

Canada's Top 100 Corporate R&D Spenders List 2008 Analysis

R&D Spending Retreats

Corporate research and development (R&D) spending declined by a discouraging -3.0% among Canada's Top Corporate R&D Spenders, from \$10.6 billion in Fiscal 2006 to \$10.3 billion in Fiscal 2007¹. This means that Top 100 R&D spending has declined 4 out of the past 6 years, whereas revenues have continued to increase. Revenues increased 9.2% (among 92 companies where data were available.) The pattern of falling R&D and increasing revenues contributed to eroding research intensity – R&D spending as a percent of revenues. Research intensity was 3.2%, down from 3.6% in Fiscal 2006, -12.0% decline.

However, the R&D landscape was not all together bleak. The national spending total is heavily influenced by two large firms - Nortel Networks and BCE Inc. Both companies posted sharp declines in R&D spending in Fiscal 2007 (-15.8% and -13.6% respectively). With the largest spenders omitted, R&D spending increased by a total of 3.3% at the 96 other companies where full data were available. However, with inflation taken into account, this means that spending was essentially flat over the period.

Overall, 61 firms increased their spending in Fiscal 2007, against 37 whose spending declined. However, the situation of the 25 largest R&D companies on the list (companies where two years of data were available) was less than encouraging; spending increased at the country's 13 biggest spenders, but declined at 12 others.

The \$100 Million Club

In Fiscal 2007 only 19 companies claimed a place in RESEARCH Infosource's \$100 Million Club, an elite group of firms that spent \$100 million or more each on R&D. This compares with 24 firms on the list last year. The \$100 Million Club includes a broad blend of technology, pharmaceutical/biotechnology, manufacturing, services and resource companies. The Club includes 10 Canadian companies and 9 foreign subsidiaries. Four companies on last year's list fell off (PMC Sierra, TELUS Corporation, EnCana Corporation and Tembec Inc.) and one firm returned (Hydro-Québec). Among the companies that were \$100 Million Club members for the past 2 years, 9 companies increased their R&D spending, versus 8 companies where spending declined.

¹ Canada's Top 100 corporate R&D spending in Fiscal 2007 was \$10.5 billion. However, because 2 of the Top 100 companies were new, comparable Fiscal 2006 data does not exist. Therefore, the percent change between Fiscal 2007 and Fiscal 2006 was based on 98 companies.

Club members accounted for only 67% of total Top 100 R&D spending in 2007, compared with 72% the previous year. These large R&D spenders suffered a steep -10.0% drop in spending, compared with a sharp increase of 15.3% for the companies spending less than \$100 million.

The \$100 Million Club		
2007 Rank	Company	Industry
1	Nortel Networks	Comm/telecom equipment
2	BCE	Telecommunications services
3	Magna International	Automotive
4	Pratt & Whitney Canada (fs)	Aerospace
5	IBM Canada (fs)	Software and computer services
6	Atomic Energy of Canada	Energy/oil and gas
7	Research In Motion	Comm/telecom equipment
8	Alcatel-Lucent (fs)	Comm/telecom equipment
9	sanofi-aventis Group++ (fs)	Pharmaceuticals/biotechnology
10	Apotex	Pharmaceuticals/biotechnology
11	AbitibiBowater (fs)	Forest and paper products
12	GlaxoSmithKline Canada (fs)	Pharmaceuticals/biotechnology
13	Bombardier	Aerospace
14	Ericsson Canada (fs)	Comm/telecom equipment
15	Cognos+	Software and computer services
16	Biovail	Pharmaceuticals/biotechnology
17	Pfizer Canada (fs)	Pharmaceuticals/biotechnology
18	Merck Frosst Canada (fs)	Pharmaceuticals/biotechnology
19	Hydro-Québec	Electrical power and utilities

fs = Foreign subsidiary (includes R&D expenditures for Canadian operations only)

+Not current name

++includes sanofi-aventis Canada Inc. and Sanofi Pasteur Limited

Industry Performance

Information technology companies, spread across 5 sub-segments, dominated Top 100 spending in 2007, accounting for 51% of the Top 100 spending total, a drop from 53% of the total the year prior. The Communications/telecom equipment sub-sector continued to dominate industry spending, accounting for 27% of the total, down from 28% in Fiscal 2006. Standouts were Research In Motion, where R&D spending jumped 42.0% in Fiscal 2007, and Alcatel-Lucent, where spending increased by 26.1% over the period. However, if Nortel Networks' result is omitted, this sector accounted for 11% of total spending in Fiscal 2007, versus 9% in Fiscal 2006. Three companies in the Telecommunication services sub-sector accounted for 13% of Top 100 spending, down from 15% of the total in 2006.

Taking up the slack were 32 companies in the Pharmaceutical/biotechnology sector, which accounted for 19% of total spending in Fiscal 2007, compared with 18% the prior year.

The sanofi-aventis Group² led, recording total R&D spending of \$207.2 million, surpassing Apotex with \$181.8 million. Without Nortel Networks in the mix, the Pharma/biotechnology sector accounted for 24% of Top 100 spending, up from 23% in Fiscal 2006.

Top 100 – Leading Industries	
Industry	R&D Spending (% of Total)
Communications/telecom (13)	27
Pharmaceuticals/biotechnology (32)	19
Telecommunications services (3)	13
Aerospace (5)	8
Software and computer services (8)	8
Automotive (2)	7
Energy/oil and gas (11)	7

Between Fiscal 2006 and Fiscal 2007, total R&D spending declined in 4 of the 7 leading sectors represented by the Top 100 performers.

The Top 10 R&D Intensive Firms

Rising revenues and stagnant R&D spending led to an overall drop in research intensity this year. Intensity rose at 46 companies while an almost equal number (42 companies) had a drop in intensity between Fiscal 2006 and Fiscal 2007. (Comparable data were not available for the other companies, or revenues were less than \$1 million.) Predictably, Pharma/biotechnology companies tended to be the most research-intensive. In Fiscal 2007, 9 of the 10 most research-intensive firms were in this sector. Firms that are highly research intensive are typically startup or early-stage companies that are investing heavily in new products without a corresponding revenue stream.

Top 10 Research Intensive Companies*			
2007 Rank		Company	R&D as % of Revenue
Research Intensity	Overall		
1	36	Neurochem+	3,679.4
2	72	Isotechnika	1,272.0
3	40	Cardiome Pharma	1,164.0
4	89	Azure Dynamics	635.5
5	83	Medicure	392.5
6	65	MethylGene	222.6
7	92	ProMetic Life Sciences	190.6
8	74	Labopharm	145.1
9	88	Akela Pharma	140.5
10	55	AEterna Zentaris	93.3

*\$1 million or more of revenue
+Not current name

² Includes sanofi-aventis Canada Inc. and Sanofi Pasteur Limited

Gainers and Losers

Natural resource companies were well represented among the 10 companies that had the strongest growth in R&D spending. Penn West Energy Trust led the pack with a 435.1% gain in spending. Teck Cominco (88.2%) and Petro-Canada (52.9%) also fared well. So too did a number of information technology firms, led by Corel Corporation (63.7%), Sandvine Corporation (57.9%), and MOSAID Technologies (52.3%). Medicure Inc. (128.4%) led companies in the Pharma/biotechnology sector in growth.

Top 10 Companies by Growth			
2007 Rank		Company	% Change 2006-2007
R&D Growth	Overall		
1	87	Penn West Energy	435.1
2	83	Medicure	128.4
3	66	Teck Cominco	88.2
4	79	SNC-Lavalin	72.2
5	48	Corel	63.7
6	91	Sandvine	57.9
7	65	MethylGene	54.2
8	44	Petro-Canada	52.9
9	82	MOSAID Technologies	52.3
10	94	Evertz Technologies	48.8

A number of household names suffered substantial declines in R&D spending in Fiscal 2007, which is worrisome. EnCana and Tembec both reduced their spending by more than 40%, whereas TELUS, Suncor Energy and Axcan Pharma all had declines of over 30%.

Bottom 10 Companies by Growth			
2007 Rank		Company	% Change 2006-2007
R&D Growth	Overall		
1	31	EnCana	-48.8
2	33	Tembec	-44.7
3	26	TELUS	-34.6
4	46	Suncor Energy	-32.4
5	69	Axcan Pharma	-31.7
6	59	Nexen	-24.5
7	13	Bombardier	-23.9
8	47	QLT	-22.0
9	43	Syncrude Canada	-21.8
10	90	SR Telecom	-19.9

Looking Ahead

Companies are bracing for the impact of world financial and stock market meltdowns as this analysis is being written. Suffice to say that there are bound to be major repercussions for corporate R&D spending next year. At this time everything is up for grabs. A number of leading firms may not be in existence next year. Others will seek mergers with competitors. Revenues are likely to decline across broad sectors of industry. All bets are off for predictions of industrial research in the year to come.

But what if the global economic crisis had not interceded? What would the prognosis for industrial research in Canada have been? Not positive. Even in the good economic times Canada enjoyed in recent years, corporate R&D spending stagnated – especially in real (inflation-adjusted) terms. Our R&D powerhouses, such as Nortel and BCE have sharply cut back on their spending. A few other firms, such as RIM, are moving up in the ranking, but their spending is still not at a level where it can meaningfully replace that of the leaders. The Pharma/biotechnology sector continues to spend at high levels, but overall spending in that sector is not substantially increasing.

It is true that more companies than ever claim to be conducting research (19,000 in 2005, compared with 11,000 in 2000), but most of these are small firms trying to grow into large ones, rather than large companies that have global market presence. In any event, most of these companies are occasional R&D performers, rather than committed companies.

Even without the current uncertainties the outlook for corporate research was not strong. When the dust of the economic tsunami settles, policy makers at the federal and provincial levels need to quickly adjust their innovation strategies to account for the new realities. As for corporate leaders, the current crisis may well yield opportunities, but before that it will certainly extract a toll. Research and development will, however remain key to future competitiveness.