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Science Statistics

Estimates of Research and
Development Expenditures
in the Higher Education
Sector, 2007/2008



September 2009 Edition



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Symbols

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- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- p preliminary
- r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- E use with caution
- F too unreliable to be published

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Highlights

Spending on research and development in the higher education sector 2007/2008

- Spending on research and development (R&D) by higher education institutions such as universities and affiliated research hospitals, experimental stations and clinics, amounted to \$10.2 billion in current dollars in 2007/2008 (table 1).
- In 2002 constant dollars, this was \$8.8 billion, up 2.7% from the previous year and 85% above the level in 1998/1999 (table 1).
- Of six funding sectors, higher education institutions themselves continued as the largest contributors to R&D done by this sector (45% of total funding in 2007/2008). They spent \$4.6 billion in current dollars, up 3.1% from the previous year. The second largest contributor was the federal government, which provided \$2.7 billion or 27% of total funding (table 1).
- The higher education sector spent \$2.1 billion in current dollars in the social sciences and humanities field in 2007/2008, up 7.9% from 2006/2007. Spending on natural sciences and engineering (including health sciences) stood at \$8.1 billion, up 5.3% (table 2, 5, 6, 7) .
- Ontario and Quebec combined provided 68% of total R&D spending of the higher education sector (table 3).

Analysis

Estimates of Research and Development Expenditures in the Higher Education Sector, 2007/2008

Spending on research and development performed by higher education institutions which includes universities, all affiliated research hospitals, experimental stations and clinics was \$10.2 billion (current dollars) in 2007/2008, a 5.8% increase over 2006/2007. In 2002 constant dollars this amounted to \$8.8 billion, a 2.7% increase over the previous year and an 85% rise from 1998/1999 (table 1).

There are six sectors funding research and development expenditures in the higher education sector: the federal government; the provincial government; the business enterprise; the higher education; private non-profit organizations and foreign.

The higher education institutions themselves continued as the largest contributors to research and development done by this sector, spending \$4.6 billion (current dollars), a 3.1% increase over 2006/2007. The higher education sector's presence at 45% of 2007/2008 total expenditures, has fallen from 1994/1995 when its share was 52% (table 1).

In 2007/2008, the second largest funding sector for higher education expenditures on research and development remained the federal government at \$2.7 billion, up 9.4% from the previous year. The federal government contributed 27% of total funding in 2007/2008, an increase from a decade earlier when federal funding comprised one-fifth of total spending on R&D in the higher education sector (table 1).

The provincial government sector contributed \$1.0 billion towards spending on higher education research and development in 2007/2008 an increase of 4.2% over the previous year. The provincial government's share increased from 8.5% of total higher education R&D expenditures in 1998/1999 to 10% in 2007/2008 (table 1).

Funding from the business enterprise and the private non-profit sectors rose, with both contributing near 9% of total higher education expenditures on R&D. Foreign sector funding remained at 1%. The business enterprise and private non-profit sector's share of total R&D funding to the higher education sector was basically unchanged from 1998/1999 (table 1).

Estimates of R&D expenditures in the higher education sector are allocated by three science types: social sciences and humanities; health sciences; and natural sciences and engineering excluding health sciences (or other natural sciences).

In 2007/2008 spending on research and development by the higher education sector in the social sciences and humanities amounted to \$2.1 billion, a 7.9% increase from 2006/2007. Health sciences stood at \$4.0 billion, up 6.2% from the previous year. Other natural sciences and engineering increased 4.5% to \$4.1 billion in 2007/2008 (tables 2, 5, 6, 7)

Just over two thirds of total R&D spending in the higher education sector occurred in Ontario (42%) and Quebec (26%) in 2007/2008. Comparatively, about one-quarter of total R&D expenditures in the higher education sector was performed in the Prairies (15%) and British Columbia (11%), with the remainder in the Atlantic Provinces (6%) (table 3).

Related products

Selected publications from Statistics Canada

88-202-X	Industrial Research and Development: Intentions
88-204-X	Federal Scientific Activities
88-221-X	Gross Domestic Expenditures on Research and Development in Canada and the Provinces
88-522-X	Science and Technology Activities and Impacts: A Framework for a Statistical Information
88F0006X	Science, Innovation and Electronic Information Division Working Papers
88F0017M	Science, Innovation and Electronic Information Division Research Papers

Selected CANSIM tables from Statistics Canada

358-0001	Gross domestic expenditures on research and development, by science type and by funder and performer sector, annual
358-0024	Business enterprise research and development (BERD) characteristics, by industry group based on the North American Industry Classification System (NAICS), annual
358-0026	Intellectual property management, by federal departments and agencies indicators, annual

Selected surveys from Statistics Canada

4201	Research and Development in Canadian Industry
4204	Research and Development of Canadian Private Non-Profit Organizations
4208	Provincial Research Organizations (PRO)
4209	Provincial Government Activities in the Natural Sciences
4210	Provincial Government Activities in the Social Sciences
4212	Federal Science Expenditures and Personnel, Activities in the Social Sciences and Natural Sciences
5109	Higher Education Research and Development Estimates

Selected summary tables from Statistics Canada

- *Research and development performed by the business enterprise sector*
- *Domestic spending on research and development (GERD), funding sector, by province*
- *Domestic spending on research and development (GERD), performing sector, by province*
- *Domestic spending on research and development (GERD)*

Statistical tables

Table 1
Source of funds

	Federal government	Provincial government	Business enterprise	Higher education	Private non-profit organizations	Foreign	Total
millions of current dollars							
1994/1995	869.8	314.7	296.1	1,913.8	259.2	21.3	3,674.9
1995/1996	854.8	323.2	296.7	1,926.6	265.7	24.2	3,691.2
1996/1997	809.0	297.6	335.6	1,905.5	312.7	36.4	3,696.8
1997/1998	792.7	369.9	381.0	1,971.5	324.5	39.5	3,879.1
1998/1999	862.9	371.6	411.0	2,339.4	335.1	49.5	4,369.5
1999/2000	1,084.6	482.2	460.3	2,648.8	349.2	56.6	5,081.7
2000/2001	1,292.8	587.2	553.4	2,892.1	418.2	49.6	5,793.3
2001/2002	1,586.8	712.0	603.3	2,928.9	509.1	84.1	6,424.2
2002/2003	1,816.7	828.6	643.2	3,461.8	604.5	100.5	7,455.3
2003/2004	2,181.7	1,018.1	679.1	3,589.3	599.4	75.8	8,143.3
2004/2005	2,336.9	1,039.0	754.7	4,146.7	684.9	95.7	9,057.9
2005/2006	2,542.4	973.3	803.3	4,340.9	742.0	116.3	9,518.2
2006/2007 ¹	2,487.5	992.7	808.2	4,434.9	775.7	125.7	9,624.8
2007/2008	2,720.2	1,034.0	870.1	4,574.1	889.7	99.1	10,187.3
millions of 2002 constant dollars ¹							
1994/1995	986.2	356.8	335.7	2,169.8	293.9	24.1	4,166.6
1995/1996	947.7	358.3	328.9	2,135.9	294.6	26.8	4,092.2
1996/1997	883.2	324.9	366.4	2,080.2	341.4	39.7	4,035.8
1997/1998	855.1	399.0	411.0	2,126.8	350.1	42.6	4,184.6
1998/1999	934.9	402.6	445.3	2,534.6	363.1	53.6	4,734.0
1999/2000	1,155.1	513.5	490.2	2,820.9	371.9	60.3	5,411.8
2000/2001	1,321.9	600.4	565.8	2,957.2	427.6	50.7	5,923.6
2001/2002	1,604.4	719.9	610.0	2,961.5	514.8	85.0	6,495.7
2002/2003	1,816.7	828.6	643.2	3,461.8	604.5	100.5	7,455.3
2003/2004	2,112.0	985.6	657.4	3,474.6	580.3	73.4	7,883.2
2004/2005	2,192.2	974.7	708.0	3,890.0	642.5	89.8	8,497.1
2005/2006	2,307.1	883.2	728.9	3,939.1	673.3	105.5	8,637.2
2006/2007 ¹	2,203.3	879.3	715.9	3,928.2	687.1	111.3	8,525.1
2007/2008	2,336.9	888.3	747.5	3,929.6	764.3	85.1	8,752.0

1. CANSIM, table384-0036.

Table 2
Source of funds and by major field of science, 2007/2008

	Social sciences and humanities ¹		Health sciences ²		Other natural sciences and engineering ³		Total	
	2002 constant dollars ⁴	Current dollars	2002 constant dollars ⁴	Current dollars	2002 constant dollars ⁴	Current dollars	2002 constant dollars ⁴	Current dollars
millions of dollars								
Total	1,771.6	2,062.2	3,448.1	4,013.6	3,532.2	4,111.5	8,752.0	10,187.3
Federal government	384.8	447.9	871.8	1,014.8	1,080.3	1,257.5	2,336.9	2,720.2
Provincial governments	177.7	206.8	266.5	310.2	444.2	517.0	888.3	1,034.0
Business enterprise	31.4	36.5	327.7	381.4	388.5	452.2	747.5	870.1
Higher education	1,036.1	1,206.0	1,470.7	1,711.9	1,422.9	1,656.2	3,929.6	4,574.1
Private non-profit organizations	141.7	164.9	477.3	555.6	145.4	169.2	764.3	889.7
Foreign	0.0	0.0	34.0	39.6	51.1	59.5	85.1	99.1

1. Social sciences and humanities embrace all disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, business administration and commerce, communications, criminology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political sciences, psychology, religious studies, social work, sociology, and urban and regional studies.
2. Health sciences consist of programmes directed towards the protection and improvement of human health.
3. Other natural sciences and engineering consist of disciplines, other than health sciences, concerned with understanding, exploring, developing or utilizing the natural world. Included are engineering, mathematical and physical sciences.
4. CANSIM, table 384-0036.

Table 3
Source of funds and by province, 2007/2008

	Federal government	Provincial governments	Business enterprise	Higher education	Private non-profit organizations	Foreign	Total
millions of current dollars							
Canada	2,720.2	1,034.0	870.1	4,574.1	889.7	99.1	10,187.3
Newfoundland and Labrador	45.8	5.8	11.8	70.8	5.2	0.5	139.9
Prince Edward Island	11.6	1.7	1.4	18.8	0.0	0.1	33.7
Nova Scotia	81.4	6.9	39.3	170.1	28.8	0.0	326.6
New Brunswick	34.7	7.0	5.6	87.2	9.2	0.1	143.8
Quebec	771.7	255.3	224.0	1,154.8	185.5	19.2	2,610.5
Ontario	1,093.0	351.0	431.5	1,982.8	399.4	56.4	4,314.0
Manitoba	77.1	19.2	19.9	141.6	37.1	7.0	302.0
Saskatchewan	67.6	22.4	9.5	116.5	13.1	0.6	229.7
Alberta	224.5	230.7	80.9	400.4	63.3	4.3	1,004.1
British Columbia	312.8	133.9	46.2	431.0	148.1	11.0	1,083.0
millions of 2002 constant dollars ¹							
Canada	2,336.9	888.3	747.5	3,929.6	764.3	85.1	8,752.0
Newfoundland and Labrador	39.3	5.0	10.1	60.8	4.5	0.0	120.2
Prince Edward Island	10.0	1.5	1.2	16.2	0.0	0.0	29.0
Nova Scotia	69.9	5.9	33.8	146.1	24.7	0.0	280.6
New Brunswick	29.8	6.0	4.8	74.9	7.9	0.0	123.5
Quebec	663.0	219.3	192.4	992.1	159.4	16.5	2,242.7
Ontario	939.0	301.5	370.7	1,703.4	343.1	48.5	3,706.2
Manitoba	66.2	16.5	17.1	121.6	31.9	6.0	259.5
Saskatchewan	58.1	19.2	8.2	100.1	11.3	0.1	197.3
Alberta	192.9	198.2	69.5	344.0	54.4	3.7	862.6
British Columbia	268.7	115.0	39.7	370.3	127.2	9.5	930.4

1. CANSIM, table 384-0036.

**Table 4
Province**

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
millions of current dollars											
1994/1995	3,674.9	58.5	3.8	113.2	53.8	1,136.1	1,441.3	114.8	108.2	309.0	336.2
1995/1996	3,691.2	58.4	3.7	117.0	56.2	1,111.5	1,432.7	113.5	113.9	327.8	356.5
1996/1997	3,696.8	56.6	4.2	117.6	56.3	1,099.3	1,456.1	111.3	113.6	328.8	353.0
1997/1998	3,879.1	61.2	5.9	125.0	57.4	1,131.6	1,554.2	108.3	118.9	357.7	358.9
1998/1999	4,369.5	72.0	11.4	164.1	80.4	1,273.8	1,699.7	130.8	138.4	408.1	390.8
1999/2000	5,081.7	78.6	11.4	199.6	89.0	1,532.9	1,908.0	157.6	176.1	490.9	437.6
2000/2001	5,793.3	83.4	15.7	199.9	88.2	1,628.6	2,316.2	189.6	228.2	546.0	497.5
2001/2002	6,424.2	89.4	15.7	208.6	88.2	1,778.5	2,575.9	205.9	235.6	664.9	561.5
2002/2003	7,455.3	94.4	18.7	225.5	98.9	2,074.3	2,995.5	224.5	258.8	727.5	737.2
2003/2004	8,143.3	114.1	25.2	259.1	117.5	2,345.0	3,187.4	238.7	244.8	826.8	784.6
2004/2005	9,057.9	115.6	24.2	266.0	114.3	2,467.7	3,835.1	260.6	244.7	898.2	831.5
2005/2006	9,518.2	148.5	27.4	297.4	130.1	2,556.4	3,980.3	294.5	217.7	962.0	904.0
2006/2007 ¹	9,624.8	132.2	31.2	316.5	135.0	2,540.7	4,088.1	287.1	216.1	918.9	959.1
2007/2008	10,187.3	139.9	33.7	326.6	143.8	2,610.5	4,314.0	302.0	229.7	1,004.1	1,083.0
millions of 2002 constant dollars ¹											
1994/1995	4,166.6	66.3	4.3	128.3	61.0	1,288.1	1,634.1	130.2	122.7	350.3	381.2
1995/1996	4,092.2	64.7	4.1	129.7	62.3	1,232.3	1,588.4	125.8	126.3	363.4	395.2
1996/1997	4,035.8	61.8	4.6	128.4	61.5	1,200.1	1,589.6	121.5	124.0	359.0	385.4
1997/1998	4,184.6	66.0	6.4	134.8	61.9	1,220.7	1,676.6	116.8	128.3	385.9	387.2
1998/1999	4,734.0	78.0	12.4	177.8	87.1	1,380.1	1,841.5	141.7	149.9	442.1	423.4
1999/2000	5,411.8	83.7	12.1	212.6	94.8	1,632.5	2,031.9	167.8	187.5	522.8	466.0
2000/2001	5,923.6	85.3	16.1	204.4	90.2	1,665.2	2,368.3	193.9	233.3	558.3	508.7
2001/2002	6,495.7	90.4	15.9	210.9	89.2	1,798.3	2,604.6	208.2	238.2	672.3	567.7
2002/2003	7,455.3	94.4	18.7	225.5	98.9	2,074.3	2,995.5	224.5	258.8	727.5	737.2
2003/2004	7,883.2	110.5	24.4	250.8	113.7	2,270.1	3,085.6	231.1	237.0	800.4	759.5
2004/2005	8,497.1	108.4	22.7	249.5	107.2	2,314.9	3,597.7	244.5	229.5	842.6	780.0
2005/2006	8,637.2	134.8	24.9	269.9	118.1	2,319.8	3,611.9	267.2	197.5	873.0	820.3
2006/2007 ¹	8,525.1	117.1	27.6	280.3	119.6	2,250.4	3,621.0	254.3	191.4	813.9	849.5
2007/2008	8,752.0	120.2	29.0	280.6	123.5	2,242.7	3,706.2	259.5	197.3	862.6	930.4

1. CANSIM, table384-0036.

Table 5
Social sciences and humanities

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
millions of current dollars											
1994/1995	725.5	15.6	0.9	23.5	13.9	217.5	278.9	24.2	21.9	58.7	70.4
1995/1996	724.7	15.4	0.9	23.0	13.8	213.5	269.1	24.7	23.8	64.5	76.0
1996/1997	705.2	15.2	1.1	21.3	13.2	204.9	259.6	24.5	23.9	61.1	80.4
1997/1998	731.7	14.7	1.5	21.9	12.8	203.6	285.6	23.8	26.9	62.2	78.7
1998/1999	903.8	16.5	3.5	40.9	25.4	243.9	341.9	33.6	32.6	71.6	93.9
1999/2000	1,062.5	20.5	3.7	48.1	27.8	296.4	401.0	40.4	36.8	86.2	101.6
2000/2001	1,202.4	19.2	4.5	51.9	29.8	323.6	473.5	43.1	47.6	95.5	113.7
2001/2002	1,274.5	23.8	4.3	48.9	29.7	331.4	515.0	44.7	48.5	107.3	120.9
2002/2003	1,414.1	21.7	5.6	51.3	32.2	396.3	535.1	48.7	51.5	120.7	151.0
2003/2004	1,598.8	29.3	6.7	58.0	38.0	453.8	603.2	54.0	48.0	143.2	164.6
2004/2005	1,778.3	27.0	6.8	63.7	40.2	486.2	696.4	59.8	46.1	168.9	183.2
2005/2006	1,891.4	31.7	7.3	71.5	45.8	492.2	761.1	67.1	42.0	176.1	196.8
2006/2007 ¹	1,910.7	30.9	8.9	70.6	44.4	481.3	798.8	63.3	42.2	160.5	209.8
2007/2008	2,062.2	36.4	8.8	77.0	44.8	517.1	840.9	65.8	41.9	194.7	234.8
millions of 2002 constant dollars ¹											
1994/1995	822.6	17.7	1.0	26.6	15.8	246.6	316.2	27.4	24.8	66.6	79.8
1995/1996	803.4	17.1	1.0	25.5	15.3	236.7	298.3	27.4	26.4	71.5	84.3
1996/1997	769.9	16.6	1.2	23.3	14.4	223.7	283.4	26.7	26.1	66.7	87.8
1997/1998	789.3	15.9	1.6	23.6	13.8	219.6	308.1	25.7	29.0	67.1	84.9
1998/1999	979.2	17.9	3.8	44.3	27.5	264.2	370.4	36.4	35.3	77.6	101.7
1999/2000	1,131.5	21.8	3.9	51.2	29.6	315.7	427.1	43.0	39.2	91.8	108.2
2000/2001	1,229.4	19.6	4.6	53.1	30.5	330.9	484.2	44.1	48.7	97.6	116.3
2001/2002	1,288.7	24.1	4.3	49.4	30.0	335.1	520.7	45.2	49.0	108.5	122.2
2002/2003	1,414.1	21.7	5.6	51.3	32.2	396.3	535.1	48.7	51.5	120.7	151.0
2003/2004	1,547.7	28.4	6.5	56.1	36.8	439.3	583.9	52.3	46.5	138.6	159.3
2004/2005	1,668.2	25.3	6.4	59.8	37.7	456.1	653.3	56.1	43.2	158.4	171.9
2005/2006	1,716.3	28.8	6.6	64.9	41.6	446.6	690.7	60.9	38.1	159.8	178.6
2006/2007 ¹	1,692.4	27.4	7.9	62.5	39.3	426.3	707.5	56.1	37.4	142.2	185.8
2007/2008	1,771.6	31.3	7.6	66.2	38.5	444.2	722.4	56.5	36.0	167.3	201.7

1. CANSIM, table384-0036.

Table 6
Health sciences

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
millions of current dollars											
1994/1995	1,382.1	15.6	0.3	38.8	3.6	458.6	571.4	44.9	27.8	123.7	97.4
1995/1996	1,428.4	15.3	0.3	45.7	4.7	452.5	606.1	43.8	30.4	126.8	102.8
1996/1997	1,430.4	15.0	0.3	46.3	4.6	449.0	614.1	42.7	27.3	130.0	101.1
1997/1998	1,516.1	17.3	0.6	52.8	4.8	457.4	661.6	40.8	31.1	147.3	102.4
1998/1999	1,627.8	21.6	0.6	62.2	6.8	507.8	671.1	45.6	36.1	166.5	109.5
1999/2000	1,822.5	20.1	0.6	71.8	7.1	597.5	706.1	53.8	43.5	199.5	122.5
2000/2001	2,103.9	23.9	1.4	72.6	7.5	633.9	875.6	62.0	57.9	225.0	144.1
2001/2002	2,382.6	25.4	1.3	83.4	7.7	700.2	977.1	74.1	67.6	274.5	171.3
2002/2003	2,955.6	29.7	2.1	88.1	9.2	813.5	1,296.6	81.2	76.4	306.1	252.7
2003/2004	3,086.8	35.9	3.6	107.3	10.5	877.1	1,314.8	83.1	65.3	330.0	259.2
2004/2005	3,584.6	39.0	3.7	102.9	9.6	921.2	1,692.0	91.6	64.8	351.1	308.8
2005/2006	3,767.1	54.7	4.8	112.0	10.9	969.0	1,740.4	105.9	63.2	387.1	319.2
2006/2007 ^r	3,780.9	45.1	4.8	126.4	13.1	986.2	1,736.6	103.4	60.6	376.4	328.3
2007/2008	4,013.6	42.6	3.6	123.7	14.7	1,004.9	1,887.9	106.4	62.4	381.7	385.7
millions of 2002 constant dollars ¹											
1994/1995	1,567.0	17.7	0.3	44.0	4.1	520.0	647.8	50.9	31.5	140.2	110.4
1995/1996	1,583.6	17.0	0.3	50.7	5.2	501.7	672.0	48.6	33.7	140.6	114.0
1996/1997	1,561.6	16.4	0.3	50.5	5.0	490.2	670.4	46.6	29.8	141.9	110.4
1997/1998	1,635.5	18.7	0.6	57.0	5.2	493.4	713.7	44.0	33.5	158.9	110.5
1998/1999	1,763.6	23.4	0.7	67.4	7.4	550.2	727.1	49.4	39.1	180.4	118.6
1999/2000	1,940.9	21.4	0.6	76.5	7.6	636.3	752.0	57.3	46.3	212.5	130.5
2000/2001	2,151.2	24.4	1.4	74.2	7.7	648.2	895.3	63.4	59.2	230.1	147.3
2001/2002	2,409.1	25.7	1.3	84.3	7.8	708.0	988.0	74.9	68.4	277.6	173.2
2002/2003	2,955.6	29.7	2.1	88.1	9.2	813.5	1,296.6	81.2	76.4	306.1	252.7
2003/2004	2,988.2	34.8	3.5	103.9	10.2	849.1	1,272.8	80.4	63.2	319.5	250.9
2004/2005	3,362.7	36.6	3.5	96.5	9.0	864.2	1,587.2	85.9	60.8	329.4	289.7
2005/2006	3,418.4	49.6	4.4	101.6	9.9	879.3	1,579.3	96.1	57.4	351.3	289.7
2006/2007 ^r	3,348.9	40.0	4.3	112.0	11.6	873.5	1,538.2	91.6	53.7	333.4	290.8
2007/2008	3,448.1	36.6	3.1	106.3	12.6	863.3	1,621.9	91.4	53.6	327.9	331.4

1. CANSIM, table384-0036.

Table 7
Other natural sciences and engineering

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
millions of current dollars											
1994/1995	1,567.2	27.3	2.7	50.9	36.2	460.0	591.1	45.6	58.5	126.6	168.3
1995/1996	1,538.1	27.7	2.5	48.3	37.6	445.5	557.6	45.0	59.7	136.5	177.7
1996/1997	1,561.2	26.4	2.8	50.0	38.4	445.4	582.5	44.1	62.4	137.7	171.5
1997/1998	1,631.4	29.2	3.7	50.3	39.7	470.7	607.0	43.7	61.0	148.2	177.8
1998/1999	1,837.9	33.9	7.3	61.0	48.2	522.0	686.7	51.6	69.8	170.0	187.4
1999/2000	2,196.8	38.0	7.2	79.6	54.2	639.0	800.9	63.4	95.8	205.1	213.6
2000/2001	2,487.0	40.2	9.8	75.5	50.9	671.2	967.1	84.5	122.7	225.5	239.6
2001/2002	2,767.1	40.2	10.1	76.2	50.8	746.7	1,083.8	87.0	119.5	283.2	269.6
2002/2003	3,085.6	43.0	11.0	86.1	57.5	864.5	1,163.8	94.6	130.9	300.7	333.5
2003/2004	3,457.7	48.9	14.9	93.9	69.0	1,014.2	1,269.4	101.5	131.5	353.6	360.8
2004/2005	3,695.1	49.6	13.7	99.4	64.5	1,060.3	1,446.8	109.2	133.8	378.1	339.6
2005/2006	3,859.7	62.1	15.3	113.9	73.5	1,095.2	1,478.8	121.5	112.5	398.8	388.1
2006/2007 ¹	3,933.3	56.2	17.5	119.5	77.5	1,073.2	1,552.7	120.4	113.2	382.0	421.0
2007/2008	4,111.5	60.9	21.2	125.9	84.3	1,088.4	1,585.3	129.8	125.4	427.8	462.5
millions of 2002 constant dollars ¹											
1994/1995	1,776.9	31.0	3.1	57.7	41.0	521.5	670.2	51.7	66.3	143.5	190.8
1995/1996	1,705.2	30.7	2.8	53.5	41.7	493.9	618.2	49.9	66.2	151.3	197.0
1996/1997	1,704.4	28.8	3.1	54.6	41.9	486.2	635.9	48.1	68.1	150.3	187.2
1997/1998	1,759.9	31.5	4.0	54.3	42.8	507.8	654.8	47.1	65.8	159.9	191.8
1998/1999	1,991.2	36.7	7.9	66.1	52.2	565.5	744.0	55.9	75.6	184.2	203.0
1999/2000	2,339.5	40.5	7.7	84.8	57.7	680.5	852.9	67.5	102.0	218.4	227.5
2000/2001	2,542.9	41.1	10.0	77.2	52.0	686.3	988.9	86.4	125.5	230.6	245.0
2001/2002	2,797.9	40.6	10.2	77.0	51.4	755.0	1,095.9	88.0	120.8	286.3	272.6
2002/2003	3,085.6	43.0	11.0	86.1	57.5	864.5	1,163.8	94.6	130.9	300.7	333.5
2003/2004	3,347.2	47.3	14.4	90.9	66.8	951.8	1,228.8	98.3	127.3	342.3	349.3
2004/2005	3,466.3	46.5	12.9	93.2	60.5	994.7	1,357.2	102.4	125.5	354.7	318.6
2005/2006	3,502.5	56.4	13.9	103.4	66.7	993.8	1,341.9	110.3	102.1	361.9	352.2
2006/2007 ¹	3,483.9	49.8	15.6	105.8	68.6	950.6	1,375.3	106.6	100.3	338.4	372.9
2007/2008	3,532.2	52.3	18.2	108.2	72.4	935.1	1,361.9	111.5	107.7	367.5	397.3

1. CANSIM, table384-0036.

Data quality, concepts and methodology

Estimation of research and development expenditures in the higher education sector, 2007/2008

Definitions

Natural sciences and engineering

The natural sciences and engineering (NSE) field embraces the disciplines of study concerned with understanding, exploring, developing or utilizing the natural world. Included are the engineering, mathematical, life and physical sciences.

Social sciences and humanities

The social sciences and humanities (SSH) field embraces all disciplines involved in studying human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political science, psychology, religious studies, social work, sociology, and urban and regional studies.

Scientific research and experimental development (R&D)

Creative work undertaken on a systematic basis in order to increase the stock of scientific and technical knowledge and to use this knowledge in new applications.

The central characteristic of R&D is an appreciable element of novelty and of uncertainty. New knowledge, products or processes are sought. The work is normally performed by, or under the supervision of, persons with postgraduate degrees in the natural sciences or engineering.

An R&D project generally has three characteristics:

- a substantial element of uncertainty, novelty and innovation;
- a well-defined project design;
- a report on the procedures and results of the projects.

Canadian business enterprises

This sector is composed of business and government enterprises, including public utilities and government owned firms and frequently referred to as the industry sector. Incorporated consultants providing scientific and engineering services are also included. Industrial research institutes located at Canadian universities are considered to be in the university sector.

Higher education

The higher education sector is composed of all universities, colleges of technology and other institute of post-secondary education, whatever their source of finance or legal status. It also includes all research institutes, experimental stations and clinics operating under the direct control of, or administered by, or associated with, the higher education establishments.

Canadian private non-profit institutions

Charitable foundations, voluntary health organizations, scientific and professional societies, and other organizations not established to earn profits comprise this sector. Private non-profit institutions primarily serving or controlled by another sector should be included in that sector (e.g., the Pulp and Paper Research Institute is in Canadian business enterprises).

Canadian provincial and municipal governments

Departments and agencies of these governments form this sector. Government enterprises, such as provincial utilities are included in the Canadian business enterprises sector, and hospitals in the Canadian non-profit institutions or university sector.

Other Canadian performers

This sector includes all individuals or organizations not belonging to any of the above sectors. In particular, it includes provincial research councils and foundations.

Foreign performers

All foreign governments, foreign companies (including foreign subsidiaries of Canadian firms), international organizations, non resident foreign nationals and Canadians studying or teaching abroad, are included in this sector.