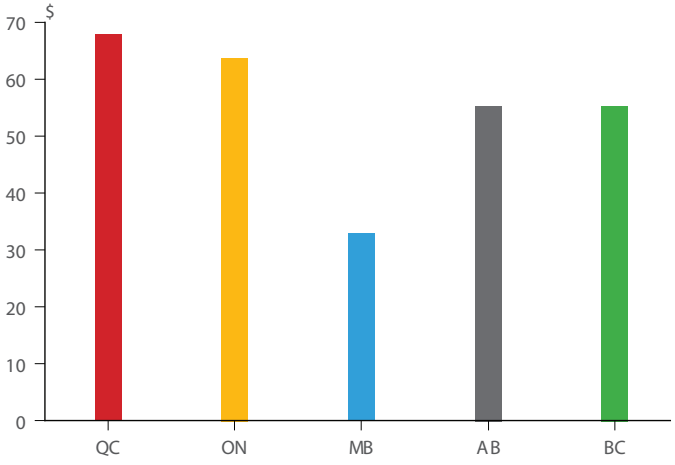
INDICATOR E-16 (a)
PER CAPITA CFI FUNDING FOR HEALTH RESEARCH, CUMULATIVE TO 2010/11[16]



Data Source: Canadian Foundation for Innovation

B.C. ranks third among the designated provinces in average CFI funding for health research

INDICATOR E-16 (b)
PER CAPITA CFI FUNDING FOR NATURAL SCIENCES AND ENGINEERING RESEARCH, CUMULATIVE TO 2010/11[17]



Data Source: Canadian Foundation for Innovation

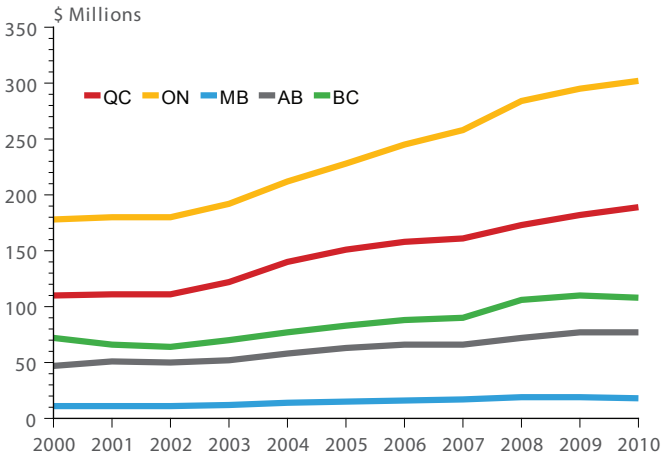
Of the designated provinces, Quebec receives the highest per capita funding for natural sciences and engineering research

[16] Cumulative funding since program onset (1997) up to and including fiscal year 2010/11. Per capita totals are calculated using population data as at July 1st, 2010.

[17] See note 16.

In 2009/10, the National Sciences and Engineering Research Council of Canada (NSERC) recorded $782 million in expenditures on grants and scholarships nationally, an increase of 2.2% over the previous year. Funding for most provinces has climbed steadily over the last several years. In 2009/10, Canada's two largest provinces received nearly two-thirds of overall funding (a combined 63% or $491 million). In the same year, B.C. was the recipient of more than $108 million (14% of the national total) and an impressive $24 per capita in funding from the NSERC. Although down slightly from the previous year (-1.2% from $110 million in 2008/09), this was substantially more than Alberta ($77 million, or $21 per capita) and Manitoba ($18.5 million, or $15 per capita). In 2009/10, B.C. was also ahead of Ontario ($23) and tied with Quebec ($24) in NERSC scholarship funding received per capita.

INDICATOR E-17
GROWTH IN NSERC-FUNDED GRANTS AND SCHOLARSHIPS, 1999/2000 TO 2009/2010



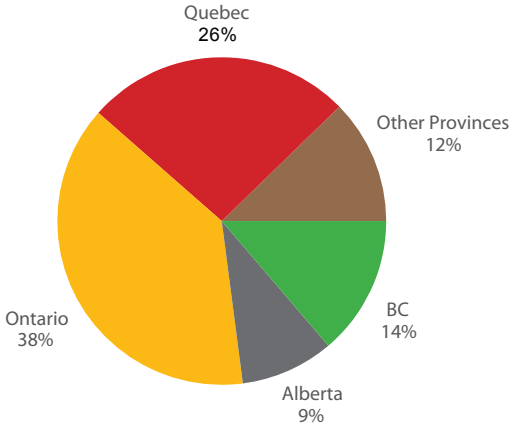
Data Source: The Natural Sciences and Engineering Research Council of Canada

NSERC-funded grants and scholarships have levelled off in B.C.

The Canada Research Chairs (CRC) Program and its committees maintain high standards of excellence for appointees and, as such, the ability to fill the Chairs is a direct indicator of the attractiveness of the province's research environment. In 2010, B.C. institutions were home to 255 of the 1,842 research chairs currently in place at Canadian universities. This accounts for 14% of the nation's chairs, more than the combined shares of Atlantic Canada, Saskatchewan and Manitoba.

Across the country, 29% of CRCs (543) have been recruited from outside Canada. Of the Chairs operating in British Columbia's institutions, 120 (47%) are from outside of Canada, including 57 expatriates and 63 international recruits. The province is above the national average in the number of female chairholders, with over a quarter (27%) fitting this description. Nation-wide, 25% of chairholders are women, with the highest proportion found in Newfoundland and Labrador (36%) and Saskatchewan (31%).

INDICATOR E-18
DISTRIBUTION OF CANADA RESEARCH CHAIRS, 2010



Data Source: Canada Research Chairs Program

B.C. is home to more Canada Research Chairs than Saskatchewan, Manitoba and the Atlantic provinces combined

Business Indicators

This set of indicators is concerned with the stimulus to business formation and growth that comes from internal research and development, patenting and venture capital. It also measures results that are in part due to these stimuli, in the form of establishment entries and exits, high growth companies, and the overall growth in the number of businesses.

Compared to other provinces, British Columbia scores above average in venture capital investment, but lags in some other business stimulus indicators, such as patents granted and ICT investment.

TABLE 3: QUICK SUMMARY OF INDICATORS FOR THE BUSINESS SECTOR

INDICATORS	Trend		Ranking	
	Long-Term	Latest Year	Five Desig-nated Provs.	Overall
B-1: Patents per 100,000 persons	↑	↓	4 of 5	5 of 10
B-2: Patents granted as a % of applications, 3 year average	↑	↓	4 of 5	8 of 10
B-3: Entries to the high tech sector	→	↓	n/a	n/a
B-4: Exits from the high tech sector	→	↑	n/a	n/a
B-5: High growth high tech companies	↓	↓	n/a	n/a
B-6: Venture capital investment, total[#]	→	↑	3 of 5	3 of 7
B-7: Venture capital investment: share of Canadian total[#]	↑	↑	3 of 5	3 of 7
B-8: Venture capital by sector: life sciences[#]	→	↑	1 of 5	1 of 7
Venture capital by sector: information technology[#]	↓	↑	3 of 5	3 of 7
B-9: ICT Investment as a share of GDP	↑	↑	5 of 5	9 of 10
B-10: Business expenditure on R&D (BERD) to GDP	→	↓	3 of 5	3 of 10

[#] The overall ranking is out of 7 because the Atlantic Provinces are grouped together as one.

PATENTS AND APPLICATIONS

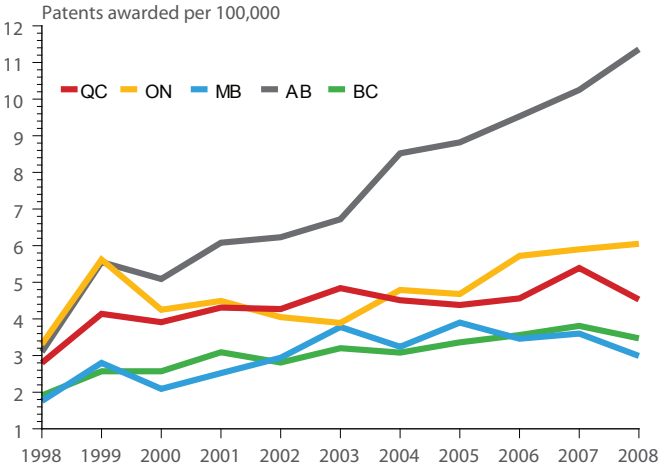
Why are these indicators important?

Patents are an indicator of the intellectual capital of innovation. According to the Canadian Intellectual Property Office, their mandate is to "grant patents which will result in the protection of the inventor and dissemination of technical information, and the encouragement of the creation, adoption, and exploitation of inventions." Patent applications may be rejected for a number of reasons, "including lack of novelty, obviousness, and lack of patentable subject matter." Patents are key resources for researchers, academics and businesses that need to stay shoulder-to-shoulder with developments in their fields.

The application for and granting of patents are indicators of the success of R&D, whether in the public or private sector. Over the past decade, British Columbia has lagged the other designated provinces in terms of patents awarded per 100,000 persons. The acceptance rate of B.C. patent applications has also been lacklustre.

Relative to the other designated provinces, British Columbia has not been particularly successful in patenting new inventions. B.C. applicants were awarded 152 patents in 2008 (the latest year for which data are available), or 3.5 per 100,000 population. This rate falls short of three other designated provinces and B.C. has ranked fourth or fifth since at least 1998. Despite the comparatively poor performance, patent acceptance has been creeping up in B.C. over the past decade, both in actual number and in ratio per 100,000 persons.

INDICATOR B-1
PATENTS AWARDED PER 100,000 POPULATION



Data Source: Canadian Intellectual Property Office

In 1998, B.C. applicants were awarded just 76 patents (or 1.9 per 100,000 population), considerably fewer than in 2008. However, the upward climb came to a halt in 2008, as both the per capita rate and the actual number declined.

In the 2006 to 2008 period, only 30% of B.C.'s applications resulted in the issuing of a patent.[18] This is substantially lower than for Alberta (52%) and Manitoba (41%), just slightly less than for Ontario (32%) and on par with Quebec (30%).

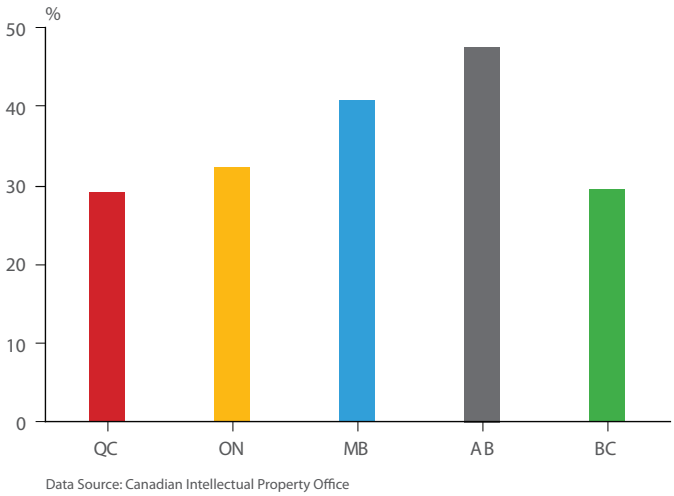
It should be noted that applications for patents are rejected far more often than they are accepted. In 2008, just over a third (35%) of patent applications was accepted in Canada. The low acceptance rates across the country suggest that applicants generally begin the process of applying for a patent with little knowledge of the procedure(s) or of their chances of success.

B.C. ranks fourth among the designated provinces in patents awarded per capita

[18] Patent applications take an average of 25 months to be processed. Thus, to know how many applications filed in 2006 were accepted, one must look at patents granted in 2008. Figures presented here show patent grants in 2008 as a percent of applications in 2006.

INDICATOR B-2

PATENTS GRANTED AS A PERCENT OF PATENT APPLICATIONS (THREE-YEAR AVERAGE, 2006-2008)



Data Source: Canadian Intellectual Property Office

Alberta has the highest rate of acceptance for patent applications

SECTOR DYNAMISM: ENTRIES AND EXITS[19]

Why are these indicators important?

A dynamic sector, characterized by a healthy mixture of large and small, old and new firms, is ideal for generating high levels of innovation. Large, established firms provide employment and earnings stability while small start-ups often provide market responsiveness, creativity and employment growth. The high technology labour force is combined with capital and ideas in the drive to generate new goods and services. A stagnant sector, characterized by several large firms and low levels of entry and exit, is not likely to generate high levels of innovation.

High tech sector entry rates indicate the percentage of firms currently in the sector that are new (i.e., did not exist in the previous year). Similarly, exit rates show how many firms left the high tech sector (or went out of business) as a percentage of the total number of high tech firms.[20] Note that only companies with employees are included in these data.

Innovation is integral to the high tech sector. Along with an innovative spirit comes a somewhat volatile environment for businesses. One consequence of this is a high rate of business failures. On the other hand, small start-up firms in high tech are often at the leading edge of innovation, and are crucial to the ongoing strength of the sector.

A good way to measure the strength of a specific sector is to compare it to the overall economy.[21] Between 2007 and 2009 high technology firms had an average annual entry rate of 15.0%, expanding by nearly 260 businesses to reach 8,903 in 2009. By comparison, the number of firms in the B.C. economy as a whole had a much lower average annual entry rate (+11.6%).

Over the same period, the exit rate in the province's high tech sector (+13.5%) was also higher than the average business exit rate (+10.5%), providing further evidence that the innovative atmosphere of high tech businesses may tend to lead towards instability. Although data are no longer available at the establishment level for direct comparison,

[19] Note that a comparison with other provinces for indicators B-3, B-4 and B-5 is not available because BC Stats does not have access to the necessary data.

[20] Statistics Canada has changed the method used to measure business counts such that data reported here are inconsistent with figures reported in earlier editions of this publication. Previously, the concept of a statistical establishment was the measure that was used. Statistics Canada defined a statistical establishment as a production entity that: produces a homogeneous set of goods or services; does not cross provincial boundaries; and provides data on the value of output together with the cost of principal intermediate inputs and labour resources used to produce the output.

With the release of the 2008 data, the concept of a statistical location was introduced. The location, as a statistical unit, is defined as a producing unit at a single geographic location at which, or from which, economic activity is conducted and for which, at minimum, employment data are available. The change to business location counts was made because they provide a better measurement of actual business units. One consequence of this change is that location data prior to 2007 are not available.

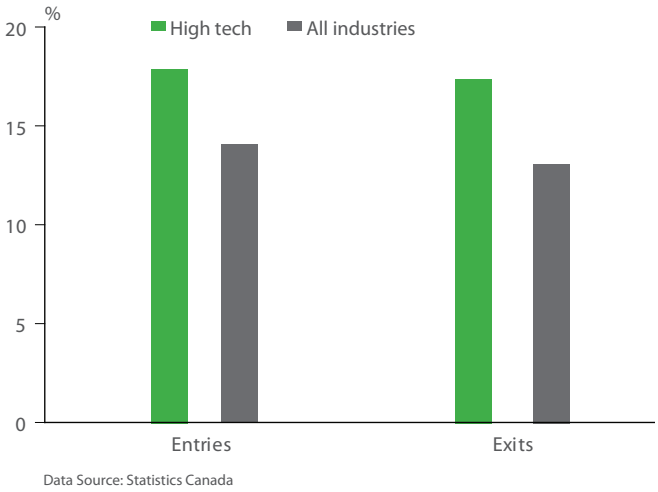
[21] Since data for location counts are only available from 2007 on, growth measures (i.e., entries, exits and high growth) can only be calculated for 2008 and 2009.

there is evidence that the number of high technology firms has been growing relatively steadily over the past decade, at a much faster pace than for B.C. businesses overall.[22]

Historically, entries to the high technology sector have exceeded exits, such that the overall number of high technology establishments has been growing fairly steadily. There have been two exceptions to this pattern in the last ten years; in 2002 and again in 2007, entry rates slipped well below exit rates, each of which was a reflection of a downturn that affected high technology throughout North America.[23] Surprisingly, the most recent economic downturn, which began in the latter half of 2008, does not appear to have had the same impact on the high technology sector. In fact, in 2008, high tech entry rates increased, while exit rates declined. In that same year, the overall economy saw a similar drop-off in business exits, but, unlike the high tech sector, recorded a notable decline in entries. In 2009, a somewhat different picture emerged, perhaps as the effects of the economic downturn had more time to take root. In that year, high technology exit rates were up (from 13.0% in 2008 to 14.0% in 2009) while entry rates inched down (from 15.2% to 14.8%). Long-term average rates remain higher for high tech businesses than for all B.C. establishments. High exit rates are not necessarily a sign of long-term trouble in the high tech sector as this type of competitive environment is often a marker of high levels of innovation.

One possibility as to why the high tech sector has shown more signs of resilience in a poor economic climate is that the relatively recent technology bubble of the late 1990s and subsequent burst in the early 2000s could have served as a key lesson for many technology companies, providing them with the experience and tools with which to both prepare and react. Still, some tech companies in B.C. have voiced their inability to raise capital during the downturn and its effect on their business plans, including pending business closures. However, companies that were able to take responsive measures in reaction to the economic downturn and were able to raise capital during the previous boom would have been better positioned to weather the storm than those that had not.[24]

INDICATORS B-3 AND B-4
ENTRY AND EXIT RATES IN THE HIGH TECH SECTOR COMPARED TO ALL INDUSTRIES,2009



Data Source: Statistics Canada

Entry and exit rates are higher than average in the high tech sector

[22] While data by statistical location are not available prior to 2007, data from the old statistical establishment framework indicate that business counts have been growing at a faster rate in the high tech sector.

[23] Note again that these historic figures are derived using establishment counts in lieu of business location counts, which are not available prior to 2007.

[24] For more information on businesses' perceptions of the impact of the economic downturn for the high technology sector, see BC Technology Industry Association's Industry Report: Tech Talent BC Labour Trends. February 2010. http://www.bctia.org

HIGH GROWTH COMPANIES

The indicator explained

High levels of growth are strong indicators of the success of a sector. An increasing number of high growth companies will create new jobs, new wealth and new government revenues.

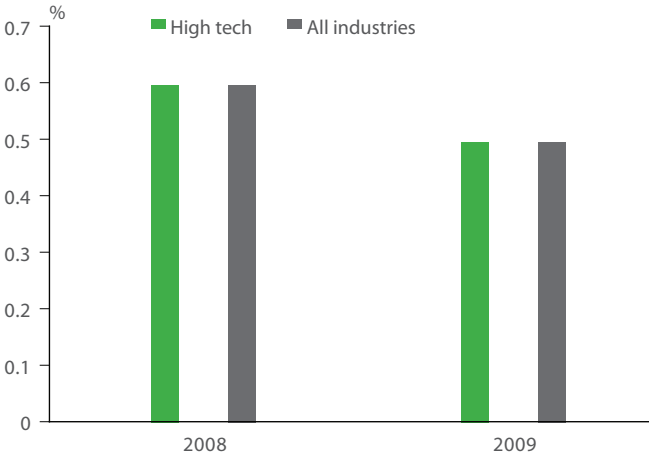
BC Stats defines "high growth companies"as those which increase by at least two employment size categories in one year. For example, a firm that has one to four employees would be considered high growth if it expanded to have 10 to 19 employees over the course of one year. Similarly, a company with 100-149 workers expanding to 200-249 workers would also be considered high growth. There are 21 employment size categories, which provide a considerable amount of detail. However it should be cautioned that, because the exact number of workers in a firm is not known, this measure will be somewhat imprecise. Further, because the last employment category is "5,000 and over," it is impossible for a large corporation to be classified as high growth. These data, then, principally apply to small and medium-sized establishments.

Companies exhibiting elevated levels of growth are indicative of the potential of the high tech sector. Very few companies qualify as high growth, but they can be slightly more common in the high tech sector than elsewhere. The high technology sector is often thought to be a breeding ground for rapid growth firms—small start-up companies that grow exponentially over short periods of time. However, in recent years, B.C.'s high tech firms have demonstrated patterns of high growth similar to the economy overall.

In 2009, about 0.5% of all companies in B.C. showed rapid growth in number of employees, down slightly from the previous year (0.6% in 2008). The share of high growth high technology businesses was virtually identical to that for the economy as a whole (0.5% in 2009). Although data for statistical location counts do not allow for analysis of high growth companies prior to 2008, it is worth noting that, based on data from the old statistical establishment framework, there was a substantial drop-off in 2008 in both the share and the actual number of high growth establishments for the high tech sector and all industries alike. Over the past decade or so, with the exception of the year 2000, when overall growth rates spiked, the percentage of companies that could be classified as high growth had hovered around the two percent mark for the high tech sector as well as for the economy as a whole.

In actual numbers, there were between approximately 2,000 and 4,000 high growth businesses in the overall provincial economy and between about 100 and 200 for the high tech sector alone. In 2008, coinciding with the global economic downturn, these numbers plummeted to 981 and 51, respectively.

INDICATOR B-5
HIGH GROWTH COMPANIES FOR THE HIGH TECH SECTOR AND FOR ALL INDUSTRIES, 2008 AND 2009



Data Source: Statistics Canada

The high tech sector and the economy as a whole have identical shares of companies that are classified as high growth and each saw rates decline in 2009

VENTURE CAPITAL INVESTMENT

Why are these indicators important?

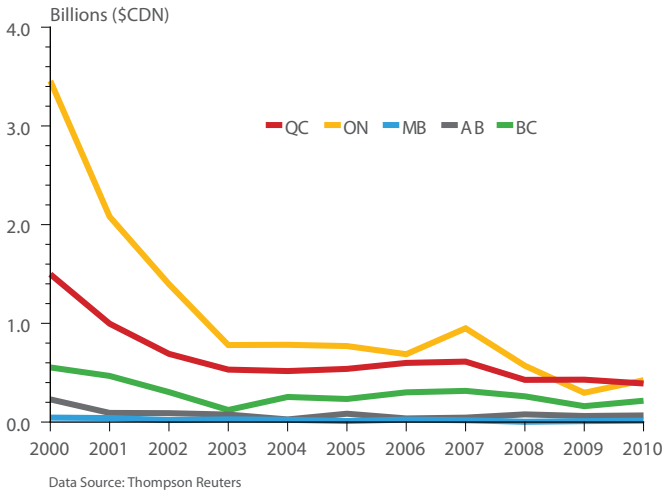
Venture capitalists specialize in investing in high-risk company start-ups or expansions, providing the seed funds for projects that are often involved in the development of new products or processes. They take a portfolio approach, such that, while many high-risk investments may never be commercially viable, those that do succeed are expected to provide high returns to compensate for the total risk capital invested across the portfolio. Thus, venture capital (VC) investment by province gives an indication of both the quality of ventures in a given province and the investors' assessment of the business climate. It also reflects the risk tolerance of investors in different regions and over time.

Following strong growth throughout the 1990s, Canadian venture capital investment declined in the early half of the 2000s. The anticipation of a new millennium coincided with an explosion in Canadian venture capital investment[25] during the latter part of the 1990s. Over the first few years of the new decade, investment began to fall and, since then, overall investment has continued to trend down. At its peak in 2000, venture capital investment in Canada amounted to $5.9 billion. By 2009, it had fallen to $1.0 billion, its lowest point in a decade. Although investment had been on a downward track for several years, the record low in 2009 is at least partially the result of the global economic slowdown. In 2010, investment began to hint at a turn-around, inching up to $1.1 billion at the national level.

Venture capital investment has historically been characterized by boom or bust volatility. Similar to the overall Canadian pattern, venture capital investment in B.C. more than tripled between 1998 and 2000. At the peak of the boom, in the year 2000, B.C. attracted more than $553 million in venture capital investment, significantly more than neighbouring Alberta ($230 million). In 2010, venture capital in B.C. attracted $216 million in investment, compared to $67 million in Alberta and less than $14 million in Manitoba. However, this was still considerably less than in Quebec ($390 million) and Ontario ($424 million).

[25] Most of the other potential financing indicators, such as debt financing, are either available only for Canada with no provincial breakdown, or do not provide sufficient years of reporting to establish trends and are therefore not included in this report. However, Appendix III does offer some data on total Canadian investment in scientific and research development.

INDICATOR B-6
CANADIAN VENTURE CAPITAL INVESTMENT BY PROVINCE OF INVESTMENT ($ BILLION)



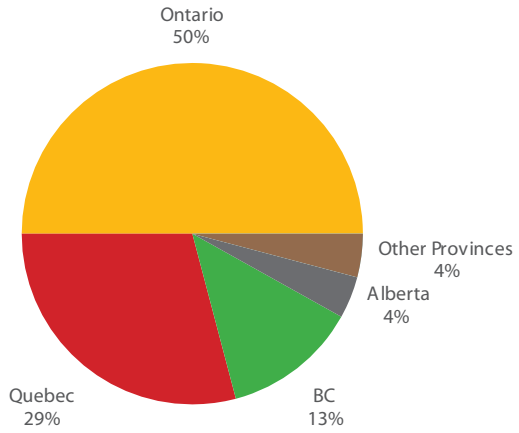
Data Source: Thompson Reuters

Despite a recent decline in overall venture capital investment in B.C., the province maintains a solid rank of third

Usually ranking above the national average, B.C. has fared relatively well in terms of investments per 100,000 population. In 2010, the province had an average venture capital investment of almost $48 per 100,000 persons, up substantially from 2009 ($36), and well above that of Alberta ($18). Along with maintaining a solid second place ranking among the provinces (remaining well ahead of Ontario, at $32), 2010 marked the first year since 2007 where B.C.'s per capita share has been above the national average. Quebec recorded the highest per capita investment ratio in the country ($49), while Manitoba had the lowest ($9).

In 2010, B.C. boasted a 19% share of the country's venture capital investment, well above the 9% average over the 2000-2010 period, and still a far greater share than in any other province outside Canada's industrial core. In fact, the cumulative amount of investment in B.C. between 2000 and 2010 ($3.2 billion) far exceeded that of Alberta, Saskatchewan, Manitoba and Atlantic Canada combined ($1.9 billion).

INDICATOR B-7
PROPORTIONAL SHARE OF CANADIAN VENTURE CAPITAL INVESTMENT, 2000-2010

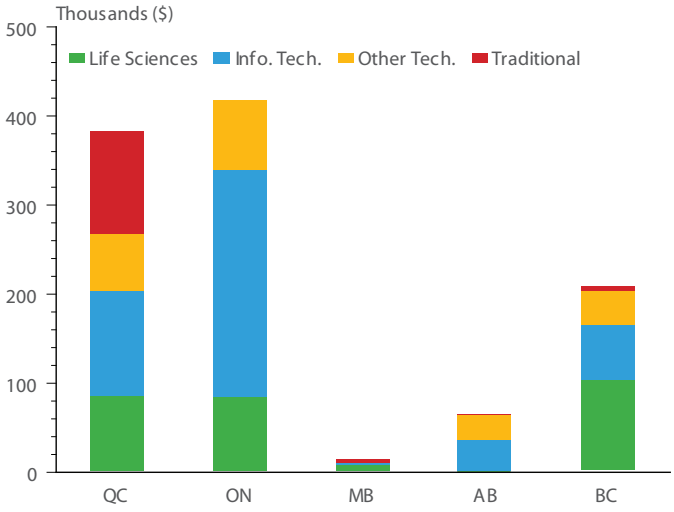


Data Source: Thompson Reuters

B.C.'s share of Canadian venture capital investment is more than three times that of Alberta

The life sciences sector in B.C. attracted the bulk of the province's venture capital investment (48%) in 2010. Information (29%) and other (19%) technologies also made up significant portions, while the remaining 3% was attributable to investment in traditional undertakings. The distribution in type of investment varies significantly among the provinces. In 2010, for example, the life sciences sector accounted for 68% of overall VC investment in Manitoba, the largest proportion of all the provinces. By contrast, just three percent of VC investment in Alberta went to life sciences, while more than half of overall investment was in information technology (IT). Ontario and Quebec were similar to Alberta in that the largest share of VC investment in each of those provinces also landed in the IT sector in 2010 (61% and 31%, respectively).

INDICATOR B-8
CANADIAN VENTURE CAPITAL INVESTMENT, BY PROVINCE, BY SECTOR, 2010

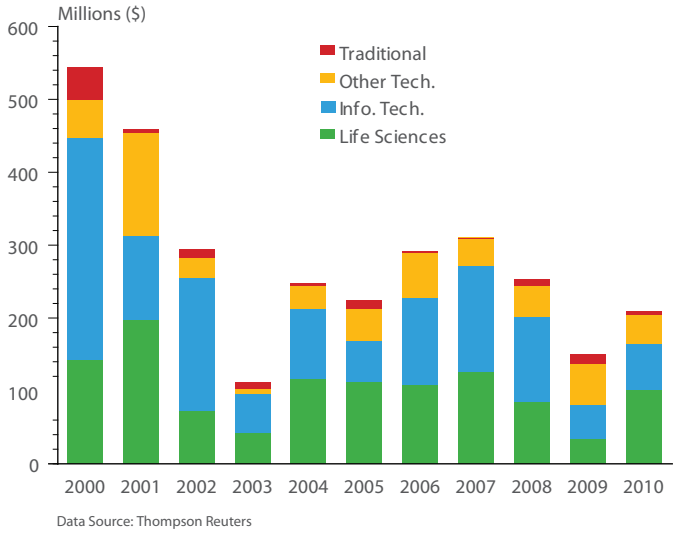


Data Source: Thompson Reuters

Based on the value of VC investments, B.C. ranks first in life sciences and third in information technology

In B.C., the different types of venture capital investment have also varied significantly from year to year. While the amount of overall VC investment in B.C. has been notably volatile over the past decade, the share of investment in the life sciences sector in the province appears to have been increasing steadily.

CANADIAN VENTURE CAPITAL INVESTMENT IN B.C., BY SECTOR, 2000 TO 2010



Data Source: Thompson Reuters

VC investments in B.C.'s life sciences sector recovered more after the dot.com bust than the information technology sector

INVESTMENT IN ICT

Why is this indicator important?

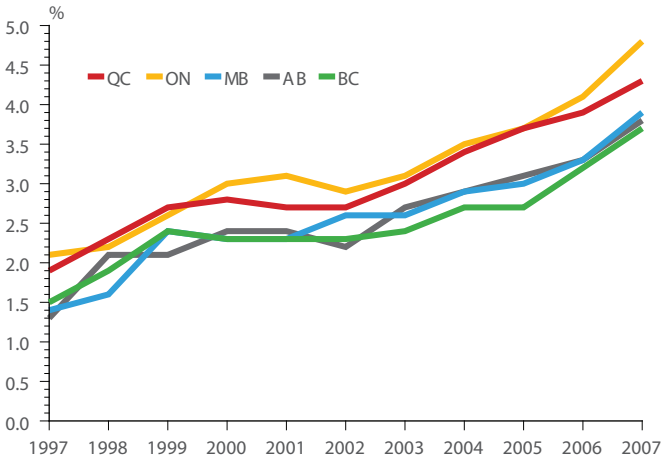
The information and communications technologies (ICT) sector is an integral component of high technology. The companies that comprise this sector include software and computer services, wholesale and manufacturing of ICT products, and communications services. According to Industry Canada, ICT in Canada has shown continued strength over the past decade, with revenues and employment climbing at rates higher than for the Canadian economy overall. The performance of B.C.'s ICT industry is a key indicator of its contribution to the health of the province's high technology sector as a whole.

Nationally, investment in the information and communications technologies (ICT) sector surpassed the $56.0 billion mark in 2007 (the latest year for which data are available), a 17.8% jump over the previous year. This amounted to 4.3% of Canada's GDP in that year, the highest share on record. Over the past decade, the Canadian investment in ICT to GDP ratio has climbed substantially from a low of 1.8% in 1997. British Columbia paints a similar picture to that of the nation as a whole, with ICT investment surging 18.3% (to $6.0 billion) between 2006 and 2007.

Over the last decade, the rates of ICT investment to GDP in Quebec and Ontario have been very close, but the gap between the two provinces has recently begun to widen. Between 1997 and 2007, Ontario's rate more than doubled (from 2.1% to 4.8%), while Quebec's increased at a slightly slower pace (1.9% to 4.3%). Ratios for B.C. and Alberta have also been quite close, with Alberta's hovering slightly above B.C.'s for much of the decade. In 2007, Alberta's ratio was at 3.8%, while B.C.'s was just barely lower (3.7%). In that same year, Manitoba's rate of ICT investment to GDP was 3.9%.

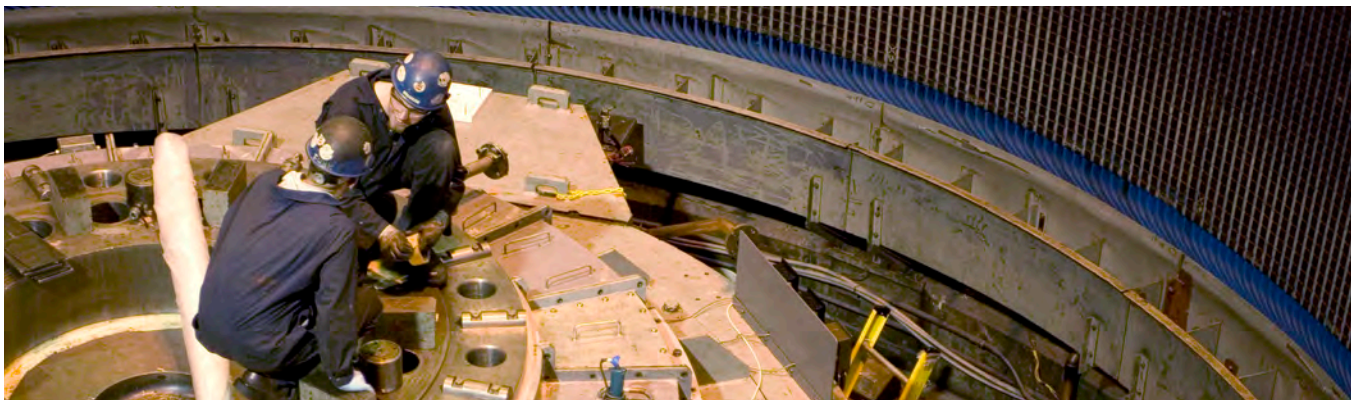
INDICATOR B-9

ICT INVESTMENT AS A SHARE OF GDP, BY PROVINCE, 1997-2007



Data Source: Centre for the Study of Living Standards, using data provided by Statistics Canada

Investment in ICT to GDP is increasing rapidly across the country; however, B.C. continues to lag other designated provinces



PERFORMANCE OF R&D BY THE BUSINESS SECTOR

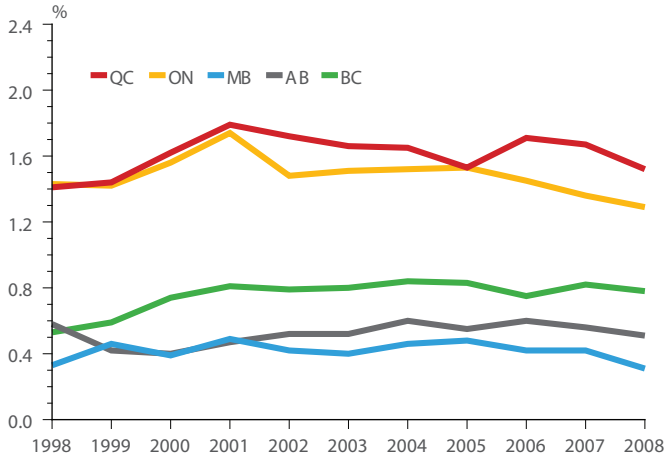
Why is this indicator important?

Research and development (R&D) provides the potential for innovation and new discoveries in the form of new products, services or processes that eventually enhance productivity. In this way, R&D is viewed as an investment in future production of the economy. The ratio of R&D performed by business (BERD) to GDP is an indicator of the proportional investment in R&D by the business sector relative to the size of the overall economy. It is assumed that a higher proportion is likely to lead to higher rates of discovery and increased commercialization activity.

Canada's business sector performed $15.8 billion worth of R&D in 2008 (the latest year for which data are available), amounting to just under one percent of the nation's GDP in that year. Historically, the ratio of BERD to provincial GDP has been much higher in Quebec and Ontario than in the rest of the country. In 2008, although well above Alberta (0.5%) and Manitoba (0.3%) in performed R&D to provincial GDP, B.C. (0.8%) was far exceeded by Ontario (1.3%) and Quebec (1.5%). Until the end of the last decade, the ratios of BERD to GDP in B.C. and Alberta were quite comparable. However, in more recent years, R&D has seriously lagged in Alberta, resulting in its falling well behind British Columbia. Although the ratios of business R&D to GDP in both Quebec and Ontario were close to twice that of B.C. in 2008, this is comparatively more promising than in the late 1990s, when they were closer to triple that of British Columbia.

In 2008, Ontario and Quebec made up a combined 77% of BERD in Canada, while B.C.'s share was 10%. At the same time, nine percent was attributable to Alberta, and just one percent to Manitoba.

INDICATOR B-10
RATIO OF BUSINESS PERFORMANCE OF R&D TO GDP



Data Source: Statistics Canada

B.C.'s ratio of business performance of R&D to GDP has increased over the past decade

Government Indicators

The government sector impacts the high technology environment by funding and directly performing R&D, and by providing a regulatory, tax and infrastructure environment for the private sector to operate within.

In general, the tax regime varies substantially across provinces. For example, Quebec has a considerably lower corporate income tax rate than other provinces, while Alberta and New Brunswick have the lowest small business tax rates.

This section also includes a summary of gross expenditures on R&D (GERD) in British Columbia. This consists of R&D performed by business and higher education in addition to federal and provincial governments. Generally, direct performance of R&D by government has lagged in B.C. compared to other provinces but, in recent years, has shown signs of growth.

TABLE 4: QUICK SUMMARY OF INDICATORS FOR THE GOVERNMENT SECTOR

INDICATORS	Trend		Ranking	
	Long-Term	Latest Year	Five Designated Provs.	Overall
G-1: Personal tax index individual with $80,000 income	↓	↑	2 of 5	2 of 10
G-2: Small business tax rate	↓	→	2 of 5	3 of 10
G-3: Corporate income tax rate	↓	↓	2 of 5	2 of 10
G-4: Government expenditure on R&D (GOVERD) to GDP	↓	↓	5 of 5	10 of 10
G-5: Gross expenditure on R&D (GERD) to GDP	→	↓	3 of 5	4 of 10

TAX RATES: INDIVIDUAL AND CORPORATE

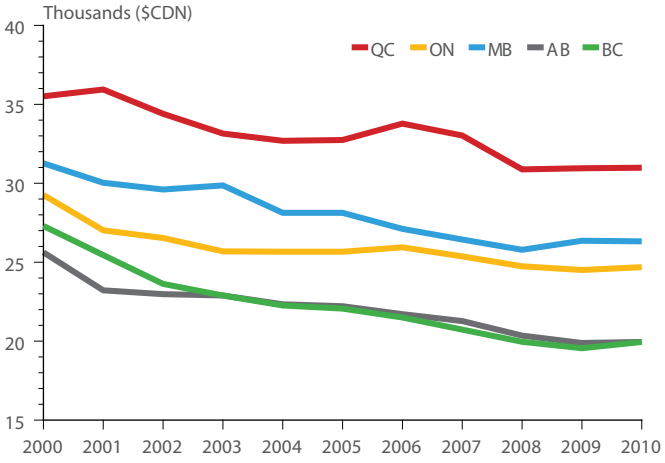
Why are these indicators important?

High technology companies are highly mobile because much of the input to their production is derived from human capital. As a result, high technology companies are often free to seek an ideal location to establish operations. Lower levels of taxation are thought to attract investment and encourage a skilled labour pool. On the other hand, desirable amenities that may play an equal role in attracting skilled workers, such as quality of life, social programs, environmental standards and regulated working conditions may result in higher levels of taxation.

Taxation is a significant policy area over which the government has complete control. Lower levels of taxation are considered attractive to investment and to a skilled workforce, both of which are essential to the high technology sector. However, a better quality of life associated with regulation of working conditions, environmental standards and universal social programs are also thought to be appealing to high technology workers and demand for such amenities can be associated with higher levels of taxation.

The level of taxation in B.C. for high-income individuals has declined steadily over the past decade. From 2003 to 2009, the province had the lowest rate in the country, but in 2010, Alberta inched below British Columbia. In 2010, the total taxes levied to single (unattached) individuals in B.C. earning $80,000 annually averaged $19,952 (or 25%), one of lowest levels in the nation, just barely above Alberta ($19,949).[26] B.C.'s rate was up slightly from 2009 (+2.0%), but still reflects a considerable decline since 2000, when taxes amounted to $27,295 (34%). The long-term decrease in personal taxes on high-income earners has also been seen in most other provinces. Beginning in 2008, coinciding with the onset of the global economic slowdown, other parts of the country also experienced a levelling off of tax rates and, in some cases, a slight increase. In 2010, average taxes paid by high-income earners in B.C. remain well below those in Quebec ($30,986), Manitoba ($26,321) and Ontario ($24,687).

INDICATOR G-1
ALL TAXES PAID BY UNATTACHED INDIVIDUALS EARNING $80,000 PER YEAR ($ '000)

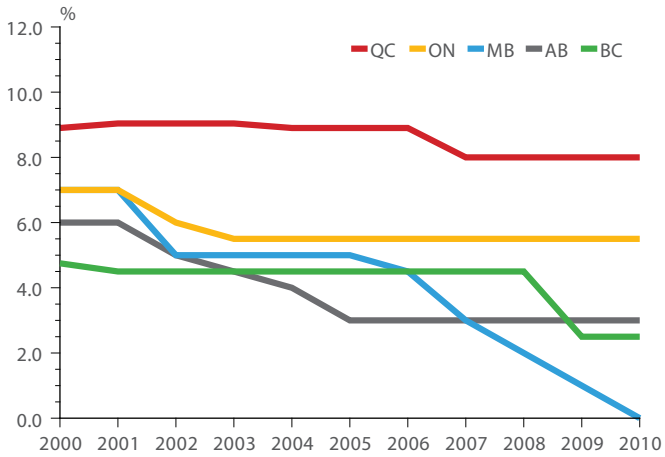


Data Source: BC Ministry of Finance

B.C. and Alberta have nearly identical taxation levels for high-income earners

British Columbia's small business tax rate paints a similar picture to that of high income individuals. In 2000 and 2001, B.C. boasted the lowest small business tax rate in the country. In the years that followed, some of the Atlantic provinces dropped rates substantially, as did Alberta and Manitoba. In fact, 2008 marked the year that Manitoba replaced Alberta as having the lowest rate (2.0%) among the designated provinces. In 2009, B.C. lowered its rate from 4.5% to 2.5% to claim the second lowest rate of its fellow designated provinces. The rate remained the same in 2010, resting just below that of Alberta (3.0%). Quebec's tax rate has hovered around eight or nine percent (8.0% in 2010) for the past decade, while Ontario's rate has remained unchanged since 2003 (5.5%). Small business tax rates have dropped dramatically in Manitoba over the past decade and, in 2010, the province succeeded in eliminating the small business tax altogether.

INDICATOR G-2
SMALL BUSINESS TAX RATE



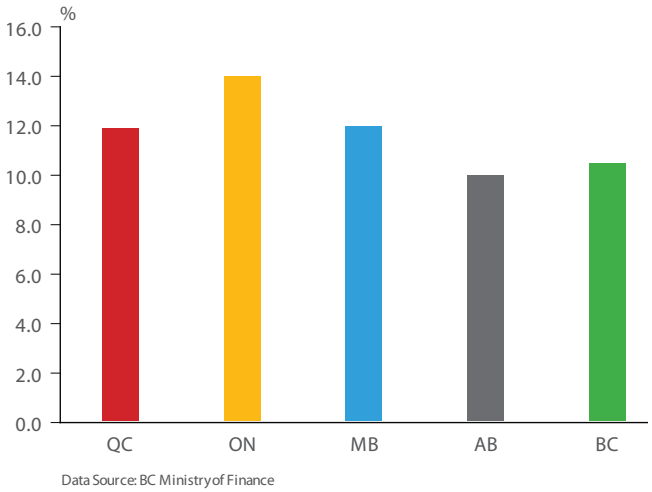
Data Source: BC Ministry of Finance

B.C.'s small business tax rate is the second lowest of the designated provinces

[26] Note that this includes all federal and provincial taxes, such as the GST, health care premiums, income tax, etc. Data for 2010 are Balanced Budget tax rates as of March 2nd, 2010.

British Columbia's general corporate income tax rate (10.5% in 2010) is also lower than every province except Alberta. In 2010, at 10.0%, Alberta's corporate tax rate has maintained the lowest rate in the country for the third consecutive year. Prior to 2008, Quebec had boasted the lowest rate since at least 1990, but, in 2008, it raised its rate from 9.9% to 11.4% and bumped it up again in 2010 (11.9%). In 2010, Manitoba's rate (12.0%) sat just above that of Quebec, while Ontario's remains the highest (14.0%) of the designated provinces.

INDICATOR G-3
GENERAL CORPORATE INCOME TAX RATE IN 2010



Data Source: BC Ministry of Finance

Alberta has the lowest corporate tax rate in the country

PERFORMANCE OF R&D BY THE GOVERNMENT SECTOR

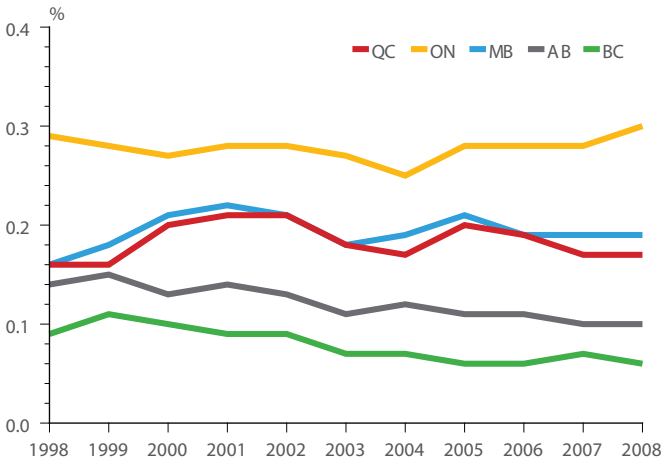
Why is this indicator important?

Government tends to fund much more R&D than it actually performs. However, in some fields, governments do maintain research personnel in order to provide independent testing of products, processes and practices. The purpose of most internal government research is not necessarily focused on innovation, but serves a review function. Significant innovations developed by government researchers are often spun-off to the private sector. The ratio of government R&D to GDP is an indicator of the proportional investment in R&D by the government sector relative to the size of the overall economy.

In 2008, (the latest year for which data are available) the government sector (combined provincial and federal) in Canada performed $3.0 billion worth of R&D, climbing 2.6% from 2007 to reach its highest level since at least 1990. In 2008, this accounted for just under 0.2% of Canada's GDP.

Within the designated provinces, Ontario has maintained by far the highest ratio of government R&D to GDP (0.30% in 2008) for at least the last 18 years. Compared to all provinces, B.C.'s ratio has historically ranked last and Alberta has held the ninth place rank. These positions held true in 2008, when B.C. saw its ratio inch down to 0.06%, about a third of the Canadian average (0.19%). In that same year, rates for Alberta (0.10%), Manitoba (0.19%) and Quebec (0.17%) were unchanged, while Ontario's (0.30%) advanced slightly.

INDICATOR G-4
RATIO OF COMBINED FEDERAL AND PROVINCIAL PERFORMANCE OF R&D TO GDP



Data Source: Statistics Canada

Ontario has had the highest ratio of government R&D to GDP for at least two decades

GROSS EXPENDITURE ON R&D

Why is this indicator important?

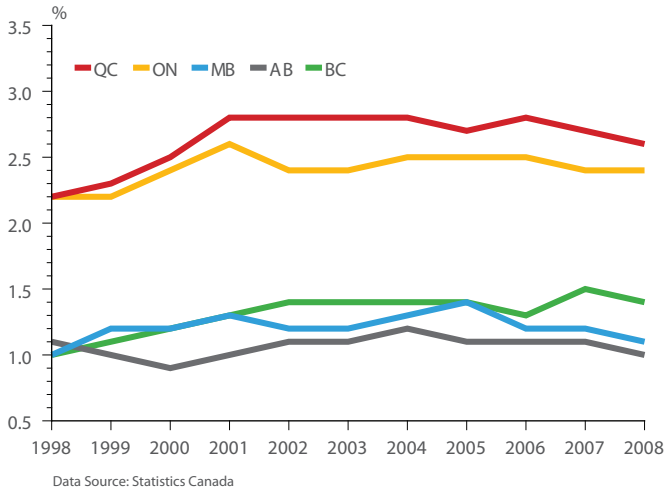
The overall ratio of gross R&D effort to the overall economy, also known as the GERD ratio, is a measure of how much a jurisdiction is willing to sacrifice current consumption for potential increased future capacity. The changing structure of the ratio (the relative size of the component investments by the government, business and higher education sectors) over time is a measure of the shifting importance different sectors place on the performance of R&D.

Nationally, gross expenditure on research and development (GERD) remained above the $29.0 billion mark in 2008 (the latest year for which data are available), relatively unchanged (-0.1%) from the previous year. This amounted to 1.9% of Canada's GDP in that year. Over the past decade, the Canadian GERD to GDP ratio has ranged from a low of 1.8% and a peak of 2.1%.

The GERD to GDP ratios for Quebec and Ontario have been very close over the last ten years, but the gaps between provinces have recently started to widen. Between 1998 and 2008, Ontario's rate rose from 2.2% to 2.4%, while Quebec's increased from 2.2% to 2.6%. Ratios for B.C. and Alberta lingered at approximately 1.0% of GDP until 2000, when increases in B.C.'s rate began to outpace those for Alberta. In 2008, Alberta's ratio was at 1.0%, while B.C.'s was significantly higher (1.4%). With a few exceptions, Manitoba's rates have generally remained between 1.0% and 1.2% over the past decade (1.1% in 2008).

The business sector in B.C. performed the bulk of R&D (55%) in 2008. Higher education made up 41%, while the rest (4%) was done by the federal and provincial governments. This is also a common trend among other designated provinces. In Alberta, the business sector accounted for 51% of performed R&D and higher education made up 39%. However, government performed a much higher share of research in that province (9%) than in B.C. Meanwhile, Manitoba recorded by far the largest share of R&D attributable to higher education (55%) and government (17%), but substantially less was performed by the business sector (28%) than in the other designated provinces. The business sector performed most of the R&D in both Quebec (58%) and Ontario (55%) in 2008. The amount of R&D performed by government in B.C. has held relatively steady over the past decade, while R&D in business and higher education has been increasing.

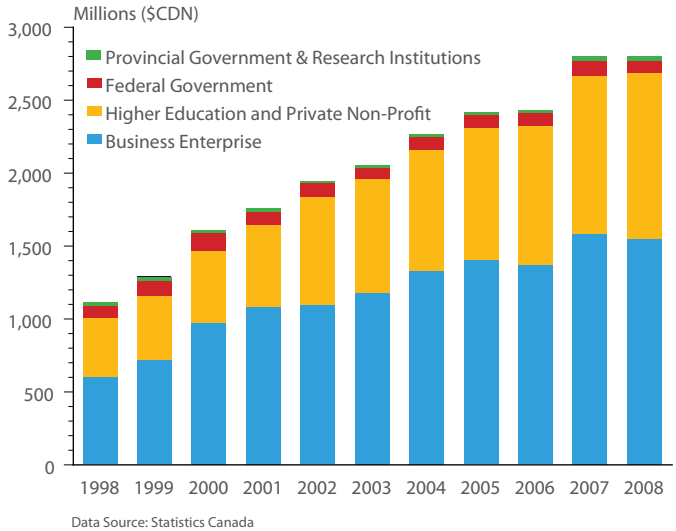
INDICATOR G-5
RATIO OF GROSS EXPENDITURE ON R&D TO GDP



Data Source: Statistics Canada

B.C.'s ratio of gross expenditure on R&D to GDP has been on the rise over the past decade

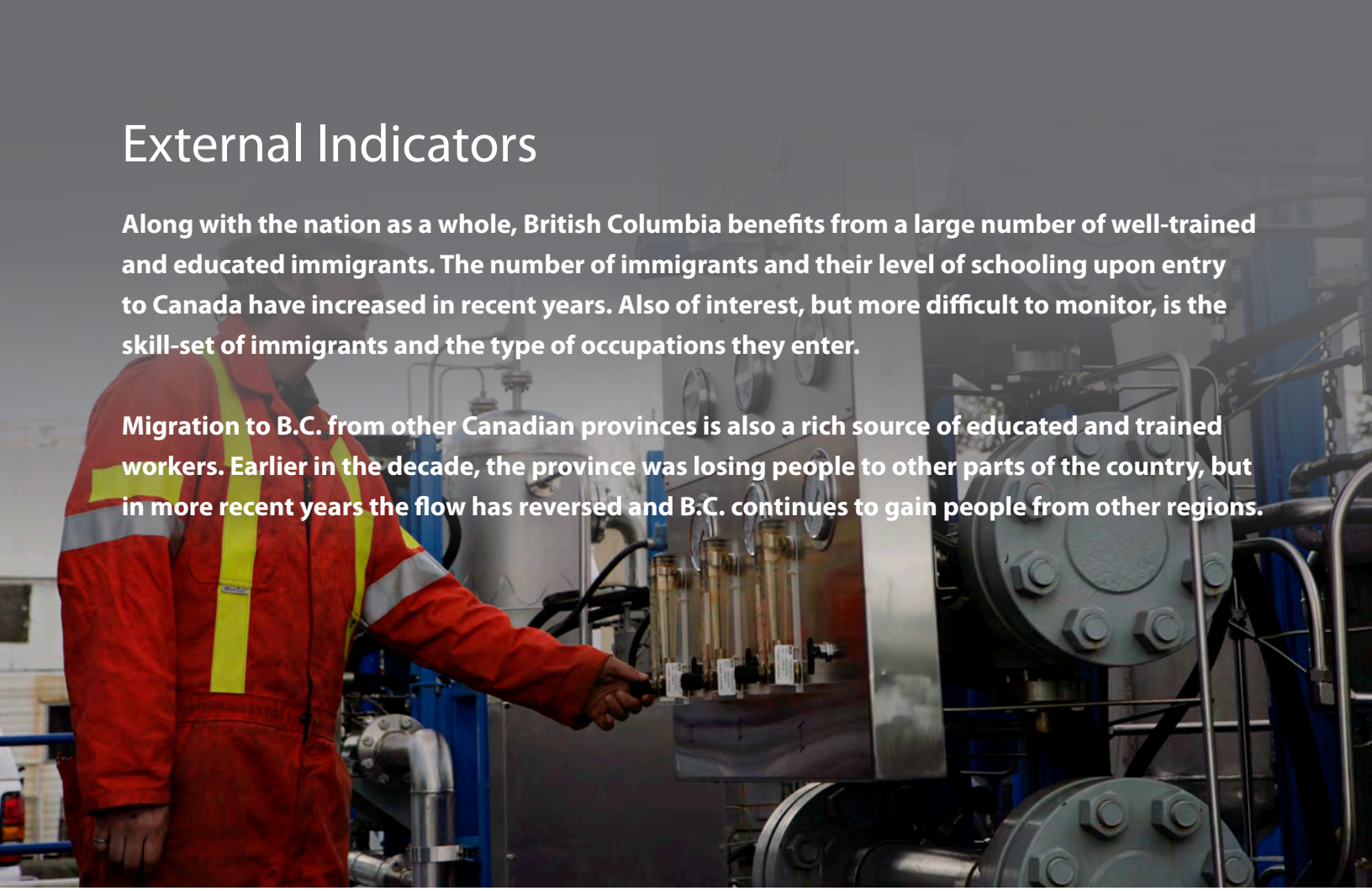
SHARE OF R&D PERFORMANCE IN B.C., BY SECTOR



Data Source: Statistics Canada

The business sector is the leading performer of R&D in B.C.

External Indicators



Along with the nation as a whole, British Columbia benefits from a large number of well-trained and educated immigrants. The number of immigrants and their level of schooling upon entry to Canada have increased in recent years. Also of interest, but more difficult to monitor, is the skill-set of immigrants and the type of occupations they enter.

Migration to B.C. from other Canadian provinces is also a rich source of educated and trained workers. Earlier in the decade, the province was losing people to other parts of the country, but in more recent years the flow has reversed and B.C. continues to gain people from other regions.

British Columbia's economy is highly dependent on trade with other provinces and foreign countries, both as a source of goods and services used in the province and as markets for its products and services. Trade relationships play an integral role in the high tech sector, as they do in the economy as a whole. Since imported components are often used to produce high tech products, imports of high technology goods can be an indicator of future production. B.C.'s high tech imports have been volatile over the past decade and are impacted by currency exchange rates and the health of the overall economic climate. This held true in 2009, in the midst of the global economic slowdown, as imports recorded the largest decline of the decade.

TABLE 5: QUICK SUMMARY OF INDICATORS FOR THE EXTERNAL SECTOR

INDICATORS	Trend		Ranking	
	Long-Term	Latest Year	Five Designated Provs.	Overall
X-1: Percentage of immigrants with higher education	↑	↓	4 of 5	7 of 10
X-2: Median years of schooling of immigrants	→	↓	4 of 5	7 of 10
X-3: Net inter-provincial migration	↑	↓	1 of 5	1 of 10
X-4: High technology imports	→	↓	n/a	n/a

EDUCATIONAL BACKGROUND OF IMMIGRANTS

Why are these indicators important?

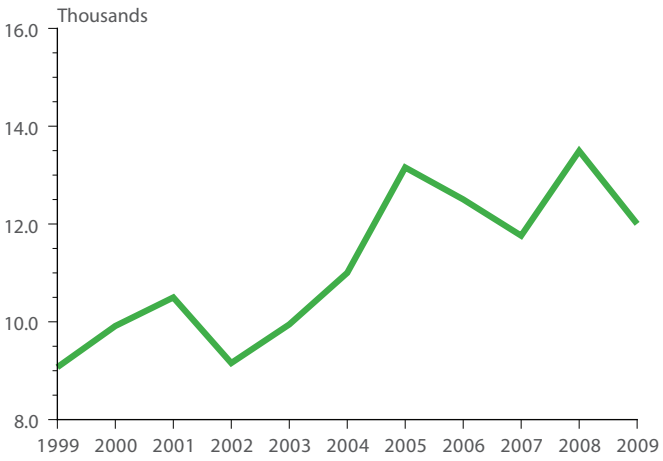
The economic effects of immigration depend on the skills and resources immigrants bring with them. Two specific indicators of the educational attainment of immigrants are the percentage of immigrants aged 25 years and older with 16 or more years of education (sufficient levels to obtain a university degree in Canada) and the median years of education of immigrants aged 25 years and older at landing. An influx of highly educated immigrants increases the supply of skilled labour and can provide a significant boost to high technology companies. Immigrants also offset the loss of skilled workers who move to other provinces or out of Canada.

British Columbia has historically experienced high levels of immigration and the trend has continued over the past decade, through to 2010.[27]

Between 1999 and 2009, the number of skilled immigrants (with 16 or more years of education) landing in B.C. jumped 32%, a much more pronounced rate of increase than in Ontario (+10%). Immigration of highly educated immigrants to Manitoba has tripled over the last decade (+200% between 1999 and 2009), while Quebec (+160%) and Alberta (+155%) have also experienced a significant increase in annual influx. Nationally, the number of highly educated immigrants has climbed 50% over the past decade.

B.C. has certainly been a central destination for skilled immigrants. From 1999 to 2009, B.C. received a cumulative 122,500 immigrants with 16 or more years of education —more than any other province except for the more populous Quebec and Ontario. Geography undoubtedly plays a role in B.C.'s success in attracting these foreign residents. Asia has become the top continent of origin for immigrants to Canada and B.C.'s relative proximity to Asia and the Pacific Ocean compared to the rest of Canada makes it a prime destination.

INDICATOR X-1
ADULT IMMIGRANTS TO B.C. WITH 16 OR MORE YEARS OF SCHOOLING AT TIME OF LANDING



Data Source: Citizenship and Immigration Canada

Despite fluctuations, the number of immigrants to B.C. with 16 or more years of schooling has increased over the past decade

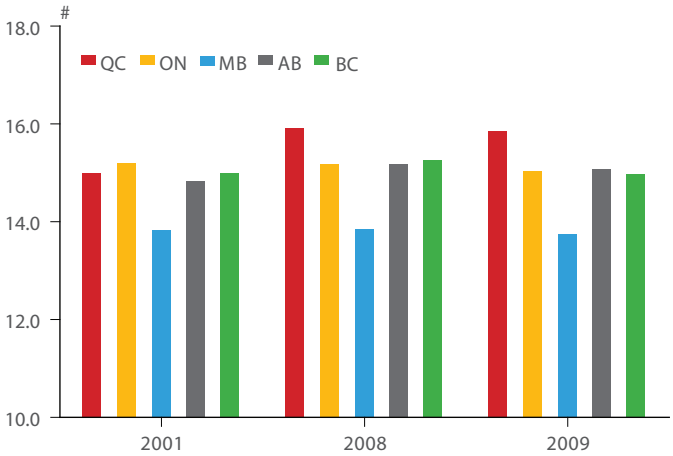
As in other parts of the country, immigrants to the province tend to be well educated. In fact, in 2009, the median education level of adult immigrants (aged 25 years and older at landing) to B.C. was 15.0 years of schooling. This was slightly under that of top-ranking Quebec (15.9), but relatively on par with that of Alberta and Ontario (each 15.1). In the same year, the median education level of immigrants to Manitoba (13.7) was the lowest in the country.

The median years of schooling of immigrants aged 25 years and older has increased notably since the 1990s, but appears to have reached a plateau in recent years. Between 1999 and 2009, median education inched up

[27] For detailed immigration data, see the BC Stats website: http://www.bcstats.gov.bc.ca

from 14.8 years to 15.0 years in British Columbia. Other provinces have seen a similar trend: the Canadian median climbed from 14.8 years of education to 15.2 years over the same period.

INDICATOR X-2
MEDIAN YEARS OF SCHOOLING AMONG IMMIGRANTS AGED 25 YEARS AND OLDER



Data Source: Citizenship and Immigration Canada

Immigrants to Quebec have the highest median number of years of schooling

CENSUS SNAPSHOT: FOCUS ON IMMIGRANTS

It is readily apparent that Canada acquires many high technology workers through immigration. Analysis by Statistics Canada using 2001 Census data point to three factors that have significantly impacted the Canadian workforce over the previous decade: the aging population, new immigrants and the demand for highly skilled workers.[28] The same analysis showed that, in 2001, 12.0% of recent immigrants aged 25-44 worked in information technology occupations, in contrast to only 3.0% of Canadian-born workers. Recent immigrants between the ages of 25-44 in the labour force were also over-represented in natural science and engineering professions, with 3.0% working in engineering and 1.2% in natural sciences versus 1.0% and 0.6% of Canadian-born workers, respectively.

A notably high proportion of immigrants to Canada is highly skilled and, as such, plays a significant role in the growth of highly skilled occupations – those customarily requiring a university education. Engineers, computer and information scientists and physical and life scientists are key drivers of the high technology sector. The types of specialized labour provided by people educated in these fields are crucial to the research and development of new or more efficient production processes. The distribution of graduates from such disciplines, as well as the types of occupations that they enter, provides some measure of the province's capacity to feed the high tech economy. It should be acknowledged that the acceptability of foreign credentials in Canada is a well-documented issue for immigrants. Statistics Canada has noted that foreign-educated immigrants are less likely than their Canadian-trained counterparts to work in their field of study.[29]

IMMIGRANTS AND EDUCATION

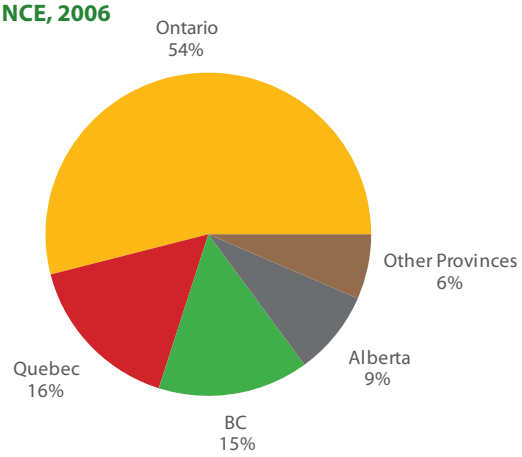
In 2006, nearly half (47%) of adult immigrants (aged 25 to 64) with post-secondary qualifications reported having studied at a Canadian institution. The other half (53%) received their credentials outside of Canada, most likely in their respective countries of origin. Of those who had obtained post-secondary credentials in Canada, 15% studied at an institute in British Columbia. Most attended post-secondary schools in Ontario (54%), and a further 16% studied in Quebec, while Alberta and Manitoba were the provinces of choice for nine and three percent, respectively. Many immigrants come to Canada for an education and the fact that 15% of those educated in Canada studied in B.C. speaks to the province's ability to draw immigrants into its education system, thus adding to the overall labour pool of high tech workers.

[28] Source: Statistics Canada, 2001 Census. This specific study was conducted upon the release of the 2001 Census data and was not replicated for 2006 Census data.

[29] For some analysis on internationally educated immigrants and education/skills and labour market outcomes, see Statistics Canada's report, Characteristics and Labour Market Outcomes of Internationally-educated Immigrants produced by the Culture, Tourism and the Centre for Education Statistics branch, September 2010.

While B.C. was the province of choice for 15% of immigrants who were educated in Canada, in 2006, it was home to 18% of immigrants with post-secondary qualifications. This could suggest that B.C. draws more educated immigrants who enter Canada with existing credentials, or perhaps, of those immigrants who studied in other provinces, more decided to move to British Columbia to pursue their careers upon completion of their certificates or degrees.

IMMIGRANT POPULATION WITH POST-SECONDARY QUALIFICATIONS, LOCATION OF CANADIAN STUDY BY PROVINCE, 2006



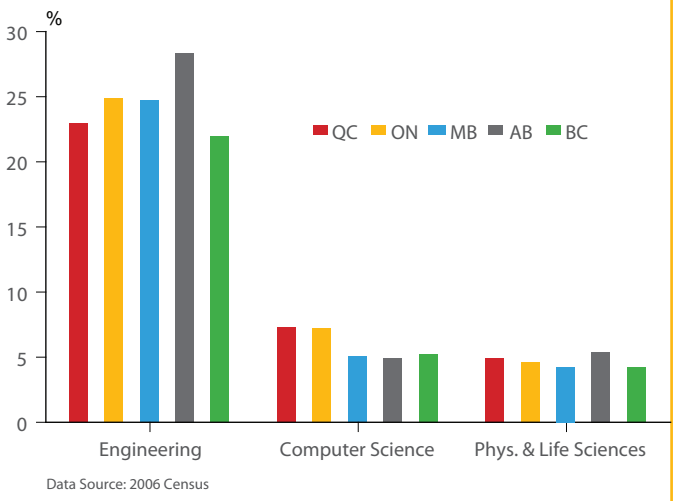
Data Source: 2006 Census

Fifteen percent of immigrants who received their post-secondary education in Canada studied at a B.C. institution

In 2006, nation-wide, nearly a quarter (24%) of immigrants with post-secondary educations of all types had received their education in the high tech-specific field of architecture, engineering and related technologies. A further seven percent studied math, computer and information sciences, while five percent were educated in physical and life sciences and technologies.

There is a slight variation among the designated provinces with regard to distribution of educational skill sets among immigrants. For example, Alberta appears to have a much larger share of immigrants who are educated in architecture and engineering (29%) than other provinces, while a much smaller proportion of immigrants in B.C. are educated in this field (22%). In the field of math, computer and information sciences, B.C. (5%) is on par with Alberta and Manitoba, but has a considerably smaller share of immigrants trained in this field than Quebec and Ontario (each 7%). The proportion of immigrants educated in physical and life sciences was more evenly distributed among the designated provinces, with the percentage of educated immigrants schooled in this discipline ranging from four percent in B.C. and Manitoba to six percent in Alberta.

SHARES OF IMMIGRANTS WITH POST-SECONDARY QUALIFICATIONS BY FIELD OF STUDY, 2006



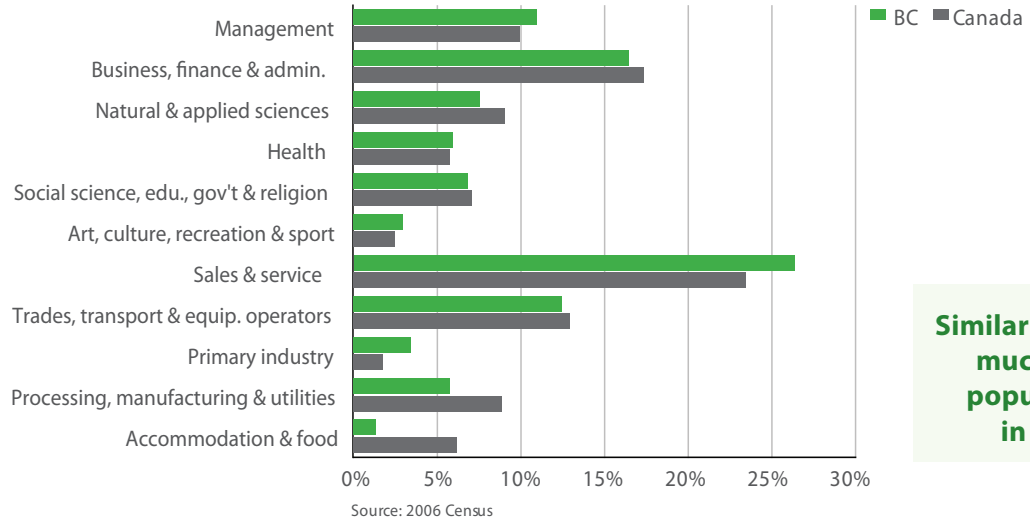
Data Source: 2006 Census

In terms of educational skill sets of immigrants, engineering makes up the largest share in each province

IMMIGRANTS AND OCCUPATION

Immigrants have long been an integral part of the existing labour force across the country. In 2006, over a quarter (27%) of British Columbia's working immigrants were employed in sales and service occupations, a higher ratio than that for the other designated provinces and for Canada as a whole (24%). Similarly, B.C.'s immigrants were more likely than those in the other designated provinces to work in management positions, and immigrant workers in the health care professions were slightly more common in B.C. than in the rest of the country. A substantially larger share of the immigrant workforce in Ontario was employed in business, finance and administration, while Quebec was the most strongly represented of the designated provinces in social science, education, government and religious occupations. Meanwhile, Alberta had a large proportion of immigrants working in the key high tech areas of natural and applied sciences, while Manitoba had a slightly elevated share of processing, manufacturing and utilities workers.

DISTRIBUTION OF IMMIGRANT WORKERS BY TYPE OF OCCUPATION, B.C. AND CANADA, 2006



Source: 2006 Census

Similar to Canada as a whole, much of the immigrant population in B.C. works in sales and service

INTER-PROVINCIAL MIGRATION

Why is this indicator important?

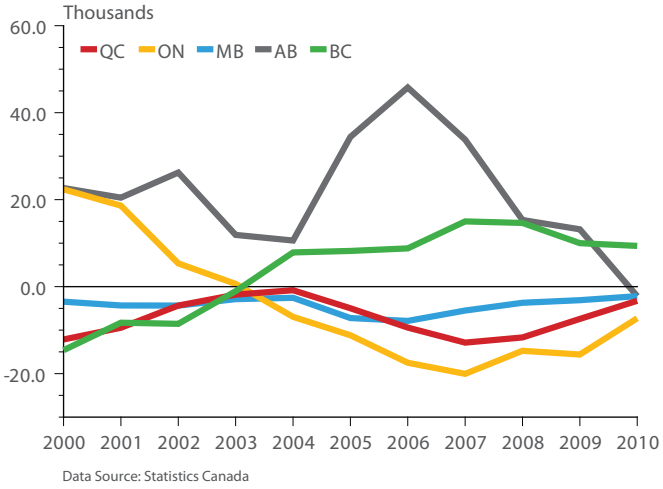
Canadian workers are much freer to move within the borders of the country than they are internationally. In aggregate, population movement between provinces is a general indicator of perceived economic opportunity and general attractiveness. Individuals and families often relocate for economic reasons. In this way, this indicator points to the overall perception of the strength of provincial economies and the labour pool from which employers can draw.

People seeking better economic opportunities contribute significantly to the pattern of inter-provincial migration in Canada. Net migration to B.C. peaked in 1993, with a net inflow of more than 40,000 people. However, the next year (1994) marked the beginning of a steep downward slide for migration to the province and, by the year 2000, there was a net outflow of more than 14,600 individuals, most of whom were headed to Alberta or Ontario. For many years, the migration patterns of B.C. and Alberta mirrored each other. However, over the last decade, net migration levels for B.C. and Ontario have shown a stronger correlation. Out-migration from B.C. eased in 2003 and the following year saw a solid inflow of inter-provincial migrants. Since then, inflow has remained stable and, in 2010,[30] the province experienced a net gain of nearly 9,400 migrants, marking the seventh consecutive year of net inter-provincial gains. British Columbia was also the only province among the designated provinces to see a net influx of residents from other parts of the country in 2010.

Over the last decade (2000 to 2010), Alberta experienced an annual net in-migration average of more than 21,100; over the same period, B.C. gained an average of just 3,760 residents from other provinces per year. In Ontario, population inflows in the late 1990s and early 2000s were reversed in 2004, and by 2007 there were more than 20,000 net out-migrants to other provinces. The exodus from Ontario has since slowed somewhat, such that, in 2010, the province lost far fewer residents than it had in previous years. Between 2000 and 2010 Ontario experienced an average annual net out-migration to other provinces of about 4,200 people, while Manitoba saw an average annual loss of close to 4,300. Although Manitoba's loss was similar to that of Ontario over the same period, given that the province is far less populated than Ontario to begin with, the long-term outcome could have a greater impact. Quebec has seen consistent net interprovincial out-migration for at least the past 20 years, losing an average of more than 7,100 people annually between 2000 and 2010.

[30] Dates for this indicator are in Census years, such that '2010' refers to the July 1st, 2009 to June 30th, 2010 period.

INDICATOR X-3
NET INTER-PROVINCIAL MIGRATION



Data Source: Statistics Canada

Inter-provincial migration to B.C. has somewhat mirrored that of Ontario in recent years

Immigration and inter-provincial migration play significant roles in the breadth of the labour pool from which employers can draw. It becomes especially relevant when one considers that most of B.C.'s high technology employers currently recruit from within the province. In fact, it has been estimated that 40% of such employers have their entire workforces drawn from within the province, and that 86% draw more than three-quarters of their workforce locally. Few companies (less than 10%) recruit outside North America. Many tech business owners feel that B.C. has a good pool of talent, albeit many recognize that additional experienced talent from outside of B.C. may be required to augment this base.[31]

[31] For more information on recruitment and labour practices in the high technology sector, see the BC Technology Industry Association's industry report: *Tech Talent BC Labour Trends*. February, 2010. http://www.bctia.org

HIGH TECHNOLOGY IMPORTS

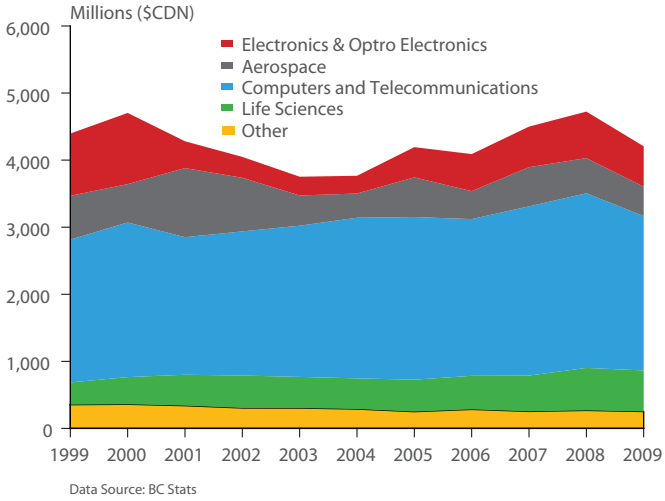
Why is this indicator important?

Although a heavy reliance on imports can create a negative trade balance (the difference between the value of goods exported and the value imported), imports of high technology goods are often essential to supply domestic supply chains that turn imports into future exports. For instance, without state-of-the-art telecommunications, the high technology sector as a whole would struggle. Similarly, purchases of computer integrated manufacturing technology would displace future imports of other goods, whether high technology or low technology, and could generate goods for export. More importantly, high technology imports are a key driver in productivity growth and enhancing competitiveness. Although some tech imports are consumer goods, such as smart phones, laptops, etc. for personal/household use, a significant portion is comprised of goods and services utilized by businesses operating in the high tech sector.

B.C.'s high technology sector relies on imports of high technology goods in order to thrive.[32] B.C. imports of high technology products were valued at $4.4 billion in 2009. Computers and telecommunications are the main component (58%) of high technology imports. Life sciences (13%) and aerospace (9%) also make up notable shares. Imports of electronics and opto-electronics have generally been expanding since 2004 and in 2010 comprised a combined 14% of overall high tech imports.[33]

Imports of high technology goods increased steadily in the 1990s, before starting to decline in 2002 and 2003 as the entire high tech sector went through a slump. Since then, high tech imports have fluctuated substantially, with 2009 (-10.9%) marking the first double-digit decline since at least 1990. In 2009, trade of most commodities between countries was deeply affected by the global economic recession, so it comes as no surprise that the high technology sector was also hard hit.

INDICATOR X-4
VALUE OF HIGH TECHNOLOGY IMPORTS TO B.C. ($ MILLION)



Data Source: BC Stats

Computers and telecommunication make up more than half of high technology imports in B.C.

[32] Note that imports have not been adjusted for inflation or exchange rate effects.

[33] For a description of what these commodity groups contain, see Appendix B of the *2010 Profile of the British Columbia High Technology Sector.*

Labour Indicators

Most of the indicators in this report are grouped according to the sector that provides or affects the input. However, in the case of labour input, indicators such as unemployment rates are not attributable to a single source sector. This section contains a set of indicators that are specific to the labour market but also represent a combined impact of the source sectors.

Nation-wide, rates of unemployment among workers in the natural and applied sciences are consistently well under those for the economy as a whole. In general, unemployment rates have been falling quite consistently since the early 1990s. The past decade has witnessed both the highs and lows of unemployment rates in B.C., from the labour shortage crisis of 2006-2008 to the onset of the economic slowdown that began in late 2008.

TABLE 6: QUICK SUMMARY OF INDICATORS FOR LABOUR

INDICATORS	Trend		Ranking	
	Long-Term	Latest Year	Five Designated Provs.	Overall
L-1: Unemployment rate for natural and applied sciences	→	↑	5 of 5	7 of 10
L-2: Research personnel per 100,000 population	↑	↑	3 of 5	3 of 10
L-3: Quality of life, Vancouver[∞]	→	→	n/a	4 of 235
L-4: Cost of living[×]	↓	→	n/a	3 of 6

[∞] The ranking compares Vancouver to 235 other cities worldwide.
[×] The ranking compares Vancouver to five other Canadian cities.

UNEMPLOYMENT RATE IN NATURAL AND APPLIED SCIENCES

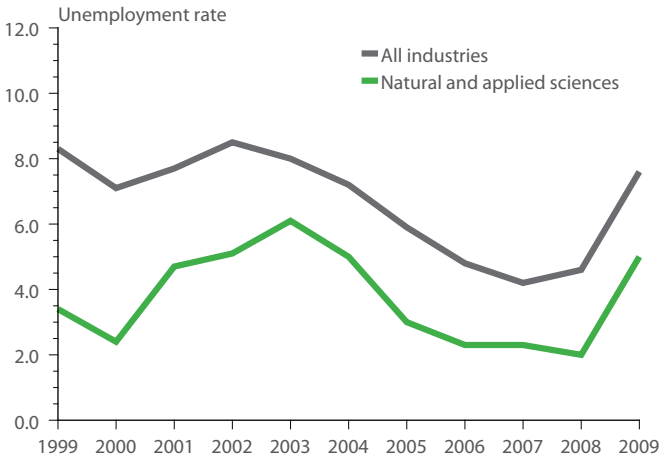
Why is this indicator important?

A low level of unemployment in natural and applied science occupations is desirable because some components of this group (e.g., computer scientists) are the engines of innovation in the high technology economy. Higher levels of unemployment in this group indicate idle intellectual capital, which has the effect of slowing the overall rate of innovation. Also, a lower ratio between the unemployment rate for natural and applied science occupations and the overall labour force indicates heightened demand for these specializations. This should attract high tech workers from other jurisdictions as well as more students into these areas. However, it should be noted that a low rate of unemployment may not always be seen as a positive, particularly from a labour-supply perspective. Given tight labour conditions, prospective employers may see appeal in a higher rate of unemployment in that it implies the existence of a larger labour pool from which to select employees.

Between 1999 and 2009, British Columbia's highest annual rate of unemployment for all occupations occurred in 2002, at 8.5%. Over the same period, the highest recorded overall unemployment rate for the nation as a whole was 8.3%, in 2009. In contrast, the peak rate of unemployment for natural and applied sciences in B.C. was 6.1% in 2003 and 4.6% for Canada in 2009. Clearly, over the past ten years, individuals employed in natural and applied science occupations have enjoyed an employment advantage compared to the labour force as a whole.

In 2009, the unemployment rate for natural and applied sciences in B.C. was 5.0%, slightly above the national average for the same year (4.6%). This is a marked jump from just one year earlier, when the province had its lowest high tech unemployment rate since at least 1990 (2.0% in 2008). In 2009, B.C.'s jobless rate for natural and applied science professions was the highest of all the designated provinces, while Manitoba boasted the lowest rate (2.4%). Although lower than B.C., Alberta (4.3%), which had the lowest unemployment rate for natural and applied sciences for much of the last decade, saw its rate climb notably (up from a mere 1.5% in 2008). Quebec and Ontario (4.5% and 4.9%, respectively, in 2009) also saw their rates jump between 2008 and 2009, though not to the same degree.

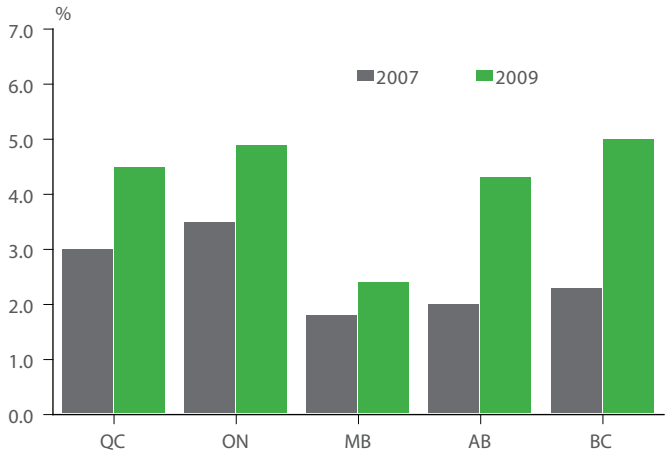
INDICATOR L-1
B.C. UNEMPLOYMENT RATE FOR NATURAL AND APPLIED SCIENCE OCCUPATIONS (%)



Data Source: Citizenship and Immigration Canada

Along with other industries, jobless rates for natural and applied sciences jumped in 2009

UNEMPLOYMENT RATE FOR NATURAL AND APPLIED SCIENCE, 2007 AND 2009 (%)



Data Source: Statistics Canada

The disparity in jobless rates in 2007 and 2009 reflects the effect of the labour crunch compared to that of the economic downturn

RESEARCH PERSONNEL

Why is this indicator important?

The absolute number of researchers and technicians engaged in research is an important determinant of the volume of scientific and technical discoveries that may result in patent applications, and later, in the birth of new firms or the growth of existing firms. The structure of the research workforce is also important in terms of the employment sector, whether federal government, provincial government, business enterprise or higher education. Each sector has different reasons for developing new technology and different methods of bringing new discoveries to market.

In 2007 (the latest year for which data are available), there were approximately 694 researchers per 100,000 persons working in the areas of government, business and higher education across the country.

Until 1998, B.C. lagged the other designated provinces, as well as the overall Canadian average, in terms of researchers per 100,000 population. However, since replacing Alberta as the third largest workforce of researchers and technicians per 100,000 persons in 2004, the province has held on to a rank of third. It has since made further advances and has managed to widen the gap between itself and Alberta substantially.

In 2007, British Columbia was home to 22,740 researchers (a 9.1% surge from 2006), making for a per capita research workforce of 528 per 100,000 persons. In the same year, Alberta's per capita research workforce dropped (from 444 to 430), as did Manitoba's (from 375 to 345). Meanwhile Ontario (799) and Quebec (908) continued to have by far the largest research workforce per 100,000. The total number of researchers in these provinces also increased in 2007, though not nearly at the same pace as in British Columbia. Ontario (+0.3% to 102,260 workers) maintained the largest research workforce in absolute numbers, followed by Quebec (+1.1% to 69,830). Manitoba's research and technician workforce shrank 7.2% (to 4,120) over the same period, while Alberta saw a more moderate decline (-0.7% to 15,090).

In 2007, as in previous years, business and higher education claimed the largest shares of Canadian research personnel (65.2% and 26.6%, respectively). Although business accounts for the largest proportion of the research workforce in each of the designated provinces, the proportions ranged from less than half (46.4%) of personnel in Manitoba to over two-thirds (70.3%) in Quebec.

Not surprisingly, due to the concentration of federal agencies in the National Capital Region (Ottawa), Ontario has a larger portion of federal research personnel (8.5%) than most provinces. However, the share of Manitoba's researchers working in federal government is even greater (13.3%).

Alberta's provincial government research workforce (5.6%) is four times that of the Canadian average (1.4%) and nearly six times higher than in British Columbia (0.9%).

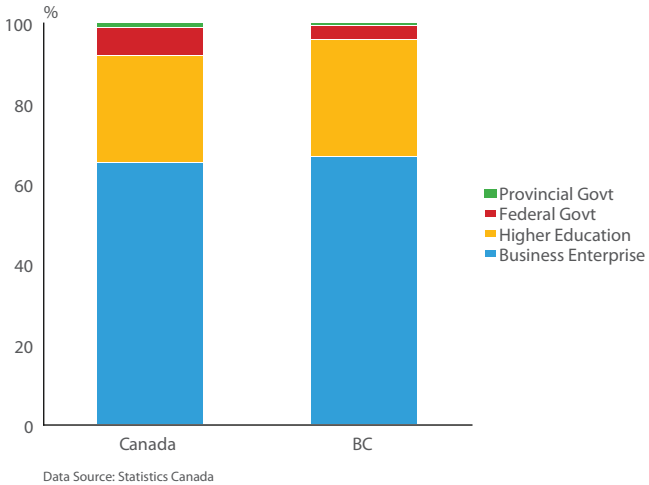
The share of researchers in the higher education sector in B.C. (29.1%) continued to be above that of Canada as a whole (26.6%), but remained much lower than for Alberta (41.2%) and Manitoba (38.6%).

INDICATOR L-2
TOTAL RESEARCH WORKFORCE PER 100,000 PERSONS, 2006 AND 2007

Data Source: Statistics Canada

B.C.'s research workforce expanded most notably among the designated provinces in 2007

STRUCTURE OF THE RESEARCH WORKFORCE BY SECTOR IN 2007



Data Source: Statistics Canada

Most of B.C.'s research workforce is found in the business sector

QUALITY OF LIFE

The indicator explained

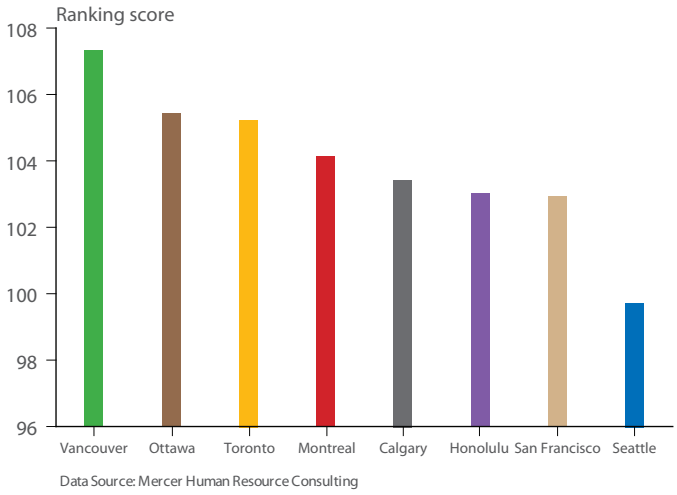
Mercer Human Resource Consulting—a large international management firm—developed "quality of life" scales to assist companies in determining hardship pay. Such allowances are often provided when a company sends employees to work in foreign (particularly third world) countries. The Mercer quality of life survey provides rankings based on 39 indicators, grouped into ten categories:

- **Political and social environment (political stability, crime, law enforcement, etc.)**
- **Economic environment (currency exchange regulations, banking services, etc.)**
- **Socio-cultural environment (censorship, limitations on personal freedom, etc.)**
- **Medical and health considerations (medical supplies and services, infectious diseases, sewage, waste disposal, air pollution, etc.)**
- **Schools and education (standard of schools)**
- **Public services and transportation (electricity, water, public transport, traffic, etc.)**
- **Recreation (restaurants, theatres, cinemas, sports and leisure, etc.)**
- **Consumer goods (availability of food, daily consumption items, cars, etc.)**
- **Housing (housing, household appliances, furniture, maintenance services, etc.)**
- **Natural environment (climate, record of natural disasters)**

Note that results of quality of life indices vary depending on methodologies used.

Vancouver, British Columbia is time and again ranked as having the highest overall quality of life in the Americas and even among the highest in the world. Although the province is made up of many diverse regions, cities and municipalities, as the most populous metropolitan area in the province, Vancouver's high ranking reflects favourably on B.C. as a whole.[34] Also, many of the quality of life variables are at equally high levels in most other parts of the province. The positive ranking for Vancouver bodes well for the entire province, in that it holds great potential to provide a competitive advantage in attracting high tech workers.

INDICATOR L-3
QUALITY OF LIFE INDEX SCORES, 2010 (NEW YORK = 100)



Data Source: Mercer Human Resource Consulting

Vancouver ranks first in the Americas on the quality of life scale

[34] The Mercer Human Resource quality of life scales give rankings only to large target urban centres. However, an urban centre's ranking can be quite representative of its surrounding regions.

In 2010, Vancouver's score of 107.4 on the overall quality of life index remains well above that of Ottawa (105.5), Toronto (105.3), Montreal (104.2) and Calgary (103.5). In terms of its global ranking among the 235 cities included in the study, Vancouver is fourth (tied with Auckland, New Zealand), far higher than Ottawa (14th), Toronto (16th), Montreal (21nd) and Calgary (28th).[35] Key American cities with which B.C. competes for high tech workers and firms (particularly Seattle and San Francisco) also rank considerably lower than B.C.'s largest city.

QUALITY OF LIFE INDEX SCORES, 2010 (NEW YORK = 100)

	Score	Global Rank	America's Rank
Vancouver	107.4	4	1
Ottawa	105.5	14	2
Toronto	105.3	16	3
Montreal	104.2	21	4
Calgary	103.5	28	5
Honolulu	103.1	31	6
San Francisco	103.0	32	7
Seattle	99.8	50	12

Source: Mercer Human Resource Consulting

COST OF LIVING

The indicator explained

The inter-city price index compares the cost of consumer goods and services in different parts of the country. The "all items" price index is based on a bundle of goods and services that represents the expenditure patterns of a hypothetical average Canadian household. The largest component of the all items index is shelter. This includes the cost of owned or rented housing and related expenses (insurance, electricity, fuel oil, etc.). Prices recorded are the full consumer price, including sales and excise taxes, and are based on a combined city average (100).

Note that this index does not reflect actual house prices.

Historically, the high quality of life in Vancouver has come with a price. Although the cost of living in Vancouver is still considerably higher than for many other cities in the country, in terms of general retail, the metropolitan centre has recently seen prices move closer to that of the average Canadian metropolitan centre.[36] In 2009, Vancouver was the fourth most expensive urban centre in Canada, for both general retail prices and for shelter costs.

With a rate of 101, retail prices in Vancouver were one point higher than the combined city average (100) in October 2009, unchanged from 2008. Meanwhile, Edmonton's rate climbed to 102 (up from 101 in 2008), such that it overtook Vancouver for the first time on record. Vancouver's rate remained above average, but was significantly below that for Ottawa (103) and Toronto (107). On the other end of the scale, Winnipeg (94) and Montreal (95) continued to enjoy lower than average retail prices.

Prices in Vancouver began to decline in 2007 (compared to the average) after having peaked in 2001, when, with an index of 106, Vancouver was the second most expensive city in the country. Between 2001 and 2009, retail prices dropped from six points to one point above average.

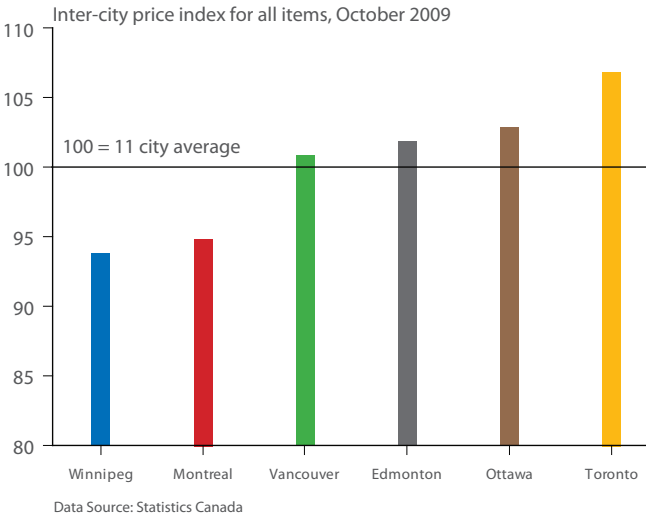
Shelter costs comprise the largest component of the inter-city price index. In 2009, Vancouver's cost for shelter was two points above average, the fourth highest in Canada. In Toronto, shelter costs were a substantial 15 points above average, while those in Montreal (11 points lower) and Winnipeg (15 points lower) were well below average.

[35] Data for Manitoba's largest city, Winnipeg, is unavailable at this time.

[36] Based on an average of the largest cities in each of the ten provinces as well as the nation's capital (11 cities total).

Despite a two point climb in 2009, perhaps due to the anticipation of the 2010 Olympics, the cost of shelter in Vancouver has declined considerably (compared to the combined city average) over the past several years. For example, in 2001, Vancouver's inter-city shelter price index was recorded as 10 points above the combined city average, markedly higher than in 2009.

INDICATOR L-4
RETAIL PRICES BY MAJOR CITY



Data Source: Statistics Canada

Retail prices in Vancouver are above those of the average metropolitan city in Canada, but lower than those in Edmonton, Ottawa and Toronto

Conclusion

Relative to other parts of the country, British Columbia fares reasonably well with regard to providing an environment that will attract high technology businesses.

In terms of educational attainment, despite B.C. falling in the mid-range of provinces for most of these indicators, the province has experienced an overall upward, improving trend in most areas. B.C. leads the country in technology adoption and the province's top university (UBC) continues to outperform most of the nation's other G-13 institutions in licensing, patents and start-up companies. Conversely, there remains room for improvement in some of the performance indicators, particularly in higher education performance of R&D.

In the business sector, B.C. has seen a general increase in patents granted in recent years, but due in part to declines in the most recent reporting years, sits below several other provinces. Companies in the high tech sector appear to have taken a hit as a result of the economic downturn of 2008 and 2009, with fewer entries and high growth companies emerging and an increase in business exits. On the other hand, the province's investment in venture capital has begun to regain momentum, with recent increases in overall investment, provincial and per capita shares. British Columbia's business sector has also shown promise in investment in ICT and performance of R&D, such that both indicators have strengthened in recent years, although B.C. still lags all other designated provinces with respect to investment in ICT.

With the exception of performance of R&D, the province's government sector ranks relatively well compared to other provinces, particularly with regard to its comparatively low tax rates for business.

The province's immigrant population is well educated, but overall immigrant education levels lag many other provinces, especially in recent years. However, B.C. appears to be expanding its general labour pool substantially, ranking top in the country in net interprovincial migration in 2010. High tech imports declined in the same year, as the industry struggled in the face of the slowdown in the economy.

Although the province's unemployment rate for natural and applied sciences is somewhat high compared to several other provinces, B.C.'s research workforce remains strong and continues to expand. In terms of attracting workers, Vancouver is still one of the most desirable metropolitan cities to call home, but this comes at a price, as its cost of living index exceeds that of some of its counterparts in other provinces.

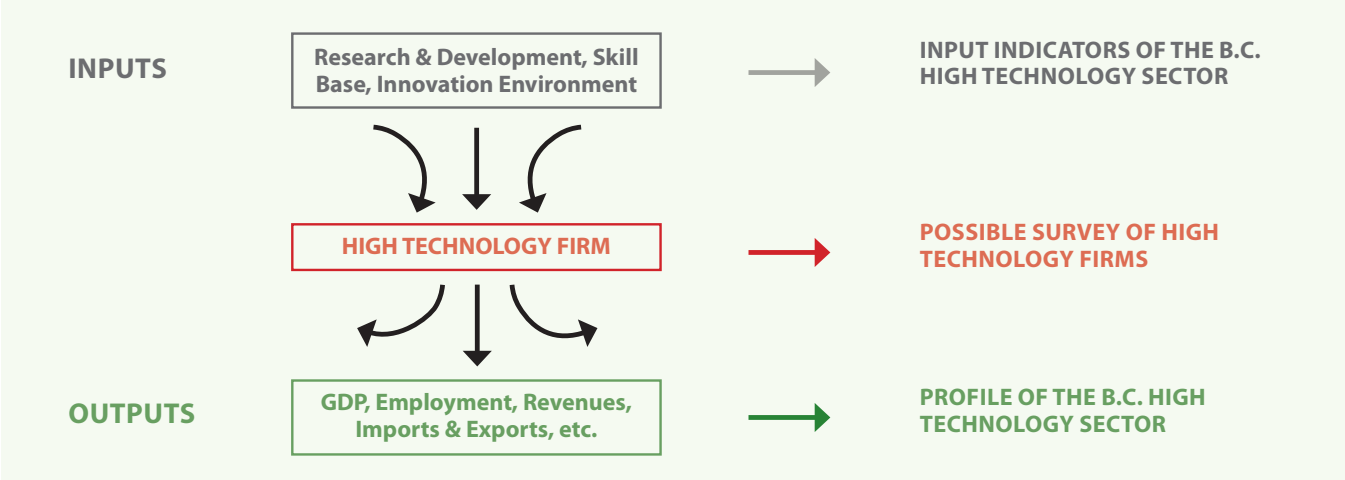
Given the importance of the high technology sector in today's global community, along with the potential for boosting business and employment in the province, the environment that B.C. provides is of high significance. If B.C.'s high technology sector is to continue to grow, there must be a continuing effort to ensure that the province maintains the right environment to attract high technology businesses.

APPENDIX I

BC STATS' SECTOR MODEL

In BC Stats' model of the high technology sector (see "Modeling the High Technology Sector," below), the firm is the centre of the system of high technology production. The firm receives inputs, in the form of labour, physical and financial capital, raw materials and parts, and knowledge. Knowledge may be embodied in labour (human capital) or other inputs, or it may come in the form of patents and copyrights, books and electronic information, etc. Through its internal operations, the firm then produces outputs. These outputs are products and services, and (in some views) also include employment and other benefits to society. This firm-centred view underlies BC Stats' publication strategy for high technology sector information, as shown in the diagram below.

TABLE 7: BC STATS' PRODUCTS FOR MONITORING THE HIGH TECHNOLOGY SECTOR



WHAT IS AN INDICATOR?

The concept of indicators is well understood in the operation of machines. For instance, the dashboard of a car has many indicators. The speedometer measures the main output, which is forward motion. However, gauges such as oil pressure and water temperature assess how well the engine is working as a system. They predict the engine's future performance, and may suggest the need for specific adjustments.

Predicting the future, in terms of the economy, requires an examination of the chain of events that leads to the production of specific outputs and the development of indicators for those steps in the chain judged to be most important. Similarly, predicting the future of the high technology sector requires the development of a model of what drives growth in the sector, and then obtaining indicators for each component of the model.

In selecting indicators, consideration must be given not only to their place in a growth model of the high technology sector, but also to their accuracy and availability. Indicators should meet other tests as well. In the annual (since 1997) *Index of the Massachusetts Innovation Economy*,[37] all potential indicators are subject to a set of five criteria. The indicators selected for inclusion in the report are:

- Derived from objective and reliable data sources,
- Statistically measurable on an ongoing basis,
- Bellwethers that reflect the fundamentals of economic vitality,
- Understood and accepted by the community, and
- Measurements of conditions in which there is an active public interest.

These criteria help ensure that the indicators become relevant to politicians and citizens as well as to statisticians, and have thus been adopted for this report as well.

[37] Collaborative Economics and Massachusetts Technology Collaborative, *Index of the Massachusetts Innovation Economy*, 2009. Available at: www.masstech.org

MODELING THE HIGH TECHNOLOGY SECTOR

In 1998, BC Stats, the Information, Science and Technology Agency of British Columbia, and the Science Council of British Columbia began a collaboration to devise a model of the B.C. high technology sector, with an associated set of indicators. This resulted in two working papers. The first reviewed definitions of the high technology sector and models of the innovation economy in other jurisdictions, while the second proposed a model for use in B.C., together with a large number of potential indicators for that model.[38] Subsequently, BC Stats has simplified the model and prepared a corresponding shorter list of indicators. The simplified model and indicators form the basis for this publication.

The traditional model of economic production focuses on land, labour and capital, which are the "factors of production" or inputs into the production process. These factors are transformed by firms, other organizations, or individuals into valued goods and services. GDP is the main measure of that value and is the most common statistic used to describe the production of economic sectors. This traditional model can be thought of as an input/output view of the economy. The inputs are obtained from a variety of sources and enter a production process, resulting in outputs.[39]

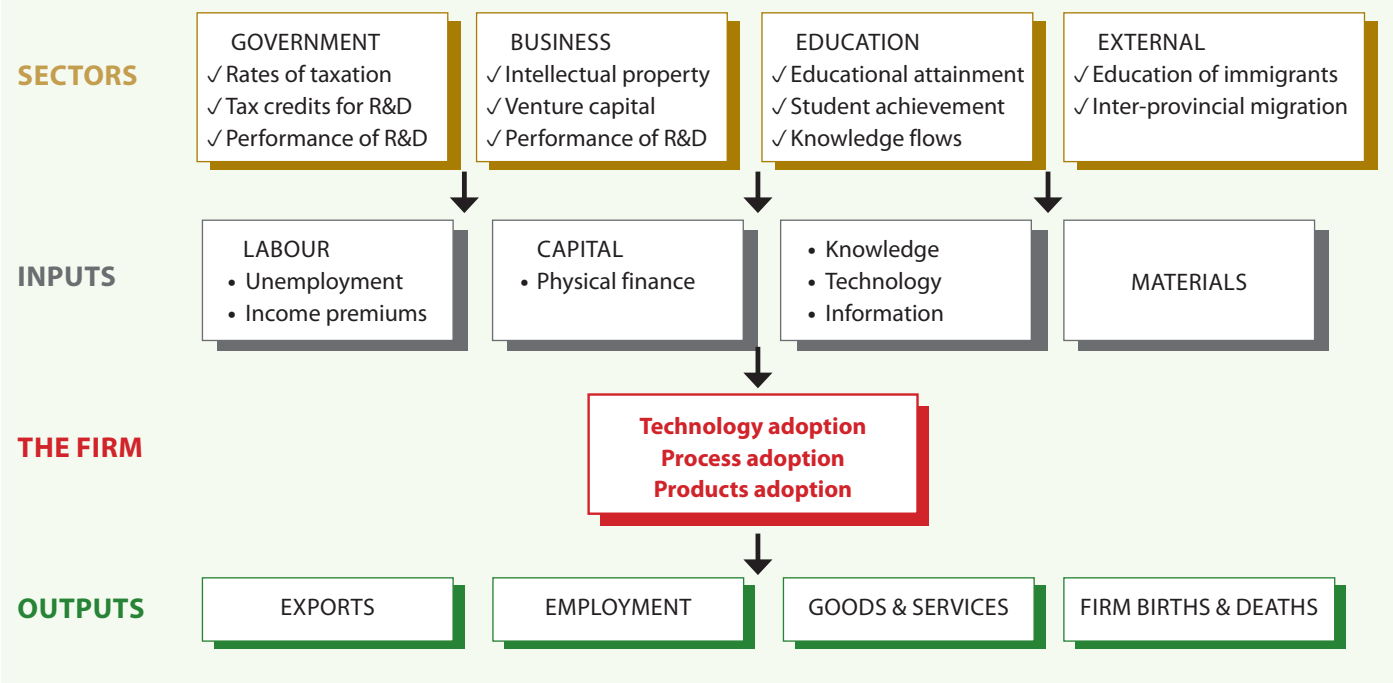
The advent of the "information economy" has added a new dimension to traditional economic production, and some efforts to describe it seem quite new as well. However, the input/output view can readily be adapted to the information economy. In the model above, the firm is at the centre of the productive system. As in the traditional model, the firm receives inputs; however, knowledge, technology and information are distinguished as a unique category. This can include patents and copyrights, software, information on production methods, etc. In addition, it is recognized that the other factors–labour, capital and materials–each have critical and increasing quantities of knowledge embodied in them.

The diagram then looks beyond the production inputs, to analyze their sources (the top row of boxes). For example, skilled labour may come from training courses in educational institutions, from in-house training, or from other provinces or countries. The sources for the inputs have been categorized as four "sectors." Within each sector, particular areas that bear on the production inputs are identified. These areas are the ones for which indicator variables have been sought out. The areas listed in bold, and checked, are the ones for which data are available and have been collected by BC Stats.

[38] Koebberling, Uschi and Veneranda Dettmers, "A Model of the BC High Technology Sector: Description of Factors and Linkages Affecting the Growth of the High Technology Sector in the Context of an Innovation Economy," Science Council of BC, April 1999. Available at www.llbc.leg.bc.ca/public/pubdocs/bcdocs/358283/high_technology.pdf

[39] This is also referred to as the neoclassical model. See Lipsey, Richard G. and Kenneth Carlaw, "A Structuralist Assessment of Technology Policies—Taking Schumpeter Seriously on Policy," Working Paper #25, Industry Canada, Research Publications Program, October 1998. Available at www.ic.gc.ca/eic/site/eas-aes.nsf/eng/ra01700.html

TABLE 7: BC STATS' PRODUCTS FOR MONITORING THE HIGH TECHNOLOGY SECTOR



While the indicator variables have normally been sought out at the level of the source sectors, certain labour indicators, such as the unemployment rate, are not attributable to a single source sector. Such indicators have been grouped in a separate "labour" section.

Once the inputs are obtained by the firm, they are transformed in a way that depends on the firm's many characteristics. Some of the characteristics of most importance for high technology firms are listed within the "firm" box in the diagram.[40]

Finally, the firm produces and sells goods and services, some of which are consumed locally, while the remainder are exported, as depicted in the bottom row. It should be recognized that even with a simplified model such as the one set out here, it is possible to imagine a large number of interactions. That is, almost every box or element within the boxes could be joined by an arrow to every other box or element. In turn, a complete statistical system based on the model would track the flows of people, dollars or information along each of the pathways (arrows). Such a comprehensive approach is neither practical, nor would it necessarily lead to greater understanding and better policy. However, statistics are available on a significant number of the interactions, providing a strong database for future research.[41]

[40] For an in-depth study of uses of knowledge within high technology firms, see Canada's 2002 Innovation Strategy reports: *Knowledge Matters: Skills and Learning for Canadians and Achieving Excellence: Investing in People, Knowledge and Opportunity* available at http://publications.gc.ca/site/eng/108190/publication.html and Schuetze, Hans, I*nnovation, Skills, and Learning: A Study of Knowledge and Human Resources Management in Small and Medium Sized Enterprises in British Columbia,* Centre for Policy Studies in Education, University of British Columbia, March 1998.

[41] For a deeper look at innovation and performance of Canadian businesses, see Industry Canada's report, *Innovation and Business Strategy: Why Canada Falls Short*, produced by the Expert Panel on Business Innovation in conjunction with the Council of Canadian Academies, June 2009.

APPENDIX II

DEFINITIONS OF THE HIGH TECHNOLOGY SECTOR

The table below describes the North American Industry Classification System-based definition of the High Tech Sector in British Columbia. This is the most recent definition developed to describe B.C.'s high technology sector. More detail on the industries and why they are included can be found in *Profile of the British Columbia High Technology Sector*, which is available at: http://www.bcstats.gov.bc.ca.

TABLE 7: BC STATS' PRODUCTS FOR MONITORING THE HIGH TECHNOLOGY SECTOR

NAICS	INDUSTRY
Manufacturing Industries	
325189	Other Inorganic Chemicals
325410	Pharmaceutical and Medicine
333310	Commercial and Service Industry
334110	Computer and Peripheral
334210	Telephone Apparatus
334220	Radio, Television Broadcasting & Wireless Communications Equipment
334290	Other Communications Equipment
334310	Audio and Video Equipment
334410	Semiconductor and Other Electronic Components
334511	Navigational and Guidance Instruments
334512	Measuring, Medical and Controlling Devices
334610	Manufacturing and Reproducing Magnetic and Optical Media
335315	Switchgear and Switchboard, and Relay and Industrial Control Apparatus
335920	Communication and Energy Wire and Cable
335990	All Other Electrical Equipment and Component
336410	Aerospace Products and Parts
339110	Medical Equipment and Supplies

NAICS	INDUSTRY
Service Industries	
511210	Software Publishers
512110	Motion Picture and Video Production
512190	Post-Production and Other Motion Picture and Video Industries
515210	Pay and Specialty Television
517111	Wired Telecommunications Carriers (Except Cable)
517112	Cable and Other Program Distribution
517210	Wireless Telecommunications Carriers (Except Satellite)
517410	Satellite Telecommunications
517910	Other Telecommunications
518210	Data Processing, Hosting and Related Services
519130	Internet Publishing and Broadcasting, and Web Search Portals
541330	Engineering
541360	Geophysical Surveying and Mapping Services
541370	Surveying and Mapping (Except Geophysical) Services
541380	Testing Laboratories
541510	Computer Systems Design and Related
541620	Environmental Consulting
541690	Other Scientific and Technical Consulting
541710	Research and Development in Physical, Engineering and Life Sciences
541720	Research and Development in the Social Sciences and Humanities

APPENDIX III: Detailed Tables

EDUCATIONAL INDICATORS

Indicator E-1
PERCENTAGE OF THE POPULATION AGED 15 YEARS AND OLDER WITH A HIGH SCHOOL DIPLOMA

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	71.5%	72.6%	73.6%	74.4%	75.7%	76.3%	77.1%	77.4%	78.4%	79.0%	79.6%
NL	61.4%	62.7%	63.7%	65.8%	67.9%	67.2%	68.7%	69.6%	70.2%	70.6%	71.5%
PE	63.5%	64.8%	67.2%	69.6%	69.9%	70.5%	71.8%	72.1%	72.7%	73.0%	74.6%
NS	68.1%	69.1%	70.9%	70.9%	72.4%	73.2%	74.1%	74.3%	75.6%	75.4%	76.1%
NB	66.6%	67.0%	68.6%	69.7%	71.2%	71.8%	72.2%	73.5%	73.7%	74.5%	75.3%
QC	67.2%	68.0%	68.9%	70.1%	71.8%	72.3%	73.5%	74.1%	75.2%	75.7%	76.1%
ON	73.1%	74.3%	75.2%	76.0%	77.3%	77.9%	78.4%	78.8%	79.8%	80.3%	80.7%
MB	68.5%	70.1%	71.2%	72.1%	73.0%	73.8%	74.5%	74.7%	75.0%	76.7%	77.4%
SK	67.9%	69.4%	70.2%	71.3%	73.2%	73.7%	74.7%	74.9%	75.7%	76.7%	78.0%
AB	75.1%	75.9%	77.3%	77.9%	78.2%	78.7%	80.2%	80.2%	81.2%	81.4%	82.4%
BC	76.7%	77.9%	78.7%	79.0%	80.0%	80.6%	80.8%	80.6%	81.5%	82.5%	83.3%

Source: Statistics Canada

Indicator E-2
PERCENTAGE OF THE POPULATION AGED 15 YEARS AND OLDER WITH POST-SECONDARY CREDENTIALS

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	41.3%	41.5%	43.0%	43.8%	44.8%	45.2%	46.6%	47.5%	48.5%	48.9%	49.4%
NL	37.5%	38.1%	39.3%	40.9%	43.1%	42.2%	43.8%	42.8%	43.7%	45.0%	46.7%
PE	38.6%	38.6%	41.2%	42.3%	43.4%	45.7%	45.1%	45.1%	44.8%	44.4%	45.9%
NS	43.3%	43.5%	45.5%	44.8%	46.0%	47.3%	46.9%	46.8%	47.2%	46.4%	48.8%
NB	37.7%	37.8%	39.1%	38.8%	39.8%	41.3%	41.5%	43.0%	43.4%	45.2%	45.4%
QC	42.3%	42.5%	43.7%	45.2%	46.8%	47.4%	49.1%	50.2%	51.0%	51.0%	51.3%
ON	41.8%	42.3%	43.9%	44.7%	45.5%	46.0%	47.8%	49.0%	50.3%	50.6%	50.9%
MB	37.1%	36.8%	37.6%	37.7%	38.4%	38.3%	39.0%	39.0%	38.6%	40.3%	41.1%
SK	34.8%	35.3%	36.4%	36.9%	39.2%	38.6%	39.4%	39.4%	40.0%	40.4%	41.2%
AB	42.5%	42.2%	44.8%	45.2%	44.4%	44.1%	45.5%	45.6%	47.0%	47.8%	48.8%
BC	41.9%	41.8%	42.6%	43.0%	44.0%	45.1%	45.7%	46.4%	47.7%	48.4%	48.3%

Source: Statistics Canada

Indicator E-3, Table a
CANADA-WIDE RANK OF 13-YEAR OLD ACHIEVEMENT IN SCIENCE*

	2007	2007 rank
Newfoundland and Labrador	485	6
Prince Edward Island	464	10
Nova Scotia	480	7
New Brunswick	564	1
Quebec	511	3
Ontario	499	4
Manitoba	476	9
Saskatchewan	480	7
Alberta	524	2
British Columbia	488	5

*2007 is the latest year for which information is available.
Source: Council of Ministers of Education, Canada

Indicator E-3, Table b
CANADA-WIDE RANK OF 13-YEAR OLD ACHIEVEMENT IN MATHEMATICS*

	2007	2007 rank
Newfoundland and Labrador	478	6
Prince Edward Island	450	10
Nova Scotia	457	9
New Brunswick	461	7
Quebec	517	1
Ontario	506	2
Manitoba	479	5
Saskatchewan	461	7
Alberta	499	3
British Columbia	484	4

*2007 is the latest year for which information is available.
Source: Council of Ministers of Education, Canada

Indicator E-4, Table a
TOTAL UNDERGRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	591.3	586.1	586.0	581.9	596.7	624.9	649.3	653.7	677.7	718.1	690.6
NL	609.5	619.9	575.0	577.5	575.0	591.7	593.3	614.6	694.6	695.8	665.9
PE	376.4	489.7	475.5	537.3	479.1	540.1	570.2	628.9	612.9	645.9	655.5
NS	890.2	854.0	854.8	819.9	833.0	912.7	953.3	956.5	1024.7	1076.2	958.8
NB	594.5	580.7	578.1	586.7	629.3	646.4	689.8	734.3	772.0	738.1	752.8
QC	693.1	686.9	663.5	663.7	695.7	728.0	758.9	765.4	757.6	749.7	743.0
ON	607.0	591.4	595.8	592.4	598.5	629.8	653.8	677.6	713.6	818.9	767.8
MB	559.2	535.3	525.5	528.2	516.8	565.0	596.5	584.6	626.1	633.8	663.4
SK	562.5	576.0	605.0	595.5	600.8	612.7	600.6	379.2	378.2	373.8	365.5
AB	481.1	486.5	493.0	511.3	537.6	553.7	572.9	549.4	547.8	553.9	505.8
BC	400.3	423.7	452.4	425.0	436.0	446.7	469.2	482.1	534.0	536.8	551.3

*2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-4, Table b
TOTAL UNDERGRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	143,079	143,493	145,347	146,433	152,301	161,487	170,031	173,541	182,478	196,125	191,340
NL	2,679	2,709	2,502	2,499	2,487	2,565	2,577	2,667	3,003	2,991	2,865
PE	405	531	519	591	531	603	642	714	699	741	762
NS	6,723	6,492	6,525	6,279	6,429	7,095	7,461	7,515	8,094	8,508	7,611
NB	3,630	3,561	3,561	3,627	3,903	4,023	4,308	4,596	4,839	4,638	4,752
QC	41,196	41,136	40,056	40,425	42,732	45,084	47,442	48,324	48,348	48,354	48,438
ON	55,149	54,534	55,950	56,805	58,527	62,607	66,042	69,507	74,286	86,454	82,218
MB	5,001	4,821	4,767	4,824	4,755	5,247	5,604	5,538	5,982	6,117	6,477
SK	4,452	4,569	4,791	4,707	4,752	4,866	4,797	3,033	3,033	3,027	3,003
AB	10,908	11,295	11,709	12,429	13,434	14,133	14,943	14,757	15,204	15,843	14,823
BC	12,933	13,848	14,958	14,244	14,751	15,255	16,215	16,893	18,990	19,452	20,385

*2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-5, Table a
TOTAL GRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	117.4	120.4	123.9	123.4	129.7	142.0	156.5	156.1	158.9	164.1	168.9
NL	72.3	92.0	98.6	83.9	95.0	94.1	122.9	105.8	137.4	138.2	124.1
PE	-	11.1	13.7	13.6	24.4	21.5	29.3	29.1	78.9	49.7	59.4
NS	130.3	164.2	145.4	161.4	167.1	193.7	240.7	236.0	243.1	235.3	259.6
NB	65.4	68.0	76.0	74.2	76.4	78.6	93.7	94.4	89.0	91.2	97.9
QC	166.1	164.1	178.7	176.1	183.6	205.1	220.3	232.0	226.9	237.6	245.0
ON	116.7	119.2	118.4	118.1	123.3	132.0	139.6	141.6	141.8	146.1	157.6
MB	71.1	68.9	63.2	62.7	79.9	63.3	69.0	77.9	78.5	86.1	84.8
SK	81.1	80.6	86.8	87.7	86.5	91.0	90.1	65.3	65.1	64.5	71.9
AB	92.5	97.6	98.5	109.3	116.6	120.0	144.1	121.3	143.4	142.4	125.8
BC	88.1	93.9	97.2	89.3	95.5	118.9	143.0	137.6	144.1	153.3	150.4

- Nil or less than 5 *2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-5, Table b
TOTAL GRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	28,395	29,487	30,741	31,047	33,105	36,693	40,971	41,445	42,777	44,823	46,794
NL	318	402	429	363	411	408	534	459	594	594	534
PE	3	12	15	15	27	24	33	33	90	57	69
NS	984	1,248	1,110	1,236	1,290	1,506	1,884	1,854	1,920	1,860	2,061
NB	399	417	468	459	474	489	585	591	558	573	618
QC	9,873	9,825	10,791	10,728	11,277	12,699	13,770	14,649	14,481	15,327	15,969
ON	10,599	10,989	11,115	11,328	12,060	13,125	14,097	14,520	14,763	15,426	16,881
MB	636	621	573	573	735	588	648	738	750	831	828
SK	642	639	687	693	684	723	720	522	522	522	591
AB	2,097	2,265	2,340	2,658	2,913	3,063	3,759	3,258	3,981	4,074	3,687
BC	2,847	3,069	3,213	2,994	3,231	4,062	4,941	4,821	5,124	5,556	5,562

*2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-6 (a), Table a
ARCHITECTURE, ENGINEERING AND RELATED TECHNOLOGY UNDERGRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	41.3	40.3	41.3	42.2	43.3	46.6	47.4	46.5	48.0	50.4	49.2
NL	30.0	30.9	29.0	37.4	41.6	50.5	55.9	57.4	70.8	80.3	60.7
PE	13.9	-	-	27.3	13.5	18.8	26.6	18.5	31.6	18.3	23.2
NS	84.6	72.6	61.7	56.4	56.7	65.6	62.5	72.2	77.1	74.8	80.5
NB	60.9	39.1	42.4	38.3	32.4	32.8	35.1	37.9	45.0	45.8	55.1
QC	50.7	51.6	49.5	52.8	51.1	55.2	59.6	59.0	58.5	60.9	59.4
ON	44.2	42.2	44.6	45.5	49.0	52.7	52.1	51.5	53.1	57.6	54.2
MB	27.2	23.6	22.8	24.3	24.5	24.6	28.4	25.3	27.9	25.8	30.4
SK	32.6	34.8	43.6	44.0	44.8	48.0	45.4	31.9	31.8	31.5	34.3
AB	32.8	32.2	37.5	37.4	41.2	43.6	40.5	38.4	37.7	38.5	40.3
BC	17.5	21.8	23.1	21.0	19.6	21.0	21.4	21.1	23.6	25.3	24.4

- Nil or zero *2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-6 (a), Table b

ARCHITECTURE, ENGINEERING AND RELATED TECHNOLOGY UNDERGRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	9,993	9,855	10,239	10,614	11,040	12,042	12,405	12,348	12,915	13,773	13,623
NL	132	135	126	162	180	219	243	249	306	345	261
PE	15	-	-	30	15	21	30	21	36	21	27
NS	639	552	471	432	438	510	489	567	609	591	639
NB	372	240	261	237	201	204	219	237	282	288	348
QC	3,012	3,087	2,988	3,216	3,141	3,417	3,729	3,726	3,735	3,927	3,873
ON	4,017	3,894	4,185	4,359	4,791	5,235	5,265	5,283	5,532	6,078	5,808
MB	243	213	207	222	225	228	267	240	267	249	297
SK	258	276	345	348	354	381	363	255	255	255	282
AB	744	747	891	909	1,029	1,113	1,056	1,032	1,047	1,101	1,182
BC	567	714	765	705	663	717	741	738	840	915	903

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-6 (b), Table a

ARCHITECTURE, ENGINEERING AND RELATED TECHNOLOGY GRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	12.5	12.0	12.4	12.5	14.3	16.6	19.6	20.1	19.7	19.6	19.8
NL	12.3	9.6	6.9	7.6	7.6	9.0	8.3	7.6	13.9	16.1	14.6
PE	-	-	-	-	-	-	-	-	-	-	-
NS	8.7	11.0	8.6	14.1	16.3	15.8	26.1	24.4	20.9	16.7	17.0
NB	7.4	7.3	9.3	7.8	6.8	9.2	12.5	15.8	14.4	12.9	10.5
QC	16.1	15.3	18.3	16.7	17.5	22.2	26.8	30.3	28.9	26.5	28.0
ON	12.2	11.8	11.5	12.3	14.8	17.3	19.5	19.5	19.1	19.4	20.5
MB	15.8	12.0	10.3	11.5	18.6	12.0	14.7	15.5	13.8	16.8	14.7
SK	11.0	9.5	9.9	10.2	10.2	10.2	14.3	9.4	9.4	9.3	8.0
AB	10.2	11.5	10.2	11.8	14.5	15.7	21.5	16.4	18.9	24.2	19.9
BC	10.7	9.6	9.6	8.9	9.2	11.1	10.4	12.2	11.6	10.3	11.1

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-6 (b), Table b

ARCHITECTURE, ENGINEERING AND RELATED TECHNOLOGY GRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	3,033	2,946	3,066	3,156	3,648	4,284	5,142	5,337	5,292	5,352	5,481
NL	54	42	30	33	33	39	36	33	60	69	63
PE	-	-	-	-	-	-	-	-	-	-	-
NS	66	84	66	108	126	123	204	192	165	132	135
NB	45	45	57	48	42	57	78	99	90	81	66
QC	957	918	1,107	1,017	1,074	1,377	1,674	1,914	1,845	1,707	1,827
ON	1,107	1,089	1,080	1,176	1,443	1,722	1,974	2,004	1,986	2,052	2,190
MB	141	108	93	105	171	111	138	147	132	162	144
SK	87	75	78	81	81	81	114	75	75	75	66
AB	231	267	243	288	363	402	561	441	525	693	582
BC	345	315	318	297	312	378	360	429	414	375	411

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-7 (a), Table a

MATHEMATICS, COMPUTER AND INFORMATION SCIENCES UNDERGRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	23.1	25.3	28.3	29.6	31.8	33.2	32.7	28.5	25.8	22.8	20.6
NL	23.9	26.1	18.6	30.5	27.7	24.9	18.0	24.9	17.3	16.1	14.6
PE	-	8.3	5.5	8.2	13.5	10.7	13.3	15.9	10.5	10.5	15.5
NS	33.0	34.3	36.2	30.9	33.8	41.3	40.6	43.5	34.9	25.0	25.7
NB	19.7	22.5	22.4	30.6	33.9	32.8	31.7	31.6	23.0	19.1	16.6
QC	27.5	31.9	34.9	33.8	35.0	32.9	29.3	24.0	21.1	18.5	17.3
ON	25.8	27.5	31.1	33.8	38.3	40.4	42.5	34.9	33.5	29.8	26.8
MB	24.2	22.0	24.1	21.4	13.4	13.2	19.5	15.8	17.0	14.0	15.7
SK	23.1	24.6	33.3	33.8	35.7	29.5	27.8	14.6	14.6	14.4	8.4
AB	14.2	16.3	15.4	20.0	20.5	23.3	19.8	24.0	18.3	16.6	12.8
BC	13.3	14.0	19.0	18.4	20.9	27.1	26.0	25.5	23.5	20.9	19.4

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-7 (a), Table b

MATHEMATICS, COMPUTER AND INFORMATION SCIENCES UNDERGRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	5,595	6,192	7,008	7,437	8,121	8,574	8,553	7,572	6,954	6,225	5,697
NL	105	114	81	132	120	108	78	108	75	69	63
PE	-	9	6	9	15	12	15	18	12	12	18
NS	249	261	276	237	261	321	318	342	276	198	204
NB	120	138	138	189	210	204	198	198	144	120	105
QC	1,635	1,908	2,109	2,061	2,151	2,040	1,833	1,518	1,344	1,191	1,128
ON	2,343	2,538	2,925	3,240	3,741	4,011	4,293	3,582	3,483	3,147	2,865
MB	216	198	219	195	123	123	183	150	162	135	153
SK	183	195	264	267	282	234	222	117	117	117	69
AB	321	378	366	486	513	594	516	645	507	474	375
BC	429	456	627	618	708	927	900	894	834	759	717

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-7 (b), Table a

MATHEMATICS, COMPUTER AND INFORMATION SCIENCES GRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	5.7	6.2	5.8	6.2	7.2	7.8	9.1	9.2	9.0	8.7	8.7
NL	1.4	2.1	2.1	2.1	2.1	2.8	2.1	1.4	5.6	4.9	5.6
PE	-	-	-	-	-	-	-	-	-	-	-
NS	7.9	22.9	12.2	8.6	9.7	12.0	14.2	17.9	15.6	12.1	12.8
NB	4.9	4.9	4.4	4.4	6.8	6.7	4.3	7.2	6.2	8.6	5.7
QC	7.3	7.8	8.3	9.1	10.2	10.9	11.4	11.4	10.7	10.2	9.8
ON	5.7	5.9	5.7	6.1	7.1	7.7	9.4	9.9	9.5	9.1	10.0
MB	2.7	2.7	2.6	1.3	1.6	2.3	2.6	2.9	2.8	3.1	2.5
SK	4.5	3.4	4.2	2.7	3.8	3.0	5.3	2.3	2.2	2.2	2.6
AB	4.8	3.9	3.7	4.3	5.8	6.7	9.3	7.7	9.5	8.2	7.7
BC	4.6	4.9	3.8	5.8	6.2	6.6	7.6	7.2	7.5	8.1	7.1

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-7 (b), Table b

MATHEMATICS, COMPUTER AND INFORMATION SCIENCES GRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	1,368	1,521	1,440	1,572	1,848	2,019	2,376	2,439	2,436	2,367	2,412
NL	6	9	9	9	9	12	9	6	24	21	24
PE	-	-	-	-	-	-	-	-	-	-	-
NS	60	174	93	66	75	93	111	141	123	96	102
NB	30	30	27	27	42	42	27	45	39	54	36
QC	435	465	504	552	627	672	711	720	684	660	642
ON	522	543	537	585	696	762	948	1,017	987	960	1,071
MB	24	24	24	12	15	21	24	27	27	30	24
SK	36	27	33	21	30	24	42	18	18	18	21
AB	108	90	87	105	144	171	243	207	264	234	225
BC	150	159	126	195	210	225	261	252	267	294	264

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-8 (a), Table a

PHYSICAL AND LIFE SCIENCES UNDERGRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	52.3	48.3	48.1	46.5	43.1	43.5	42.7	46.1	49.5	55.2	52.7
NL	86.0	78.9	74.5	62.4	58.3	56.1	55.9	52.5	59.0	60.0	55.1
PE	61.3	88.5	82.5	76.4	48.7	64.5	87.9	92.5	78.9	81.1	95.5
NS	108.8	91.6	80.6	80.3	77.7	84.9	85.1	91.6	100.3	107.4	91.1
NB	56.5	58.2	48.7	40.8	42.6	43.9	45.2	43.1	46.9	43.4	52.3
QC	48.0	34.2	34.8	34.5	34.4	30.1	31.9	32.3	32.2	29.6	30.5
ON	55.8	54.6	55.4	54.1	48.9	51.4	51.0	54.3	57.0	74.1	68.6
MB	59.7	56.6	55.2	48.3	18.9	21.0	29.7	30.4	32.7	27.4	23.4
SK	34.5	41.2	36.7	33.8	31.1	34.8	32.3	25.1	25.1	24.8	32.1
AB	48.3	47.0	42.9	44.8	46.7	47.2	31.1	46.9	53.7	56.0	53.0
BC	37.6	40.6	44.9	41.6	40.1	39.3	40.6	44.3	53.1	49.8	49.3

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-8 (a), Table b

PHYSICAL AND LIFE SCIENCES UNDERGRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	12,651	11,826	11,925	11,712	11,013	11,244	11,178	12,231	13,320	15,066	14,607
NL	378	345	324	270	252	243	243	228	255	258	237
PE	66	96	90	84	54	72	99	105	90	93	111
NS	822	696	615	615	600	660	666	720	792	849	723
NB	345	357	300	252	264	273	282	270	294	273	330
QC	2,856	2,046	2,103	2,103	2,115	1,863	1,992	2,037	2,058	1,908	1,989
ON	5,070	5,034	5,202	5,190	4,785	5,112	5,148	5,574	5,937	7,818	7,341
MB	534	510	501	441	174	195	279	288	312	264	228
SK	273	327	291	267	246	276	258	201	201	201	264
AB	1,095	1,092	1,020	1,089	1,167	1,206	810	1,260	1,491	1,602	1,554
BC	1,215	1,326	1,485	1,395	1,356	1,341	1,404	1,551	1,887	1,803	1,824

*2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-8 (b), Table a

PHYSICAL AND LIFE SCIENCES GRADUATE DEGREES AWARDED PER 100,000 PERSONS AGED 15 YEARS AND OLDER*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	12.0	11.3	11.3	11.8	12.0	12.6	13.1	13.0	13.9	14.1	14.5
NL	18.4	20.6	20.0	6.9	6.9	8.3	12.4	13.1	13.9	11.9	11.9
PE	-	-	-	-	-	-	-	-	-	-	-
NS	15.9	11.0	8.6	12.1	10.9	12.0	14.9	17.2	19.0	19.0	16.6
NB	5.4	5.9	5.8	7.3	5.3	5.8	8.2	9.6	8.1	8.1	8.6
QC	14.6	14.5	14.5	17.1	17.2	18.7	19.6	19.4	19.3	20.0	20.2
ON	12.2	11.3	11.1	11.8	11.8	12.0	12.7	12.5	13.6	13.7	14.4
MB	9.1	8.3	8.9	6.6	9.5	7.4	8.6	9.2	9.4	8.7	7.4
SK	9.5	9.8	8.7	8.0	9.1	8.7	7.1	6.0	6.0	5.9	8.4
AB	8.7	9.3	9.9	9.1	9.5	10.8	7.7	7.9	11.6	12.0	12.6
BC	10.2	8.7	9.4	9.0	9.0	9.5	10.6	9.7	10.4	10.6	11.4

- Nil or zero *2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-8 (b), Table b

PHYSICAL AND LIFE SCIENCES GRADUATE DEGREES AWARDED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	2,901	2,778	2,802	2,982	3,066	3,255	3,441	3,444	3,735	3,849	4,017
NL	81	90	87	30	30	36	54	57	60	51	51
PE	-	-	-	-	-	-	-	-	-	-	-
NS	120	84	66	93	84	93	117	135	150	150	132
NB	33	36	36	45	33	36	51	60	51	51	54
QC	870	870	873	1,041	1,056	1,155	1,224	1,227	1,230	1,290	1,314
ON	1,110	1,044	1,044	1,128	1,158	1,191	1,287	1,278	1,419	1,446	1,539
MB	81	75	81	60	87	69	81	87	90	84	72
SK	75	78	69	63	72	69	57	48	48	48	69
AB	198	216	234	222	237	276	201	213	321	342	369
BC	330	285	312	300	303	324	366	339	369	384	420

- Nil or zero

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-9

PERCENTAGE OF HOUSEHOLDS WITH HOME COMPUTERS

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	45.2	50.0	55.2	59.8	64.1	66.6	68.7	72.0	75.4	78.4	79.4
NL	34.9	39.1	42.3	48.8	50.6	51.3	55.2	60.8	66.0	65.9	69.9
PE	32.9	39.3	40.3	48.5	52.3	57.3	63.3	65.6	69.2	72.2	71.9
NS	37.5	42.5	48.7	56.1	57.7	61.1	63.5	66.8	71.0	73.0	75.4
NB	32.4	37.3	44.5	48.3	49.3	53.2	57.9	61.8	67.7	70.0	72.5
QC	38.8	42.4	45.6	50.9	56.8	59.2	61.4	65.7	69.2	70.9	74.2
ON	49.1	55.2	60.9	66.2	68.4	71.7	72.6	75.8	78.3	82.7	81.1
MB	40.9	43.7	47.2	51.2	56.4	60.5	65.1	65.5	69.5	74.6	74.6
SK	37.8	42.8	49.1	51.4	57.5	60.3	63.3	68.9	68.8	72.3	77.0
AB	50.6	57.5	61.0	65.9	70.4	72.3	73.5	76.8	83.4	82.9	85.6
BC	52.2	54.4	63.0	64.2	71.4	71.9	75.2	76.8	79.9	84.1	85.0

*2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator E-10

PERCENTAGE OF HOUSEHOLDS USING THE INTERNET (%)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	25.0	33.4	42.6	49.9	54.5	56.9	59.8	64.3	68.1	72.7	74.6
NL	21.4	23.6	30.2	39.6	39.9	40.3	44.6	52.1	57.9	60.2	65.5
PE	17.7	27.0	31.7	39.7	42.3	48.9	51.5	58.0	62.3	64.7	67.9
NS	21.4	28.5	37.4	45.5	47.9	52.4	55.4	59.3	63.6	66.5	69.9
NB	20.3	25.4	33.6	40.1	41.6	44.7	47.1	52.7	58.4	62.9	65.4
QC	19.1	24.4	33.5	40.8	46.1	47.8	50.0	55.5	59.8	63.6	67.1
ON	27.4	38.5	47.9	57.1	58.9	63.0	65.0	69.4	72.0	78.1	77.4
MB	21.9	26.7	35.3	42.1	47.0	50.0	54.6	57.6	60.6	66.2	67.3
SK	20.0	27.7	36.1	40.6	48.0	51.3	54.7	61.7	61.0	66.2	72.7
AB	29.8	40.3	47.9	55.4	60.5	61.2	66.0	69.2	76.5	77.9	81.3
BC	30.7	39.1	50.1	52.3	63.6	63.2	67.5	70.5	74.2	79.3	82.1

*2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-11

GROSS INCOME FROM TECHNOLOGY LICENSES AT G-13 UNIVERSITIES (IN $ THOUSANDS CDN)*

INSTITUTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Dalhousie U	-	-	-	-	-	25	-	148	298	516	622
U of Toronto	2,219	1,332	2,750	2,985	1,889	2,955	3,115	1,697	1,952	2,638	2,530
U of Ottawa	-	-	-	-	-	60	255	112	340	278	915
McMaster U	408	-	413	918	731	887	976	1,527	1,455	1,506	954
U of Western Ontario	63	66	33	206	812	394	1,089	4,363	4,791	3,939	4,025
Queens U	766	1,006	8,026	4,201	4,372	4,874	6,168	895	3,499	2,059	1,271
U of Waterloo	2,197	684	619	1,172	812	827	811	778	562	448	811
U of Montreal	646	-	418	4,289	548	847	1,877	-	1,226	831	870
McGill U	646	-	714	9,927	1,528	2,046	1,515	1,579	1,487	1,558	2,585
U Laval	-	-	-	169	229	179	280	352	-	1,352	1,520
U of Alberta	4,218	3,640	1,618	7,621	2,109	1,470	1,090	1,054	1,135	1,761	2,041
U of Calgary	2,866	-	4,862	-	-	4,112	3,315	3,435	4,410	4,991	4,982
U of BC	1,196	1,252	4,160	8,657	11,890	13,669	14,254	15,986	15,983	13,595	6,561

Note: The University of Western Ontario includes Lawson Health Research Institute and Robarts Research Institute. McMaster University includes Hamilton Health Science & St. Joseph's Healthcare Hamilton. The University of Calgary includes UTI, Incorporated.

- Nil or data not available *2008 is the latest year for which information is available. Source: Association of University Technology Managers

LICENSES AND OPTIONS YIELDING INCOME AT CANADIAN G-13 UNIVERSITIES (ACTUAL)*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Dalhousie U	-	-	-	-	-	5	-	4	4	5	5
U of Toronto	53	21	27	36	21	45	32	53	55	58	53
U of Ottawa	-	-	-	-	-	5	9	8	11	10	9
McMaster U	53	13	15	-	-	55	59	86	78	100	110
U of Western Ontario	16	16	7	28	46	17	31	41	46	52	43
Queens U	19	27	28	29	29	31	35	43	42	37	37
U of Waterloo	-	56	28	-	-	22	37	28	16	11	14
U of Montreal	13	16	22	-	-	19	23	-	25	20	13
McGill U	32	38	48	-	-	43	79	54	69	90	77
U Laval	-	-	-	-	-	12	16	18	-	19	35
U of Alberta	41	20	30	36	40	42	46	32	49	49	53
U of Calgary	59	53	-	-	-	85	86	31		51	48
U of BC	59	55	70	71	73	65	90	91	90	98	77

Note: The University of Western Ontario includes Lawson Health Research Institute and Robarts Research Institute. McMaster University includes Hamilton Health Science & St. Joseph's Healthcare Hamilton. The University of Calgary includes UTI, Incorporated.
- Nil or data not available *2008 is the latest year for which information is available. Source: Association of University Technology Managers

GROSS INCOME PER TECHNOLOGY LICENSE AT G-13 UNIVERSITIES (IN $ THOUSANDS CDN)*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Dalhousie U	-	-	-	-	-	5	-	37	75	103	124
U of Toronto	42	63	102	83	90	66	97	32	35	45	48
U of Ottawa	-	-	-	-	-	12	28	14	31	28	102
McMaster U	8	-	28	-	-	16	17	18	19	15	9
U of Western Ontario	4	4	5	7	18	23	35	106	104	76	94
Queens U	40	37	287	145	151	157	176	21	83	56	34
U of Waterloo	-	12	22	-	-	38	22	28	35	41	58
U of Montreal	50	-	19	-	-	45	82	-	49	42	67
McGill U	20	-	15	-	-	48	19	29	22	17	34
U Laval	-	-	-	-	-	15	17	20	-	71	43
U of Alberta	103	182	54	212	53	35	24	33	23	36	39
U of Calgary	49	-	-	-	-	48	39	111	-	98	104
U of BC	20	23	59	122	163	210	158	176	178	139	85

Note: The University of Western Ontario includes Lawson Health Research Institute and Robarts Research Institute. McMaster University includes Hamilton Health Science & St. Joseph's Healthcare Hamilton. The University of Calgary includes UTI, Incorporated.
- Nil or data not available *2008 is the latest year for which information is available. Source: Association of University Technology Managers

Indicator E-12

NUMBER OF U.S. PATENTS ISSUED TO G-13 UNIVERSITIES (ACTUAL)*

INSTITUTION	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Dalhousie U	-	-	-	-	-	7	-	1	-	-	-
U of Toronto	7	6	13	13	11	3	4	8	15	16	15
U of Ottawa	-	-	-	-	-	4	5	3	6	8	3
McMaster U	0	2	2	1	5	3	7	2	2	6	3
U of Western Ont.	5	4	3	3	1	4	7	8	8	3	6
Queens U	3	12	19	17	17	14	7	8	6	10	9
U of Waterloo	6	6	5	4	2	6	-	-	1	-	1
U of Montreal	4	13	12	11	17	11	4	-	1	4	4
McGill U	-	17	20	28	19	45	30	10	15	19	8
U of Laval	-	-	-	5	9	8	11	3	-	20	4
U of Alberta	12	11	12	13	18	11	13	10	8	9	8
U of Calgary	6	15	13	-	-	13	6	10	7	14	3
U of BC	22	50	23	29	29	19	18	25	14	18	13

Note: The University of Western Ontario includes Lawson Health Research Institute and Robarts Research Institute. McMaster University includes Hamilton Health Science & St. Joseph's Healthcare Hamilton. The University of Calgary includes UTI, Incorporated.

- Nil or data not available *2008 is the latest year for which information is available. Source: Association of University Technology Managers

Indicator E-13

NUMBER OF UNIVERSITY START-UP COMPANIES FORMED (ACTUAL)*

INSTITUTION	2003	2004	2005	2006	2007	2008
Dalhousie	-	-	-	-	-	1
U of Toronto	7	5	3	1	8	7
U of Ottawa	1	-	1	7	5	5
McMaster U	-	-	2	-	-	-
U of Western Ont.	-	1	5	3	3	-
Queens U	-	6	3	1	1	-
U of Waterloo	13	7	2	2	2	1
U of Montreal	3	2	-	-	1	1
McGill U	5	5	1	1	1	2
U of Laval	3	-	-	-	-	1
U of Alberta	4	3	2	3	4	2
U of Calgary	3	-	-	-	-	1
U of BC	4	2	2	3	5	4

Note: The University of Western Ontario includes Lawson Health Research Institute and Robarts Research Institute. McMaster University includes Hamilton Health Science & St. Joseph's Healthcare Hamilton. The University of Calgary includes UTI, Incorporated.

- Nil or data not available *2008 is the latest year for which information is available. Source: Association of University Technology Managers

SIMON FRASER UNIVERSITY GROSS INCOME FROM TECHNOLOGY LICENSES (IN $ '000 CDN), U.S. PATENTS ISSUED AND START-UP COMPANIES FORMED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Technology License Income ('000)	-	-	256	263	735	86	152	343	183	297	339
US Patents Issued	2	5	3	3	4	4	3	10	2	2	-
Start-Up companies formed	-	-	9	-	-	4	3	1	-	3	3

- Nil or data not available *2008 is the latest year for which information is available. Source: Association of University Technology Managers

UNIVERSITY OF VICTORIA GROSS INCOME FROM TECHNOLOGY LICENSES (IN $ '000 CDN) AND U.S. PATENTS ISSUED AND START-UP COMPANIES FORMED*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Technology License Income ('000)	-	-	-	-	-	130	151	178	110	160	328
US Patents Issued	-	-	-	-	-	-	4	3	5	3	1
Start-Up companies formed	-	-	-	-	-	-	-	2	1	7	6

- Nil or data not available *2008 is the latest year for which information is available. Source: Association of University Technology Managers

Indicator E-14

RATIO OF HIGHER EDUCATION PERFORMANCE OF R&D TO GDP (%)*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	0.49	0.52	0.54	0.59	0.65	0.68	0.71	0.70	0.67	0.68	0.69
NL	0.64	0.65	0.60	0.63	0.57	0.63	0.60	0.68	0.51	0.48	0.46
PE	0.37	0.35	0.48	0.47	0.51	0.66	0.60	0.66	0.72	0.75	0.80
NS	0.77	0.88	0.81	0.81	0.83	0.90	0.89	0.95	1.00	0.99	1.01
NB	0.47	0.48	0.44	0.44	0.47	0.53	0.48	0.53	0.52	0.53	0.55
QC	0.65	0.73	0.72	0.77	0.86	0.94	0.94	0.94	0.90	0.88	0.92
ON	0.46	0.47	0.53	0.57	0.63	0.65	0.74	0.74	0.73	0.74	0.78
MB	0.47	0.56	0.55	0.58	0.62	0.64	0.65	0.71	0.64	0.62	0.61
SK	0.47	0.57	0.67	0.71	0.75	0.67	0.60	0.50	0.47	0.45	0.48
AB	0.39	0.43	0.38	0.44	0.48	0.49	0.47	0.44	0.38	0.39	0.38
BC	0.34	0.37	0.38	0.42	0.53	0.54	0.53	0.53	0.53	0.56	0.57

* 2008 is the latest year for which information is available. Source: Statistics Canada

Indicator E-15

RESEARCH GRANTS AND AWARDS FUNDED BY THE CANADIAN INSTITUTE OF HEALTH RESEARCH, UP TO FUNDING YEAR 2010/11

	# awarded	total $ amount	average $ amount	funding per capita
CANADA	30,183	$8,134,079,701	$269,492	$238
NL	275	$47,927,616	$174,282	$94
PE	57	$6,993,936	$122,701	$49
NS	860	$193,997,721	$225,579	$206
NB	109	$11,723,162	$107,552	$16
QC	8,639	$2,361,723,897	$273,379	$299
ON	11,462	$3,267,264,724	$285,052	$247
MB	924	$220,457,246	$238,590	$178
SK	541	$104,784,034	$193,686	$100
AB	2,999	$832,978,028	$277,752	$224
BC	3,781	$989,444,857	$261,689	$218

Note: Grant and Award funding for funding year 2010/11 were approved in 2009/10. Totals include cumulative funding from inception (2000) up to and including fiscal year 2010/11. Canada total includes Territories. Per capita is calculated using population as at July 1st, 2010
Source: Canadian Institute of Health Research

Indicator E-16 (a)

HEALTH SCIENCE RESEARCH SECTOR PROJECTS FUNDED BY THE CANADIAN FOUNDATION FOR INNOVATION, UP TO FUNDING YEAR 2010/11

	# of projects	total $ amount	average $ amount	funding per capita
TOTAL	1,248	$1,249,292,230	$1,001,035	$37
NL	14	$12,807,508	$914,822	$25
PE	4	$274,917	$68,729	$2
NS	48	$11,938,479	$248,718	$13
NB	6	$559,558	$93,260	$1
QC	411	$281,539,397	$685,011	$36
ON	439	$642,652,785	$1,463,902	$49
MB	51	$15,315,417	$300,302	$12
SK	28	$35,561,472	$1,270,053	$34
AB	101	$100,055,566	$990,649	$27
BC	146	$148,587,131	$1,017,720	$33

Note: Total includes sum of provinces, cumulative funding since program onset (1997) up to and including fiscal year 2010/11.
Per capita is calculated using population as at July 1st, 2010
Source: Canadian Foundation for Innovation

Indicator E-16 (b)

NATURAL SCIENCES AND ENGINEERING RESEARCH SECTOR PROJECTS FUNDED BY THE CANADIAN FOUNDATION FOR INNOVATION, UP TO 2010/11

	# of projects	total $ amount	average $ amount	funding per capita
TOTAL	4,639	$2,127,329,018	$458,575	$63
NL	82	$29,569,193	$360,600	$58
PE	17	$6,187,950	$363,997	$43
NS	226	$84,022,884	$371,783	$89
NB	114	$18,475,465	$162,065	$25
QC	1,064	$539,459,887	$507,011	$68
ON	1,784	$840,401,930	$471,077	$64
MB	160	$41,108,464	$256,928	$33
SK	185	$115,221,541	$622,819	$110
AB	435	$203,323,408	$467,410	$55
BC	572	$249,558,296	$436,291	$55

Note: Total includes sum of provinces, cumulative funding since program onset (1997) up to and including fiscal year 2010/11.
Per capita is calculated using population as at July 1st, 2010

Source: Canadian Foundation for Innovation

Indicator E-17

GRANT AND SCHOLARSHIP EXPENDITURES FUNDED BY THE NATIONAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA, 2005/06 TO 2009/10

						funding per capita, 09/10
	2005-06	2006-07	2007-08	2008-09	2009 -10	
TOTAL	$640,346,365	$665,262,201	$732,540,041	$765,530,053	$782,060,774	$23
NL	$7,632,372	$8,075,366	$8,996,368	$10,317,292	$10,702,571	$21
PE	$1,001,674	$784,732	$831,686	$1,072,722	$1,135,411	$8
NS	$21,616,731	$23,973,405	$23,936,724	$24,345,440	$23,039,594	$25
NB	$10,569,753	$10,999,559	$11,046,898	$12,696,040	$14,103,119	$19
QC	$157,904,720	$161,104,120	$172,625,124	$181,982,782	$189,041,069	$24
ON	$244,559,647	$258,090,073	$284,145,661	$294,843,830	$302,272,879	$23
MB	$15,536,899	$16,517,416	$19,304,977	$19,205,167	$18,469,663	$15
SK	$27,862,491	$29,259,273	$33,440,635	$34,787,664	$38,222,999	$37
AB	$65,638,934	$66,236,321	$71,829,578	$76,643,537	$76,751,384	$21
BC	$88,023,144	$90,221,938	$106,382,389	$109,635,579	$108,322,084	$24

Note: Total includes sum of provinces only

Source: The National Sciences and Engineering Research Council of Canada

Indicator E-18
CANADA RESEARCH CHAIRS, PROVINCIAL DISTRIBUTION 2010

	total active chairs	chairholders from outside Canada	% female chairholders
TOTAL	1,842	543	25%
NL	22	6	36%
PE	6	4	17%
NS	74	20	30%
NB	32	6	19%
QC	483	156	19%
ON	708	178	27%
MB	56	8	29%
SK	36	7	31%
AB	170	38	25%
BC	255	120	27%

Note: Total includes sum of provinces only.
Source: Canada Research Chairs Program

BUSINESS INDICATORS

Indicator B-1
PATENTS AWARDED PER 100,000 POPULATION*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	2.73	4.34	3.64	4.01	3.86	4.07	4.57	4.64	5.18	5.51	5.47
NL	0.74	1.13	0.57	0.77	0.77	0.96	0.77	0.78	1.18	1.18	1.38
PE	0.74	1.47	1.47	0.73	0.73	0.73	0.73	2.17	0.00	1.45	1.43
NS	0.43	1.18	0.64	0.86	1.82	1.39	1.28	2.03	2.13	1.82	2.78
NB	1.87	2.26	1.07	1.33	1.33	2.00	1.73	1.34	1.34	1.34	1.61
QC	2.80	4.14	3.91	4.31	4.27	4.84	4.51	4.38	4.56	5.39	4.53
ON	3.31	5.62	4.25	4.49	4.05	3.89	4.79	4.68	5.72	5.90	6.05
MB	1.76	2.80	2.09	2.52	2.94	3.78	3.24	3.90	3.46	3.60	2.99
SK	3.24	3.25	3.28	2.70	2.61	2.51	4.91	6.14	6.15	4.20	4.64
AB	3.10	5.55	5.09	6.08	6.23	6.72	8.52	8.82	9.53	10.25	11.36
BC	1.91	2.57	2.57	3.09	2.81	3.20	3.08	3.36	3.56	3.81	3.47

*2008 is the latest year for which information is available.
Source: Canadian Intellectual Property Office

Indicator B-2

PATENTS GRANTED AS A PERCENT OF PATENT APPLICATIONS*

	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	25	26	24	25	27	29	33	34	35
NL	13	25	20	24	19	20	29	38	32
PE	29	13	20	25	20	60	0	33	100
NS	18	14	29	22	24	31	38	40	33
NB	18	19	17	37	24	24	24	22	27
QC	23	22	22	27	23	24	26	32	30
ON	27	27	24	21	27	27	34	32	32
MB	19	28	31	47	37	36	35	29	41
SK	36	19	22	26	40	47	46	32	39
AB	26	32	33	30	35	38	47	46	52
BC	24	26	20	23	22	26	28	31	30

*2008 is the latest year for which information is available.

Source: Canadian Intellectual Property Office

Indicators B-3, B-4 and B-5

NUMBER OF ESTABLISHMENTS, ENTRIES, EXITS, AND HIGH GROWTH COMPANIES

Total B.C. Economy

	2007	2008	2009
Establishments	172,372	175,003	176,124
Entries		19,628	20,784
Exits		16,997	19,663
High Growth Companies		980	958

High Technology Sector

	2007	2008	2009
Establishments	8,644	8,832	8,903
Entries		1,311	1,307
Exits		1,123	1,236
High Growth Companies		50	46

Source: Statistics Canada

Indicator B-6

CANADIAN VENTURE CAPITAL INVESTMENT BY PROVINCE OF INVESTMENT ($ MILLION)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CANADA	5,878	3,747	2,583	1,613	1,677	1,699	1,699	2,035	1,406	1,039	1,142
ATLANTIC	75	56	34	55	38	37	32	34	45	68	21
QC	1,498	997	691	531	517	538	599	612	428	429	391
ON	3,456	2,081	1,397	780	783	770	688	950	571	296	424
MB	45	41	20	28	23	11	25	18	3	10	14
SK	21	13	47	21	36	24	17	59	21	13	9
AB	230	93	90	76	27	85	37	45	78	62	67
BC	553	467	304	122	254	234	301	316	261	161	216

Source: Thompson Reuters

Indicator B-7

PROPORTIONAL SHARE OF CANADIAN VENTURE CAPITAL INVESTMENT

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ATLANTIC	1.3	1.5	1.3	3.4	2.3	2.2	1.9	1.7	3.2	6.5	1.9
QC	25.5	26.6	26.7	32.9	30.8	31.7	35.3	30.1	30.4	41.3	34.2
ON	58.8	55.5	54.1	48.3	46.7	45.3	40.5	46.7	40.6	28.5	37.2
MB	0.8	1.1	0.8	1.7	1.4	0.6	1.5	0.9	0.2	0.9	1.2
SK	0.4	0.3	1.8	1.3	2.1	1.4	1.0	2.9	1.5	1.3	0.8
AB	3.9	2.5	3.5	4.7	1.6	5.0	2.1	2.2	5.5	5.9	5.9
BC	9.4	12.5	11.8	7.6	15.2	13.8	17.7	15.5	18.6	15.5	18.9

Source: Thompson Reuters

CANADIAN VENTURE CAPITAL INVESTMENT PER CAPITA ($)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CANADA	191.55	120.81	82.39	50.99	52.51	52.69	52.15	61.78	42.21	30.80	33.47
ATLANTIC	31.88	24.13	14.40	23.47	16.36	15.91	13.79	14.60	19.32	29.05	9.08
QC	203.55	134.77	92.84	71.00	68.57	71.02	78.53	79.66	55.18	54.85	49.40
ON	295.80	174.91	115.56	63.70	63.17	61.47	54.29	74.25	44.15	22.69	32.11
MB	39.58	35.19	17.63	23.71	19.51	9.19	20.86	15.50	2.59	7.88	11.02
SK	20.59	12.97	47.11	21.14	35.77	23.70	17.58	59.14	20.39	12.85	8.56
AB	76.60	30.27	28.85	23.88	8.21	25.47	10.67	12.80	21.71	16.80	17.95
BC	136.98	114.61	74.11	29.69	61.15	55.73	70.98	73.26	59.51	35.99	47.70

Source: Thompson Reuters

Indicator B-8

CANADIAN VENTURE CAPITAL INVESTMENT BY PROVINCE OF INVESTMENT, BY SECTOR ($ THOUSANDS)

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Canada	Life Sciences	840,763	705,670	477,480	416,572	432,867	451,722	517,116	631,541	398,603	215,788	298,601
	Info. Tech.	4,197,244	2,542,519	1,713,139	864,893	926,180	894,317	884,845	1,038,913	653,501	497,258	483,808
	Other Tech.	142,638	213,063	106,137	97,133	113,951	120,912	149,848	202,520	218,693	135,435	224,821
	Traditional	697,305	286,100	286,376	234,848	204,124	232,001	147,120	161,554	135,581	190,258	134,377
BC	Life Sciences	145,894	200,589	74,862	44,267	119,778	115,534	110,684	129,025	88,251	37,073	104,190
	Info. Tech.	306,457	114,018	184,897	57,199	95,446	58,820	121,541	145,503	115,978	49,240	63,406
	Other Tech.	54,044	144,899	30,158	9,663	33,560	45,430	64,825	40,968	45,663	58,627	41,270
	Traditional	46,890	7,682	13,807	11,285	5,325	14,092	4,150	220	11,000	15,597	7,275
AB	Life Sciences	31,633	8,375	15,244	4,769	16,600	7,662	4,500	8,658	10,316	31,442	1,750
	Info. Tech.	118,416	72,231	29,587	50,776	7,125	34,944	14,762	31,532	29,926	9,845	35,430
	Other Tech.	5,773	4,375	3,059	1,169	825	3,174	4,500	-	23,238	19,100	29,376
	Traditional	74,309	7,575	42,353	19,307	2,057	38,842	12,742	4,784	14,500	1,276	251
SK	Life Sciences	1,987	685	3,256	125	11,090	3,737	5,800	32,125	-	283	3,524
	Info. Tech.	3,969	108	2,750	1,550	62	2,530	6,530	-	600	-	-
	Other Tech.	280	-	-	700	656	2,700	2,000	7,727	12,500	5,687	2,768
	Traditional	14,505	12,175	40,956	18,688	23,870	14,579	3,115	19,300	7,569	7,250	2,660
MB	Life Sciences	5,314	15,675	7,090	7,874	7,540	3,481	8,080	8,400	3,127	5,812	8,814
	Info. Tech.	5,300	9,446	7,240	4,575	6,523	3,141	4,354	8,320	-	-	500
	Other Tech.	350	75	-	-	-	-	-	-	-	-	-
	Traditional	34,441	15,324	6,059	15,150	8,839	4,210	12,269	1,775	-	3,800	4,300
ON	Life Sciences	244,299	192,639	157,967	123,680	116,650	130,721	104,794	189,014	128,701	47,187	85,256
	Info. Tech.	2,953,755	1,780,610	1,129,242	524,579	564,592	564,265	511,553	663,024	326,165	216,715	258,177
	Other Tech.	46,384	19,107	52,392	65,294	56,913	28,299	47,350	75,413	100,062	28,124	80,083
	Traditional	211,526	88,500	57,689	66,333	44,578	46,816	23,919	22,397	16,048	4,405	675
QC	Life Sciences	398,762	276,155	199,814	228,555	158,384	187,190	270,848	254,824	153,468	86,074	87,161
	Info. Tech.	755,922	523,092	346,419	180,811	222,287	212,306	221,405	180,221	161,115	199,458	120,600
	Other Tech.	35,807	44,607	20,528	20,307	21,597	41,309	22,923	72,142	34,760	14,497	66,324
	Traditional	307,051	152,916	124,067	101,810	114,468	97,671	84,125	105,188	78,377	129,342	116,516
ATL	Life Sciences	12,874	11,552	19,247	7,302	2,825	3,397	12,410	9,495	14,740	7,917	7,906
	Info. Tech.	53,425	43,014	13,004	45,403	30,145	18,311	4,700	10,313	19,717	22,000	5,695
	Other Tech.	-	-	-	-	400	-	8,250	6,270	2,470	9,400	5,000
	Traditional	8,583	1,928	1,445	2,275	4,987	15,491	6,800	7,890	8,087	28,588	2,700

- Nil or data not available

Source: Thompson Reuters

Indicator B-9

ICT INVESTMENT AS A SHARE OF GDP BY PROVINCE, IN PER CENT, 1997-2007 (2002 CHAINED DOLLARS)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CANADA	1.8	2.1	2.5	2.7	2.7	2.6	2.9	3.2	3.4	3.7	4.3
NL	1.5	1.7	2.1	1.6	1.8	1.6	2.0	2.4	2.7	2.9	3.1
PE	1.5	1.3	1.7	2.3	2.3	2.5	2.2	2.5	3.1	3.8	4.9
NS	1.9	1.8	2.2	2.5	2.4	2.3	2.6	2.7	3.0	3.5	4.2
NB	1.7	2.0	2.5	2.4	2.5	2.4	2.4	2.9	3.5	3.3	3.8
QC	1.9	2.3	2.7	2.8	2.7	2.7	3.0	3.4	3.7	3.9	4.3
ON	2.1	2.2	2.6	3.0	3.1	2.9	3.1	3.5	3.7	4.1	4.8
MB	1.4	1.6	2.4	2.3	2.3	2.6	2.6	2.9	3.0	3.3	3.9
SK	1.5	1.5	2.4	1.9	2.1	2.1	2.1	2.3	2.5	3.7	3.9
AB	1.3	2.1	2.1	2.4	2.4	2.2	2.7	2.9	3.1	3.3	3.8
BC	1.5	1.9	2.4	2.3	2.3	2.3	2.4	2.7	2.7	3.2	3.7

Source: Centre for the Study of Living Standards, using data provided by Statistics Canada

TOTAL ECONOMY INVESTMENT IN ICT, BY PROVINCE, 1997-2007 (MILLIONS OF 2002 CHAINED DOLLARS)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CANADA	17,474	21,080	26,110	29,809	30,750	30,114	33,544	38,358	42,388	48,003	56,561
NL	185	221	277	229	256	270	349	410	464	511	600
PE	47	45	61	83	81	92	83	98	121	154	203
NS	418	409	545	626	622	633	724	754	861	988	1,216
NB	300	358	488	482	507	505	519	637	767	757	887
QC	3,883	4,822	5,934	6,506	6,402	6,430	7,363	8,439	9,432	10,050	11,412
ON	8,050	8,920	11,095	13,830	14,561	13,826	15,097	17,276	18,888	21,383	25,516
MB	453	523	819	831	843	941	972	1,111	1,189	1,346	1,603
SK	502	501	820	652	723	729	757	847	982	1,430	1,531
AB	1,715	2,829	2,923	3,471	3,579	3,345	4,126	4,716	5,329	6,086	7,293
BC	1,866	2,358	3,021	2,986	3,052	3,204	3,406	3,911	4,177	5,120	6,059

Source: Centre for the Study of Living Standards, using data provided by Statistics Canada

REAL ICT PER WORKER AS A PROPORTION OF THE NATIONAL AVERAGE, IN PER CENT, 1997-2007 (2002 CHAINED DOLLARS)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CANADA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NL	77.0	76.4	76.2	57.4	61.0	66.3	76.8	79.4	82.7	81.3	82.5
PE	63.4	50.2	55.9	65.6	62.2	72.3	58.8	60.8	67.8	77.3	87.5
NS	85.8	68.9	74.4	75.4	72.9	76.1	78.5	70.9	74.2	76.8	81.0
NB	76.2	75.7	82.7	72.1	74.6	74.9	70.7	75.6	83.4	73.2	72.9
QC	96.0	98.6	98.4	94.7	90.5	91.6	94.8	95.3	96.8	91.7	88.4
ON	119.3	109.0	108.6	117.8	119.4	116.5	113.5	113.7	112.6	113.1	115.4
MB	67.7	65.2	83.4	74.5	73.9	84.3	79.7	80.1	78.2	78.8	80.2
SK	84.5	70.9	96.0	68.2	76.4	79.1	74.3	73.4	77.5	99.9	91.0
AB	92.7	124.8	104.5	108.5	106.7	101.8	112.3	111.6	113.9	111.7	111.0
BC	78.7	84.6	88.0	76.6	77.2	82.9	79.0	78.8	74.8	80.1	79.7

Source: Centre for the Study of Living Standards, using data provided by Statistics Canada

CANADIAN TOTAL COMPONENT INVESTMENT IN SCIENTIFIC AND RESEARCH DEVELOPMENT SERVICES ($2002 MILLION, CURRENT)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
423.6	610.0	445.3	318.3	402.6	454.2	658.7	510.1	534.3	399.7	429.8

Source: Statistics Canada

Indicator B-10

RATIO OF BUSINESS PERFORMANCE OF R&D TO GDP (%)*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	1.06	1.06	1.15	1.29	1.17	1.16	1.17	1.14	1.14	1.09	0.99
NL	0.15	0.15	0.14	0.15	0.13	0.17	0.15	0.39	0.39	0.32	0.34
PE	0.10	0.09	0.15	0.17	0.11	0.18	0.18	0.27	0.28	0.29	0.28
NS	0.29	0.27	0.27	0.35	0.34	0.27	0.31	0.31	0.33	0.31	0.28
NB	0.22	0.20	0.20	0.20	0.29	0.28	0.35	0.40	0.40	0.43	0.37
QC	1.41	1.44	1.62	1.79	1.72	1.66	1.65	1.53	1.71	1.67	1.52
ON	1.43	1.42	1.56	1.74	1.48	1.51	1.52	1.53	1.45	1.36	1.29
MB	0.33	0.46	0.39	0.49	0.42	0.40	0.46	0.48	0.42	0.42	0.31
SK	0.25	0.25	0.22	0.26	0.33	0.24	0.28	0.35	0.38	0.37	0.20
AB	0.58	0.42	0.40	0.47	0.52	0.52	0.60	0.55	0.60	0.56	0.51
BC	0.53	0.59	0.74	0.81	0.79	0.80	0.84	0.83	0.75	0.82	0.78

*2008 is the latest year for which information is available

Source: Statistics Canada

TOTAL INTRAMURAL RESEARCH AND DEVELOPMENT EXPENDITURES BY PROVINCE, BY INDUSTRY, 2007 ($)

	ATLANTIC	QC	ON	MB	SK	AB	BC	Total
Agriculture, Forestry, Fishing, Hunting	13	42	x	x	x	x	x	114
Mining and Oil & Gas Extraction	x	35	x	x	38	345	103	547
Utilities	x	119	x	x	x	x	x	256
Construction	x	30	42	x	x	x	x	83
Manufacturing	178	2,323	4,666	125	60	332	527	8,211
Pharmaceutical & Medicine	17	376	542	x	x	x	36	1,046
Computer & Peripheral Equipment	x	10	49	x	0	11	x	104
Communications Equipment	2	73	1,340	0	x	x	16	1,485
Semiconductor & Other Electronic Components	x	86	660	1	x	x	89	847
Navigational, Measuring, Medical & Control Instruments	5	123	205	10	1	8	28	380
Other Computer & Electronic Products	x	15	4	x	0	x	4	24
Aerospace Products & Parts	x	x	310	x	0	x	3	942
Services	107	2,165	2,853	63	34	377	1,071	6,670
Information & Cultural Industries	42	339	736	3	3	33	415	1,571
Computer System Design & Related	18	301	713	9	3	76	120	1,240
Scientific Research & Development	13	478	396	19	2	53	300	1,261
TOTAL	310	4,714	7,648	193	136	1,142	1,738	15,882

x denotes data suppression. Numbers may not add due to rounding. Source: Statistics Canada

GOVERNMENT INDICATORS

Indicator G-1
INDEX OF ALL TAXES PAID BY UNATTACHED INDIVIDUALS EARNING $80,000 PER YEAR ($)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
NL	30,590	29,194	28,991	28,662	28,169	28,281	29,120	28,687	26,449	24,991	24,929
PE	28,859	26,986	26,785	26,299	25,855	25,938	26,427	25,956	24,921	24,133	24,448
NS	28,491	27,893	27,693	26,685	26,189	26,301	27,479	27,453	25,340	25,690	25,742
NB	28,430	27,378	26,981	25,558	25,010	25,115	25,377	25,482	24,897	23,506	23,177
QC	35,510	35,938	34,402	33,147	32,691	32,741	33,779	33,024	30,880	30,951	30,986
ON	29,258	27,022	26,533	25,688	25,667	25,667	25,943	25,369	24,742	24,506	24,687
MB	31,266	30,034	29,607	29,863	28,127	28,127	27,112	26,437	25,787	26,360	26,321
SK	29,952	27,480	27,098	25,124	24,711	24,825	26,041	25,952	23,212	23,302	23,472
AB	25,626	23,220	22,977	22,895	22,334	22,212	21,710	21,272	20,350	19,885	19,949
BC	27,295	25,452	23,628	22,892	22,261	22,063	21,497	20,731	19,961	19,553	19,952

Source: B.C. Ministry of Finance

Indicator G-2

SMALL BUSINESS TAX RATE

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
NL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PE	7.5	7.5	7.5	7.5	7.5	7.5	7.5	5.4	4.3	2.1	1.0
NS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
NB	6.0	4.5	4.0	3.0	3.0	2.5	2.0	1.0	5.0	5.0	5.0
QC	8.9	9.0	9.0	9.0	8.9	8.9	8.9	8.0	8.0	8.0	8.0
ON	7.0	7.0	6.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
MB	7.0	7.0	5.0	5.0	5.0	5.0	4.5	3.0	2.0	1.0	0.0
SK	8.0	8.0	6.0	6.0	5.5	5.0	5.0	4.5	4.5	4.5	4.5
AB	6.0	6.0	5.0	4.5	4.0	3.0	3.0	3.0	3.0	3.0	3.0
BC	4.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	2.5	2.5

Source: B.C. Ministry of Finance

Indicator G-3

GENERAL CORPORATE INCOME TAX RATE

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
NL	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
PE	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
NS	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
NB	17.0	17.0	16.0	13.0	13.0	13.0	13.0	12.0	13.0	12.0	12.0
QC	9.0	9.0	9.0	9.0	8.9	8.9	8.9	9.9	11.4	11.4	11.9
ON	14.0	14.0	12.5	12.5	14.0	14.0	14.0	14.0	14.0	14.0	14.0
MB	17.0	17.0	16.5	16.0	15.5	15.0	15.0	14.0	14.0	12.0	12.0
SK	17.0	17.0	17.0	17.0	17.0	17.0	17.0	13.0	13.0	12.0	12.0
AB	15.5	15.5	13.5	13.0	12.5	11.5	11.5	10.0	10.0	10.0	10.0
BC	16.5	16.5	13.5	13.5	13.5	13.5	12.0	12.0	12.0	11.0	10.5

Source: B.C. Ministry of Finance

Indicator G-4

COMBINED FEDERAL AND PROVINCIAL PERFORMANCE OF R&D AS A % OF GDP*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	0.21	0.21	0.21	0.21	0.21	0.19	0.18	0.20	0.20	0.19	0.19
NL	0.27	0.25	0.25	0.23	0.22	0.15	0.14	0.15	0.12	0.11	0.08
PE	0.34	0.38	0.48	0.47	0.22	0.32	0.25	0.68	0.60	0.29	0.30
NS	0.39	0.34	0.38	0.29	0.30	0.25	0.29	0.23	0.25	0.23	0.23
NB	0.20	0.19	0.15	0.15	0.24	0.15	0.13	0.12	0.13	0.21	0.18
QC	0.16	0.16	0.20	0.21	0.21	0.18	0.17	0.20	0.19	0.17	0.17
ON	0.29	0.28	0.27	0.28	0.28	0.27	0.25	0.28	0.28	0.28	0.30
MB	0.16	0.18	0.21	0.22	0.21	0.18	0.19	0.21	0.19	0.19	0.19
SK	0.22	0.23	0.21	0.22	0.19	0.18	0.16	0.19	0.18	0.16	0.12
AB	0.14	0.15	0.13	0.14	0.13	0.11	0.12	0.11	0.11	0.10	0.10
BC	0.09	0.11	0.10	0.09	0.09	0.07	0.07	0.06	0.06	0.07	0.06

* 2008 is the latest year for which information is available.

Source: Statistics Canada

Indicator G-5

TOTAL EXPENDITURES (PRIVATE AND PUBLIC SECTOR) ON R&D AS A % OF GDP*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CANADA	1.76	1.80	1.91	2.09	2.04	2.04	2.07	2.04	2.00	1.96	1.87
NL	1.06	1.04	0.99	1.00	0.93	0.95	0.89	1.22	1.01	0.92	0.88
PE	0.81	0.82	1.10	1.08	0.84	1.13	1.03	1.61	1.60	1.32	1.38
NS	1.45	1.47	1.47	1.45	1.48	1.42	1.50	1.49	1.59	1.53	1.51
NB	0.88	0.86	0.79	0.78	1.00	0.96	0.96	1.04	1.06	1.17	1.10
QC	2.22	2.33	2.54	2.77	2.79	2.78	2.76	2.67	2.80	2.72	2.61
ON	2.18	2.17	2.36	2.59	2.38	2.43	2.51	2.54	2.46	2.38	2.37
MB	0.96	1.20	1.15	1.30	1.24	1.21	1.30	1.40	1.24	1.22	1.11
SK	0.94	1.05	1.11	1.20	1.27	1.09	1.04	1.03	1.04	0.98	0.81
AB	1.10	1.00	0.91	1.05	1.14	1.12	1.19	1.10	1.09	1.05	0.99
BC	0.96	1.07	1.22	1.32	1.41	1.41	1.44	1.42	1.33	1.46	1.42

*2008 is the latest year for which information is available.

Source: Statistics Canada

PROFILE OF B.C.'S TOTAL EXPENDITURES ON R&D ($ MILLION)*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Business Enterprise	608	714	973	1,079	1,093	1,171	1,324	1,402	1,364	1,579	1,541
Higher Education & Private Non-Profit	396	444	497	562	736	785	832	904	959	1,083	1,136
Federal Govt	84	106	111	97	99	80	91	91	91	108	93
Provincial Government & Research Institutions	24	26	25	22	20	15	16	18	18	30	33

*2008 is the latest year for which information is available.

Source: Statistics Canada

EXTERNAL INDICATORS

Indicator X-1

PERCENTAGE OF IMMIGRANTS AGED 25 YEARS AND OLDER WITH 16 OR MORE YEARS OF EDUCATION

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	40.1	42.3	43.4	45.0	44.6	47.1	46.7	44.8	44.8	46.2	44.0
NL	48.0	52.1	41.4	45.0	47.2	45.9	45.7	52.9	47.1	52.5	57.8
PE	27.1	29.9	38.1	27.1	38.1	52.8	51.3	40.3	36.3	37.6	33.5
NS	41.7	45.6	48.6	51.2	53.6	57.9	57.1	54.1	50.4	57.7	51.5
NB	45.0	42.1	45.3	49.5	45.2	50.2	52.3	55.8	49.4	52.8	50.0
QC	38.7	40.5	44.2	49.6	51.9	53.0	52.9	51.8	54.0	55.3	53.2
ON	41.7	44.2	44.6	45.8	44.3	46.9	46.4	43.3	42.9	44.7	43.1
MB	31.3	29.9	28.5	31.2	27.7	29.4	29.2	26.9	25.1	28.2	25.6
SK	40.0	39.3	41.2	40.4	43.0	48.0	43.5	41.7	32.9	32.5	28.5
AB	38.4	39.4	39.8	41.1	38.5	43.5	43.8	44.2	42.9	44.5	43.3
BC	38.0	39.8	40.9	40.4	42.5	44.6	45.1	44.4	45.3	45.7	42.6

Source: Citizenship and Immigration Canada

Indicator X-2

MEDIAN YEARS OF SCHOOLING OF IMMIGRANTS AGED 25 YEARS AND OLDER

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	14.8	15.0	15.1	15.2	15.2	15.4	15.4	15.2	15.2	15.3	15.2
NL	15.4	15.9	14.7	15.3	15.6	15.2	15.1	15.8	15.5	15.9	16.3
PE	13.2	13.1	14.1	12.9	14.4	15.7	15.6	14.7	14.3	14.5	14.2
NS	14.7	15.1	15.5	15.7	15.8	16.0	15.9	15.8	15.8	16.0	15.8
NB	15.1	14.8	15.0	15.6	15.1	15.6	15.7	15.8	15.5	15.7	15.6
QC	14.4	14.6	15.0	15.6	15.7	15.8	15.8	15.7	15.8	15.9	15.9
ON	15.0	15.2	15.2	15.3	15.2	15.4	15.3	15.1	15.1	15.2	15.1
MB	13.9	13.8	13.8	14.0	13.6	13.9	13.9	13.9	13.8	13.8	13.7
SK	14.5	14.5	14.8	14.7	15.0	15.5	15.1	14.5	13.9	14.0	13.8
AB	14.7	14.8	14.9	15.0	14.8	15.1	15.2	15.2	15.1	15.2	15.1
BC	14.8	15.0	15.0	15.0	15.1	15.2	15.3	15.2	15.3	15.3	15.0

Source: Citizenship and Immigration Canada

Census Snapshot Table 1

IMMIGRANTS AGED 25-64 WITH POST-SECONDARY QUALIFICATIONS, BY FIELD OF STUDY, 2006

	Total/all fields	Education	Visual/performing arts & communications technologies	Humanities	Social/behavior sciences & law	Business, management & public admin.	Physical & life sciences & technologies	Math, computer & information sciences	Architecture, engineering & related technologies	Agriculture, natural resources & conservation	Health, parks, recreation & fitness	Personal, protective & transportation services	Other fields of study
CANADA	100%	5.4%	3.3%	6.1%	9.8%	21.8%	4.8%	6.7%	24.4%	1.7%	12.0%	4.0%	0.0%
NL	100%	6.2%	1.8%	6.2%	10.8%	14.0%	8.0%	6.1%	17.6%	1.0%	23.1%	4.8%	0.0%
PE	100%	9.5%	5.3%	7.3%	14.8%	13.3%	3.8%	3.0%	13.0%	10.0%	14.8%	3.8%	0.5%
NS	100%	7.3%	3.5%	7.6%	9.9%	17.4%	7.2%	5.8%	19.5%	2.6%	14.4%	4.8%	0.0%
NB	100%	6.7%	2.3%	6.2%	8.4%	19.9%	4.5%	5.6%	21.1%	3.1%	16.2%	6.0%	0.0%
QC	100%	5.1%	3.7%	6.3%	10.7%	22.2%	5.1%	7.4%	23.1%	1.6%	10.4%	4.4%	0.0%
ON	100%	4.9%	3.2%	5.9%	9.9%	22.2%	4.8%	7.4%	25.0%	1.4%	11.5%	3.7%	0.0%
MB	100%	7.5%	2.6%	4.7%	8.0%	16.6%	4.1%	5.1%	24.7%	3.1%	18.8%	4.8%	0.0%
SK	100%	9.2%	2.7%	6.3%	8.2%	15.8%	7.2%	4.9%	19.6%	3.5%	17.9%	4.6%	0.0%
AB	100%	6.1%	2.5%	5.1%	8.4%	19.9%	5.5%	5.1%	28.5%	2.1%	13.0%	3.8%	0.0%
BC	100%	5.9%	4.0%	6.7%	10.0%	22.7%	4.4%	5.4%	22.1%	1.9%	12.9%	4.2%	0.0%

Source: 2006 Census

Census Snapshot Table 2
IMMIGRANTS AGED 25-64 WITH POST-SECONDARY QUALIFICATIONS, BY LOCATION OF STUDY, 2006

Outside Canada	52.9%
Inside Canada	47.1%
Newfoundland and Labrador	0.3%
Prince Edward Island	0.1%
Nova Scotia	1.2%
New Brunswick	0.6%
Quebec	16.3%
Ontario	53.9%
Manitoba	3.0%
Saskatchewan	1.2%
Alberta	8.6%
British Columbia	14.8%

Source: 2006 Census

Census Snapshot Table 3
SHARES OF TOTAL IMMIGRANT WORKFORCE WORKING IN EACH OCCUPATION CATEGORY, 2006

	All occupations	Management	Business, finance & admin.	Natural & applied sciences	Health	Social science, education, gov't service & religion	Art, culture, recreation & sport	Sales & service	Trades, transport & equipment operators	Primary industry	Processing, manufacturing & utilities
CANADA	100.0%	10.1%	17.5%	9.2%	5.9%	7.2%	2.6%	23.6%	13.1%	1.9%	9.0%
NL	100.0%	14.8%	11.8%	10.0%	16.6%	18.3%	3.6%	15.6%	6.0%	1.9%	1.3%
PE	100.0%	10.1%	11.8%	6.2%	7.0%	12.8%	6.0%	19.8%	9.1%	13.2%	4.1%
NS	100.0%	13.0%	16.0%	9.6%	9.1%	13.5%	4.8%	19.8%	8.7%	2.9%	2.5%
NB	100.0%	10.7%	17.9%	7.9%	8.7%	10.7%	3.1%	22.6%	11.0%	3.5%	3.8%
QC	100.0%	10.2%	16.3%	9.1%	6.1%	9.1%	3.2%	25.1%	10.7%	1.1%	9.3%
ON	100.0%	10.0%	18.7%	9.6%	5.4%	6.6%	2.4%	22.1%	13.5%	1.3%	10.4%
MB	100.0%	6.8%	12.9%	5.8%	9.4%	7.2%	1.8%	23.4%	15.6%	3.4%	13.7%
SK	100.0%	9.9%	12.2%	7.6%	10.4%	11.3%	2.3%	25.5%	11.6%	5.6%	3.5%
AB	100.0%	9.7%	15.8%	11.0%	6.4%	6.7%	1.9%	25.3%	14.6%	2.6%	5.9%
BC	100.0%	11.1%	16.6%	7.7%	6.1%	7.0%	3.1%	26.5%	12.6%	3.6%	5.9%

Source: 2006 Census

Indicator X-3

NET INTER-PROVINCIAL MIGRATION (NUMBER OF PERSONS) *

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
NL	-4,263	-4,493	-3,352	-1,683	-2,027	-3,710	-4,342	-4,067	-528	1,877	1,309
PE	104	165	62	165	144	-139	-639	-849	-291	-536	-876
NS	-270	-2,077	-898	510	-772	-3,041	-3,024	-4,126	-1,794	-751	205
NB	-1,183	-1,530	-1,218	-843	-760	-2,074	-3,487	-2,632	-908	-237	722
QC	-12,146	-9,442	-4,350	-1,829	-822	-4,963	-9,411	-12,865	-11,682	-7,419	-3,252
ON	22,369	18,623	5,354	637	-6,935	-11,172	-17,501	-20,047	-14,750	-15,601	-7,275
MB	-3,456	-4,323	-4,344	-2,875	-2,565	-7,227	-7,881	-5,500	-3,703	-3,111	-2,182
SK	-7,947	-8,410	-8,820	-5,141	-4,521	-9,515	-7,083	1,549	4,171	2,983	3,909
AB	22,674	20,457	26,235	11,903	10,606	34,423	45,795	33,809	15,317	13,184	-2,183
BC	-14,610	-8,286	-8,556	-1,037	7,865	8,214	8,800	15,005	14,643	9,995	9,367

*Dates for this indicator are in Census years, such that '2010' refers to the July 1st, 2009 to June 30th, 2010 period. Source: Statistics Canada

Indicator X-4

VALUE OF HIGH TECHNOLOGY IMPORTS TO B.C. BY COMMODITY TYPE ($ MILLION)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Biotechnology	34.6	36.6	56.5	53.3	46.8	34.3	35.3	43.8	59.9	83.1	96.2
Life Sciences	331.6	404.6	460.9	484.2	464.2	457.6	477.2	498.4	508.2	605.1	581.6
Opto-Electronics	94.4	135.7	127.6	117.1	106.3	123.5	205.2	299.6	337.7	420.0	356.4
Computers & Telecommunications	2,128.6	2,305.7	2,051.4	2,148.6	2,255.0	2,394.5	2,425.1	2,359.8	2,747.7	2,837.7	2,518.4
Electronics	834.3	924.8	272.2	194.1	174.0	140.4	245.7	253.0	267.0	273.0	245.2
Computer Integrated Manufacturing	150.2	185.8	179.9	191.0	204.9	188.4	181.6	195.6	159.0	145.2	110.6
Material Design	145.8	101.9	62.3	27.8	20.0	26.6	17.1	24.3	18.0	19.7	21.2
Aerospace	653.7	572.0	1,030.3	800.2	449.4	361.5	591.0	385.2	537.5	484.8	404.1
Weapons and Nuclear	23.4	35.7	40.2	31.9	31.7	39.5	15.3	19.6	16.8	20.3	23.4
Total	4,396.6	4,702.9	4,281.3	4,048.1	3,752.3	3,766.4	4,193.5	4,079.4	4,651.8	4,888.9	4,357.2

Source: BC Stats

LABOUR INDICATORS

Indicator L-1

UNEMPLOYMENT RATE FOR NATURAL AND APPLIED SCIENCE OCCUPATIONS (%)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	3.4	3.0	3.8	4.5	4.5	3.8	2.9	2.6	3.0	2.9	4.6
NL	9.7	8.2	8.2	7.8	9.3	6.7	9.5	5.1	6.4	7.9	5.9
PE	9.4	7.1	5.9	5.4	8.3	11.4	5.0	4.4	5.0	5.7	5.7
NS	4.2	4.6	4.5	5.9	7.2	4.2	5.0	4.5	3.1	3.3	5.5
NB	5.0	5.6	5.2	4.7	5.5	4.6	5.5	4.3	2.7	4.1	3.4
QC	3.4	3.1	4.2	4.4	4.8	4.5	3.5	3.7	3.0	3.6	4.5
ON	3.2	2.8	3.5	4.7	3.9	3.3	2.7	2.2	3.5	3.1	4.9
MB	2.5	3.0	2.8	3.5	3.1	1.9	-	2.5	1.8	1.7	2.4
SK	4.3	4.5	2.6	2.7	4.7	-	-	2.2	-	2.2	2.4
AB	3.1	2.7	2.6	3.0	3.2	3.4	1.6	1.8	2.0	1.5	4.3
BC	3.4	2.4	4.7	5.1	6.1	5.0	3.0	2.3	2.3	2.0	5.0

- Data not available

Source: Statistics Canada

Indicator L-2

FTE RESEARCH WORKFORCE PER 100,000 POPULATION, 2006 AND 2007*

	Federal		Provincial		Business		Higher Education		TOTAL	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
CANADA	46.5	47.5	8.7	9.5	456.8	448.2	177.6	184.6	694.5	694.4
NL	41.2	45.4	3.9	9.9	141.1	114.5	196.4	199.9	384.1	371.3
PE	72.5	72.4	0.0	0.0	145.0	108.6	123.1	101.5	340.8	282.3
NS	62.9	66.3	0.0	0.0	143.9	138.9	195.1	193.0	401.9	398.6
NB	33.5	36.2	13.4	21.5	162.3	152.9	141.7	142.2	351.4	352.8
QC	36.3	39.0	11.8	11.6	643.0	638.8	215.8	220.5	905.5	908.4
ON	67.0	68.1	4.3	4.8	556.3	543.7	179.4	184.5	805.1	799.3
MB	47.3	46.1	5.9	5.9	185.8	160.0	136.6	134.3	375.0	345.2
SK	53.4	50.0	24.2	26.0	122.0	124.0	151.0	150.2	350.8	348.9
AB	24.3	24.5	21.6	23.9	222.4	204.4	181.2	181.5	444.3	429.6
BC	18.9	17.9	4.2	4.6	345.0	351.5	124.6	156.0	491.3	527.7

FTE: full time equivalent position

* 2007 is the latest year for which information is available

Source: Statistics Canada

STRUCTURE OF THE RESEARCH WORKFORCE BY SECTOR IN 2007 (%)*

	Federal	Provincial	Business	Higher Education	Total FTE
QC	4.3	1.3	70.3	24.1	69,830
ON	8.5	0.6	68.0	22.9	102,260
MB	13.3	1.7	46.4	38.6	4,120
AB	5.7	5.6	47.6	41.2	15,090
BC	3.4	0.9	66.6	29.1	22,740

FTE: full time equivalent position

*2007 is the latest year for which information is available

Source: Statistics Canada

Indicator L-3
QUALITY OF LIFE INDEX SCORES, 2010 (NEW YORK = 100)

	Score	Global Rank	Americas Rank
Vancouver	107.4	4	1
Ottawa	105.5	14	2
Toronto	105.3	16	3
Montreal	104.2	21	4
Calgary	103.5	28	5
Honolulu	103.1	31	6
San Francisco	103.0	32	7
Seattle	99.8	50	12

Source: Mercer Human Resource Consulting

Indicator L-4
ALL ITEMS INTERCITY RETAIL PRICE INDEX (UNITS)*

	Oct-00	Oct-01	Oct-02	Oct-03	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08	Oct-09
Winnipeg	92	92	91	91	92	92	92	94	94	94
Montreal	95	94	95	93	93	93	93	95	95	95
Vancouver	106	106	105	103	102	102	104	103	101	101
Edmonton	93	93	95	97	97	97	97	98	101	102
Ottawa	103	104	105	103	103	103	102	102	103	103
Toronto	109	110	110	110	110	110	109	107	107	107

*2009 is the latest year for which information is available. Source: Statistics Canada

REFERENCE TABLES

Reference Table 1
TOTAL POPULATION

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CA	30,685,730	31,019,020	31,353,656	31,639,670	31,940,676	32,245,209	32,576,074	32,929,733	33,315,976	33,720,184	34,108,752
NL	527,966	522,033	519,531	518,520	517,447	514,363	510,313	506,379	506,193	508,143	509,739
PE	136,470	136,663	136,876	137,221	137,674	138,055	137,920	138,161	139,545	141,097	142,266
NS	933,821	932,454	935,015	937,491	939,376	937,941	938,010	935,794	936,737	939,124	942,506
NB	750,517	749,801	749,331	749,389	749,369	747,960	745,674	745,515	746,902	749,324	751,755
QC	7,356,951	7,396,331	7,441,076	7,485,838	7,535,929	7,581,911	7,631,552	7,687,423	7,751,332	7,828,357	7,907,375
ON	11,683,290	11,896,663	12,091,029	12,242,273	12,390,599	12,528,480	12,665,346	12,792,937	12,932,297	13,064,900	13,210,667
MB	1,147,313	1,151,439	1,156,613	1,163,819	1,173,566	1,178,301	1,184,031	1,193,558	1,205,517	1,219,562	1,235,412
SK	1,007,565	1,000,221	996,801	996,483	997,447	993,579	992,122	1,000,257	1,013,792	1,029,124	1,045,622
AB	3,004,198	3,058,017	3,128,364	3,183,396	3,239,471	3,322,200	3,421,253	3,512,691	3,591,391	3,670,742	3,720,946
BC	4,039,230	4,076,264	4,098,178	4,122,396	4,155,170	4,196,788	4,243,580	4,309,632	4,383,860	4,460,292	4,530,960

Source: Statistics Canada

Reference Table 2
POPULATION AGED 15 YEARS AND OLDER

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CA	24,802,222	25,164,699	25,523,673	25,843,944	26,186,016	26,546,604	26,924,276	27,310,049	27,707,835	28,110,083	28,492,082
NL	435,134	432,732	432,487	433,495	434,383	433,970	432,353	429,837	430,250	432,523	434,393
PE	109,149	109,995	110,826	111,647	112,593	113,535	114,053	114,724	116,249	117,862	119,200
NS	763,336	765,819	771,818	777,338	782,624	785,685	789,857	790,536	793,779	797,932	802,635
NB	615,959	618,256	620,177	622,374	624,505	625,926	626,778	628,365	631,284	634,932	638,314
QC	6,037,086	6,091,032	6,141,913	6,192,837	6,251,510	6,313,925	6,381,499	6,449,526	6,518,826	6,594,325	6,670,658
ON	9,390,567	9,588,561	9,779,713	9,939,993	10,100,743	10,257,338	10,410,702	10,556,964	10,708,604	10,851,131	11,004,966
MB	907,065	913,210	920,172	928,627	939,487	947,240	955,385	965,195	976,336	989,143	1,002,985
SK	791,877	790,493	790,991	794,199	798,721	799,867	801,906	809,813	821,522	834,597	847,572
AB	2,374,898	2,431,048	2,498,737	2,552,626	2,608,108	2,685,895	2,775,553	2,860,101	2,930,544	3,000,079	3,041,271
BC	3,306,290	3,351,727	3,383,179	3,415,051	3,455,602	3,504,147	3,555,948	3,623,462	3,697,772	3,773,781	3,844,531

Source: Statistics Canada

Reference Table 3
NUMBER OF HOUSEHOLDS*

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CA	10,990,880	11,182,540	11,361,810	11,522,400	11,657,730	11,749,230	11,952,550	12,180,090	12,755,570	12,985,140	13,164,370
NL	184,940	185,830	188,830	190,580	189,820	191,880	192,810	195,790	200,200	201,330	204,160
PE	48,760	50,020	50,380	50,580	51,750	50,970	52,000	52,620	54,070	54,670	55,590
NS	338,960	348,010	350,790	355,160	355,920	360,150	360,630	363,860	379,610	382,900	387,870
NB	273,700	277,200	276,160	281,780	281,350	283,940	287,380	290,000	300,490	303,860	307,570
QC	2,843,900	2,869,180	2,930,590	2,953,150	2,998,460	3,019,380	3,084,260	3,136,310	3,267,660	3,307,090	3,351,040
ON	4,043,020	4,147,740	4,210,680	4,302,710	4,352,690	4,347,130	4,451,030	4,505,860	4,736,820	4,802,270	4,878,300
MB	406,860	406,390	407,970	412,250	411,920	423,700	424,310	429,390	450,090	455,580	462,550
SK	364,720	366,560	372,500	371,220	370,530	361,220	364,290	360,550	378,190	384,780	393,670
AB	1,020,710	1,044,520	1,056,890	1,084,100	1,101,490	1,137,600	1,149,840	1,195,670	1,280,840	1,317,330	1,346,580
BC	1,465,310	1,487,090	1,517,030	1,520,870	1,543,790	1,542,650	1,586,000	1,618,530	1,707,600	1,740,970	1,777,040

*Canada is the sum of the 10 provinces. 2008 is the last year for which information is available. Source: Statistics Canada

Reference Table 4
POPULATION OF IMMIGRANTS AGED 25 YEARS OR OLDER

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	121,277	145,755	161,341	148,899	144,025	151,622	166,720	162,347	153,411	162,322	167,324
NL	256	257	220	242	231	344	304	329	325	438	410
PE	85	107	84	70	97	178	189	335	568	864	1,046
NS	961	937	1,030	865	890	1,110	1,175	1,621	1,598	1,753	1,548
NB	418	468	486	430	414	516	642	997	1,018	1,142	1,203
QC	18,023	20,566	24,297	25,017	26,427	29,426	28,765	29,572	30,419	30,631	34,138
ON	66,504	85,660	95,419	86,376	77,636	79,720	88,549	80,597	71,613	72,729	70,976
MB	2,160	2,551	2,623	2,603	3,630	4,058	4,390	5,601	6,211	6,493	7,914
SK	1,072	1,093	976	952	942	1,142	1,222	1,609	2,085	2,810	4,074
AB	7,828	9,129	10,398	9,558	10,226	10,356	12,231	13,412	13,458	15,701	17,655
BC	23,860	24,887	25,681	22,681	23,412	24,673	29,146	28,139	25,945	29,518	28,147

Source: Citizenship and Immigration Canada

Reference Table 5
UNEMPLOYMENT RATE FOR ALL OCCUPATIONS (%)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	7.6	6.8	7.2	7.7	7.6	7.2	6.8	6.3	6.0	6.1	8.3
NL	16.9	16.7	16.1	16.7	16.5	15.7	15.2	14.8	13.6	13.2	15.5
PE	14.3	12.1	11.9	12.0	11.0	11.3	10.8	11.0	10.3	10.8	12.0
NS	9.6	9.1	9.7	9.6	9.1	8.8	8.4	7.9	8.0	7.7	9.2
NB	10.2	10.0	11.1	10.2	10.3	9.8	9.7	8.8	7.5	8.6	8.9
QC	9.3	8.5	8.8	8.6	9.1	8.5	8.3	8.0	7.2	7.2	8.5
ON	6.3	5.8	6.3	7.1	6.9	6.8	6.6	6.3	6.4	6.5	9.0
MB	5.6	5.0	5.1	5.1	5.0	5.3	4.8	4.3	4.4	4.2	5.2
SK	6.1	5.1	5.8	5.7	5.6	5.3	5.1	4.7	4.2	4.1	4.8
AB	5.7	5.0	4.6	5.3	5.1	4.6	3.9	3.4	3.5	3.6	6.6
BC	8.3	7.1	7.7	8.5	8.0	7.2	5.9	4.8	4.2	4.6	7.6

Source: Statistics Canada

Reference Table 6
GROSS DOMESTIC PRODUCT ($ MILLION)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	982,441	1,076,577	1,108,048	1,152,905	1,213,175	1,290,906	1,373,845	1,450,405	1,529,589	1,599,608	1,527,258
NL	12,184	13,922	14,179	16,457	18,119	19,407	21,960	26,064	29,249	31,671	24,970
PE	3,159	3,366	3,431	3,701	3,798	3,983	4,096	4,315	4,543	4,650	4,750
NS	23,059	24,658	25,909	27,082	28,851	29,853	31,199	31,644	33,031	34,041	34,283
NB	19,041	20,085	20,684	21,169	22,366	23,672	24,716	25,847	27,044	27,376	27,497
QC	210,809	224,928	231,624	241,448	250,752	262,761	272,049	282,505	295,928	302,748	303,747
ON	409,020	440,759	453,701	477,763	493,081	516,106	537,383	560,576	583,946	584,460	578,183
MB	31,966	34,057	35,157	36,559	37,451	39,748	41,681	45,173	48,920	51,048	50,973
SK	30,778	33,828	33,127	34,343	36,653	40,796	43,996	45,604	50,863	65,425	56,553
AB	117,080	144,789	151,274	150,594	170,113	189,743	219,810	238,886	255,787	291,577	247,184
BC	120,921	131,333	133,514	138,193	145,642	157,675	169,664	182,251	192,117	197,728	191,006

Source: Statistics Canada

Reference Table 7
GROSS DOMESTIC PRODUCT ($2002 MILLION, CHAINED)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CANADA	1,045,786	1,100,515	1,120,146	1,152,905	1,174,592	1,211,239	1,247,807	1,283,033	1,311,260	1,318,055	1,285,604
NL	13,323	14,013	14,233	16,457	17,419	17,209	17,593	18,129	19,791	20,186	18,119
PE	3,502	3,570	3,532	3,701	3,778	3,877	3,921	4,077	4,149	4,167	4,164
NS	24,482	25,234	26,036	27,082	27,464	27,710	28,016	28,174	28,611	28,969	28,931
NB	19,508	19,917	20,248	21,169	21,765	22,366	22,638	23,174	23,439	23,392	23,314
QC	222,716	232,378	235,832	241,448	244,422	251,028	255,559	260,033	265,585	268,406	267,477
ON	429,697	455,234	463,357	477,763	484,341	496,780	510,509	522,998	533,233	528,635	509,421
MB	34,248	35,708	35,996	36,559	37,059	37,861	38,860	40,181	41,263	42,057	42,077
SK	33,936	34,820	34,487	34,343	35,921	37,741	38,904	38,266	39,626	41,434	39,810
AB	136,603	144,886	147,394	150,594	155,359	163,564	170,872	180,852	184,008	186,528	178,225
BC	126,708	132,578	133,403	138,193	141,435	146,541	153,489	159,729	164,496	164,869	161,851

Source: Statistics Canada

Western Economic Diversification Canada

Diversification de l'économie de l'Ouest Canada

Canada