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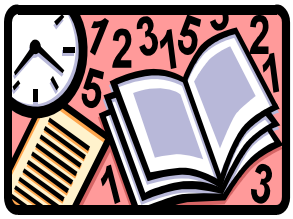

Small and Medium-sized Enterprise Outlook

August 2004

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The Small and Medium-size Enterprise Outlook is a compilation of most recent statistics and results of research about small and medium-sized enterprises (SMEs). This document is a reference tool.

Its objective is to provide an overview of the profile of SMEs in Canada and key issues arising from changes in their environment. It contains a variety of subjects that relate to challenges face by SMEs. In addition, some sections may contain considerations for policy development. Whenever possible, the sections contain current SME statistics in Canada.

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HIGHLIGHTS

- As of June 2003, there were approximately 2.2 million business establishments in Canada. The firms that maintain a payroll of at least one person, also called "employer businesses" represent only half of this (1,047,132). The firms with fewer than 100 employees constitute the vast majority of businesses (98%), 74% have fewer than 10 and 57% have only 1 to 4 employees. Slightly less than 3000 firms, or about 0.3%, have more than 500 employees. *(Source: Key Small Business Statistics, Industry Canada, April 2004)*

- Even if there is no shortage of business support services in Canada by public and private organisations, firms may face another information problem in the form of largely uncoordinated potential suppliers of services. *(Source: Business Management Skills in Small and Micro-enterprises, Small Business Policy Branch, Industry Canada, January 2003)*

- According to a recent study on management competencies and owner's perceptions of success, the growth of a firm is directly associated with the diversity of management experience and the owner's growth plans. *(Source: Management Competencies and SME Performance Criteria: A Pilot Study, Barbara Orser, Allan Riding, December 2003)*

- Not all small enterprises are interested in growing their business. Many small and micro-enterprises continue to derive adequate income without growing their business or expending beyond their own local market. These firms make an important contribution to the economy and should be encouraged but their needs are separate and different from firms seeking sustained or rapid growth. *(Source: Business Management Skills in Small and Micro-enterprises, Small Business Policy Branch, Industry Canada, January 2003)*

- Generally, informal investors such as angels believe that most potential SMEs are not "investor ready" either because business plans and market knowledge are not well developed or because business owners are unwilling to relinquish control of their businesses. They also claim that lack of preparedness by SMEs for investments is the leading factor inhibiting informal investment in Canada, edging out taxation and regulation. *(Source: Equinox Management Consultants Ltd., Practices and Patterns of Informal Investment, 2001)*

- The ability of SMEs to adopt effective business strategies, and their lack of awareness of equity financing options, restricts effective demand for VC, and therefore, the continued growth of the Canadian VC industry. (Source: *Small Business Policy Branch, Industry Portfolio Working Group on Venture Capital, 2003 called Canada's Venture Capital Market: Strengths and Challenges of a critical industry)*

- SME spend far less than large firms do in terms of absolute amounts in R&D. However, as a percentage of revenue (R&D intensity), spending on innovation by SMEs far outstrips that of larger firms. *(Source: Statistics Canada, Industrial Research and Development – 2003 Intentions)*

- Empirical studies have confirmed that collaborating firms are more innovative than non-collaborating ones, irrespective of their size. *(Source: OECD, 2001)*

- A lack of collaboration between SMEs which reduces the circulation and exchanges of information, insufficient interaction between high-tech firms and others and geographical imbalances in international co-operation patterns create obstacles and disincentives to networking by SMEs. *(Source: Networks, Partnerships, Clusters and Intellectual Property Rights: Opportunities and Challenges for Innovative SMEs in a Global Economy, OECD, 2004)*

- The costs of patenting are generally perceived as one of the greatest barriers for SMEs to benefit from the IP system. Not only is the propensity to apply for protection of IP rights among SMEs low, but so is the use of information contained in patent databases. *(Source: Networks, Partnerships, Clusters and Intellectual Property Rights: Opportunities and Challenges for Innovative SMEs in a Global Economy, OECD, 2004)*

- Although most SMEs continue to focus on local markets, a significant share are becoming internationalized and need to design products and services for international markets. Market liberalization and deregulation, which contributed to the global restructuring trend, is exposing many SMEs to fierce international competition and imposes substantial adjustment cost on them. The growing complexity of technology and the high cost of R&D are driving small firms to seek global linkages and alliances. *(Source: OECD Small and Medium Enterprises Outlook, 2002)*

- Small firms continue to lag behind large firms in establishing a presence on the World Wide Web. Between 2000 and 2002, the percentage of small firms with websites increased from 21% to 27%. This is a general trend occurring in e-commerce as enterprises are able to use their technology in a more functional manner. *(Source: Information and Communication technology use: are small firms catching up?, Statistics Canada, 2004)*

- Canada has proportionally more micro-businesses than the United States; and while Canada has been good at starting new businesses, it has been far less successful in growing them and, in particular, growing them into market leaders or Canadian champions. *(Source: The path to prosperity: Canada's small- and medium-sized enterprises, A study sponsored by Canadian Federation of Independent Business, Canadian Manufacturers & Exporters, and RBC Financial Group)*

- In Canada, only 1.4%, or 16005, of Canadian business employers are high growth firms. The majority has fewer than 20 employees (11,464). The highest numbers of high growth firms are found in the wholesale and retail trade, services and accommodation sectors. However, the base-manufacturing sector shows the highest percentage of high growth firms followed by the secondary manufacturing sector. *(Source: Characteristics of Firms that Grow from Small to Medium Size, Synthesis Report, Statistics Canada, April 2004)*

- Canadian firms are more likely to see "barriers" as reason for not growing instead of "not interested" to grow. *(Source: SME Growth Study: A Canada/U.S. Perspective, Ipsos Reid, 2002)*

- Canadian productivity is being hampered not only by the greater labour reliance, but also because Canadian firms are less innovative in the products they produce and the way they use the materials, capital and labour that they have at their disposal. *(Source: Greater innovation will fuel greater profitability; Canada's reliance on labour and not capital is hurting our manufacturers, Chris Johnsen, Advanced Manufacturing Magazine, November 2003)*

1. PROFILE OF CANADIAN SMES

1.1. Distribution by region

As of June 2003, there were approximately 2.2 million business establishments in Canada, as shown in table 1. The firms that maintain a payroll of at least one person, also called "employer businesses" represent only half of this (1,047,132). As shown in Table 1, slightly more than 58% of all business establishments in Canada are located in Ontario and Quebec, the rest being divided up between the western provinces (around 35%) and the Atlantic provinces (around 6%). The Northwest Territories, the Yukon and Nunavut only represent 0.3% of Canada's businesses.

The western provinces, the Yukon and Prince Edward Island have more business establishment per 1000 population than elsewhere. Nunavut, Newfoundland and Labrador, Nova Scotia and New Brunswick have the lowest ratios of business establishments relative to population. Ontario and Quebec are below the national average of 70.5, with 65.4 and 67.3 business establishments per 1000 people respectively. *(Source: Key Small Business Statistics, Industry Canada, April 2004)*

Table 1: Total number of business establishments, and number of establishments relative to provincial territorial population, June 2003

Provinces/Territories	No. of Business Establishments			No. of Establishments per 1 000 population
	Total	Employer Businesses	Indeterminate1	
Newfoundland and Labrador	25 951	17 077	8 874	49.9
Prince Edward Island	10 508	6 880	3 628	76.3
Nova Scotia	52 089	30 894	21 195	55.7
New Brunswick	44 590	26 897	17 693	59.4
Quebec	503 632	241 420	262 212	67.3
Ontario	800 206	347 553	452 653	65.4
Manitoba	76 154	36 062	40 092	65.5
Saskatchewan	95 911	40 234	55 677	96.4
Alberta	294 202	138 558	155 644	93.3
British Columbia	318 868	157 453	161 415	76.9
Yukon Territory	2 883	1 672	1 211	92.7
Northwest Territories	2 733	1 782	951	65.2
Nunavut	845	650	195	28.7
Canada Total	**2 228 572**	**1 047 132**	**1 181 440**	**70.5**

Source: Statistics Canada, Business Register, June 2003; National Income and Expenditure Accounts 2002; Estimates of Population by Age and Sex for Canada, the Provinces and the Territories, September 2003.

Note 1: The "Indeterminate" category consists of incorporated or unincorporated businesses that do not have a CRA payroll deductions account. The work force of such businesses may consist of contract workers, family members and/or owners.

1.2. Distribution by size

The firms with fewer than 100 employees constitute the vast majority of businesses in Canada (98%), 74% have fewer than 10 and 57% have only 1 to 4 employees (see Table 2). Slightly less than 3000 or about 0.3% have more than 500 employees.

About one quarter of all business establishments (indeterminate and employer businesses alike) produce goods, while the remainder provide services. Small firms (those with fewer than 100 employees) make up 97% of goods-producing employer businesses and 98% of all service-producing employer businesses.

The distribution of employer businesses by size of business establishment in each province is similar to the national average (see Table 3). There is some variation among the provinces and territories; for example there is a higher percentage of micro-businesses (1 to 4 employees) in Quebec (62%) than in the territories (from 33% to 53%), Ontario (53%) or Manitoba (52%). *(Source: Key Small Business Statistics, Industry Canada, April 2004)*

Table 2: Number of establishments by sector and firm size (number of employees), June 2003

Number of Employees	Cumulative Percent of Employer Businesses	No. of Business Establishments		
		Total	Goods-producing Sector2	Service-producing Sector2
Indeterminate1		1 181 440	323 786	857 654
Employer Business Total	*100.00%*	*1 047 132*	*244 942*	*802 190*
1–4	56.90%	596 043	149 128	446 915
5–9	74.40%	182 892	36 445	146 447
10–19	86.30%	124 417	24 870	99 547
20–49	94.70%	88 444	19 369	69 075
50–99	97.70%	31 284	8 125	23 159
100–199	99.10%	14 433	4 247	10 186
200–499	99.70%	6 846	2 150	4 696
500+	100.00%	2 773	608	2 165
Grand Total		**2 228 572**	**568 728**	**1 659 844**

Source: Statistics Canada, Business Register, June 2003

Note 1: The "Indeterminate" category consists of incorporated or unincorporated businesses that do not have a CRA payroll deductions account. The work force of such businesses may consist of contract workers, family members and/or owners.

Note 2: By conventional Statistics Canada definition, the goods-producing sector consists of North American Industry Classification System (NAICS) codes 11 to 31-33, while NAICS codes 41 to 91 define te service-producing sector.

Table 3: Employer businesses by firm size (number of employees) in provinces and territories, June 2003

Provinces/Territories	Employer Businesses										
		Percent of Total									
	Total	1–4	5–9	10–19	20–49	50–99	Small <100	100–199	200–499	Medium 100–499	500+
Newfoundland and Labrador	17 077	59.8	18.8	10.1	7	2.3	98	1.1	0.6	1.7	0.3
Prince Edward Island	6 880	55	20	12.8	8.2	2.4	98.4	1	0.5	1.5	0.1
Nova Scotia	30 894	54.7	17.9	13.1	9	2.9	97.7	1.5	0.6	2	0.3
New Brunswick	26 897	57.4	18	11.9	8.2	2.6	98.1	1.1	0.6	1.7	0.2
Quebec	241 420	62.2	16.4	9.9	6.9	2.5	98	1.2	0.6	1.7	0.3
Ontario	347 553	53.3	17.7	12.8	9.7	3.6	97.1	1.7	0.8	2.6	0.3
Manitoba	36 062	52	18.2	13.8	10.1	3.4	97.5	1.4	0.8	2.1	0.3
Saskatchewan	40 234	57.9	18.6	12	7.6	2.3	98.4	0.9	0.6	1.5	0.2
Alberta	138 558	57.3	17.2	12.1	8.4	2.9	97.9	1.3	0.6	1.9	0.2
British Columbia	157 453	57.8	17.8	11.9	8	2.7	98.1	1.2	0.5	1.7	0.2
Yukon Territory	1 672	52.7	19.4	13.5	9.5	2.7	97.7	1.3	0.8	2.2	0.1
Northwest Territories	1 782	40.2	21.3	17.9	13.3	4.2	97	2	1	2.9	0.1
Nunavut	650	32.8	21.5	18.2	18.2	5.8	96.5	2.6	0.8	3.4	0.2
Canada Total	**1 047 132**	**56.9**	**17.5**	**11.9**	**8.4**	**3**	**97.7**	**1.4**	**0.7**	**2**	**0.3**

Source: Statistics Canada, Business Register, June 2003

1.3. Distribution by survival rate

The probability of survival is defined as the percentage of new firms that continue to operate when they reach a given age. Table 4 is based on firms that entered the market from 1984 to 1995; therefore the highest age observable was 11 years. The percentage of new firms that remain in business after one, two or three years declines rapidly. Beyond the first three years, survival rates of micro-enterprises continue to be well below those other firms. (Source: *Key Small Business Statistics, Industry Canada, April 2004)*

Table 4: Survival rates of micro-enterprises and other small employer businesses, by region, size and age of business in percentage, 1984-1995

AGE (years)	Micro-enterprises (<5 employees)					Other Small Employer Businesses (5–99 employees)				
	ATLANTIC	QUE	ON	PRAIRIE	BC	ATLANTIC	QUE	ON	PRAIRIE	BC
1	61%	74%	78%	72%	76%	86%	90%	91%	89%	91%
2	45%	58%	62%	56%	59%	74%	78%	79%	75%	78%
3	37%	47%	50%	46%	48%	65%	68%	69%	65%	68%
4	30%	40%	42%	39%	40%	58%	61%	61%	57%	61%
5	26%	34%	36%	33%	34%	52%	54%	55%	51%	55%
6	22%	30%	31%	29%	30%	47%	49%	49%	46%	50%
7	19%	26%	27%	25%	26%	43%	44%	44%	42%	46%
8	17%	23%	24%	22%	23%	39%	41%	40%	39%	43%
9	15%	21%	21%	20%	21%	36%	38%	37%	36%	39%
10	13%	19%	19%	18%	19%	34%	35%	33%	33%	36%
11	12%	17%	17%	16%	17%	30%	32%	31%	30%	34%

Source: J. Baldwin, L. Bian, R. Dupuy and G. Gellatly, Failure Rates for New Canadian Firms: New Perspectives on Entry and Exit, Statistics Canada, 2000

1.3.0. Business Bankruptcies

There were 8,844 commercial bankruptcies reported in Canada in 2003, a decrease of 7% from 2002. The industries most affected were retail trade (16% of bankruptcies), construction (16%), and accommodation and food services (12%). Compared to 2002, 8 industries exhibit a decrease in bankruptcies. The highest percentage decrease is observed for the Government Services (57%), Other Services Industries (43%) and Health and Social Services (10%).

Table 5: Commercial bankruptcies

	1999	2000	2001	2002	2003
	number				
All industries	**10,026**	**10,055**	**10,405**	**9,472**	**8,844**
Agriculture and related services	287	263	272	228	266
Fishing and trapping	22	18	12	10	17
Logging and forestry	151	143	203	150	163
Mining, quarrying and oil wells	66	66	32	61	64
Manufacturing	750	776	913	804	800
Construction	1,445	1,490	1,410	1,361	1,411
Transportation and storage	715	861	1,074	932	863
Communications and other utilities	116	118	126	135	145
Wholesale trade	479	552	519	480	541
Retail trade	1,964	1,821	1,814	1,451	1,418
Finance and insurance	89	87	120	117	153
Real estate operators and insurance agencies	175	190	133	138	126
Business services	725	753	804	758	716
Government services	23	27	39	44	19
Educational services	26	36	62	31	28
Health and social services	128	133	141	123	134
Accommodation, food and beverage services	1,396	1,310	1,311	1,033	1,051
Other service industries	1,469	1,411	1,420	1,616	929
Source: Statistics Canada, CANSIM II, table 177-0002.					
Last modified: 2004-02-19.					

2. MANAGEMENT COMPETENCIES

Even if there is no shortage of business support services in Canada by public and private organisations, firms may face another information problem in the form of largely uncoordinated potential suppliers of services. Based on Industry Canada Micro-enterprises Survey, 2000, accountants (61%) are the single most sought source of business advice while formal sources such as bankers (24%), lawyers (21%), business consultants (15%) and government (8%) are less commonly sought.

It is important to note that not all small enterprises are interested in growing their business. Many small and micro-enterprises continue to derive adequate income without growing their business or expending beyond their own local market. These firms make an important contribution to the economy and should be encouraged but their needs are separate and different from firms seeking sustained or rapid growth. *(Source: Business Management Skills in Small and Micro-enterprises, Small Business Policy Branch, Industry Canada, January 2003)*

Stage of growth and management skills

Nascent/Pre-start-up	Requires the formulation of some kind of guiding vision that translates into business plan. The latter typically involves some assessment of the market for the would-be entrepreneur's product or service and a consideration of financing. Management skill may differ depending of the would-be entrepreneur education and experience.
Start-up	Organizational structure tends to be informal; planning typically does not extend beyond a one-year time horizon. Management skills at this stage have a focus on personal communications and marketing as the entrepreneur seeks to secure initial financing and build clients.
First stage of growth	The financial plan at this stage becomes a major management tool. Mastering growth and keeping control are the major challenges. Most of the efforts will be for financial planning, raising capital, securing sources of supply, acquiring property, plant and equipment, recruiting and training personnel, developing markets and starting up production.
Expansion/Transition	Organizational structure is more functional, arranged around products or markets. Seizing strategic opportunities and maintaining control, motivation and commitment are the main preoccupations of entrepreneurs.
Maturity	Entrepreneurs spend more time on strategic decision-making and less on day-to-day operations.

Source: *Business Management Skills in Small and Micro-enterprises, Small Business Policy Branch, Industry Canada, January 2003, page 11-12*

According to a recent study on management competencies and owner's perceptions of success, the growth of firm is directly associated with the diversity of management experience and the owner's growth plans. These two factors underlie all other attributes of the owner and the firm that are usually associated with firm growth. Specifically, the report confirms that firms with owners who seek growth perform significantly better than firms with owners who do not. *(Source: Management Competencies and SME Performance Criteria: A Pilot Study, Barbara Orser, Allan Riding, December 2003 -http://www.strategis.gc.ca/sbresearch/orser)*

A surprisingly high proportion of business owners responded "not applicable" when asked to consider their experience in management activities such as adopting new technology or electronic commerce, performing market research of financial analysis, or making use of industry information. The study provides also some policy recommendations, to list a few:

- the need to continue communicating to business owners the relevance of those management activities associated with innovation,
- the relative lack of operations management experience among business owners suggests a need for skill development as this area of management is sometimes overlooked in training programs,

- develop further owner's finance skills and competencies, and
- training programs could provide owners with opportunities to explore their motives of firm ownership and a better understanding of the consequences of not seeking growth (e.g. cost of capital, lower survivor rates, lack of market acceptance).

2.1. Gender

According to a Global Enterpreneurship Monitor survey of 21 countries, it appears that countries experiencing higher levels of economic growth, such as United States, Australia, Canada, Korea, Spain and Norway, also have some of the highest levels of women entrepreneurship. *(Source: OECD Small and Medium Enterprise Outlook, 2002)*

In Canada, based on a study by Industry Canada, over half of businesses run by women entrepreneurs are in a slow-growth stage of development. The majority of women-owned businesses tend to have fewer employees. Women export less and request less financing.

Canada Women Entrepreneurs Statistics:

- There are more than 821,000 women entrepreneurs in Canada (Statistics Canada, 2002).
- Canadian women entrepreneurs contribute in excess of $18.109 billion to the Canadian economy every year.
- The number of women entrepreneurs grew by 8% between 1996 and 2001, compared with a 0.6% increase for men.
- Between 1981 and 2001, the number of women entrepreneurs in Canada increased 208%, compared with a 38% increase for men.
- Women entrepreneurs held ownership in 45% of Canadian small and medium enterprises (SMEs) in 2000.
- Only 9% of women entrepreneurs are involved in international business.

(Source: The Prime Minister's Task Force on Women Entrepreneurs, Sarmite D. Bulte, Member of Parliament, Chair, October 2003)

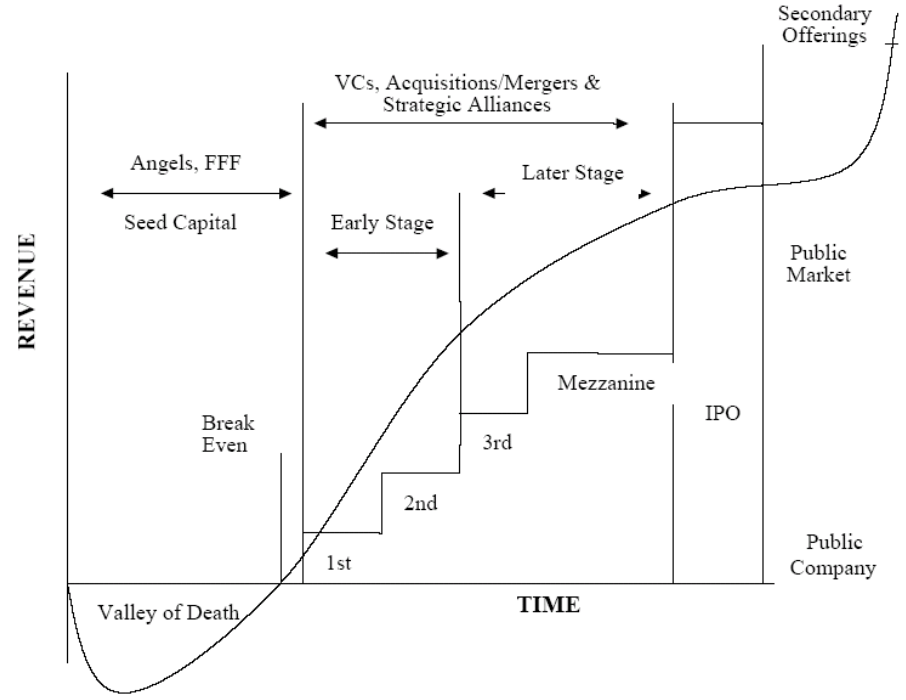
3. SME FINANCING

One of the most significant barriers inhibiting the formation of new technology businesses is a critical shortage of early-stage risk capital, particularly at the earliest, exploratory and pre-seed financing stages of development *(Source: Ontario Next Step Commercialization Program, March 2004)*. Limited market power, the lack of management skills, high share of intangible assets, the absence of adequate accounting track records and insufficient assets, all tend to increase the risk profile of SMEs.

Cultural barriers between the investment and business community, on the one hand, and the academic and scientific community on the other, also significantly limit the ability to spin-out successful new businesses from public research institutions. Uncertainty and informational asymmetries – financing vs business community - that characterize SMEs are amplified for innovative SMEs making it more difficult for them to access finance through traditional means. *(Financing Innovative SMEs in a Global Economy, OECD, 2004, Background Information for the 2nd OECD Conference of Ministers Responsible for Small and Medium Enterprises, Instanbul, Turkey, 2004)*

As shown in figure 1, each growth phase has different financing requirements that can be met by various sources.

Figure 1: Financing lifecycle (Financing Innovative SMEs in a Global Economy, OECD, page10, figure 3)



Source: Cardullo (1999).

3.1. Financing Gap in the Economy

The concept of a financing gap refers to a shortage in the supply of capital to meet the demand. The observation that some firms cannot obtain capital is not itself evidence of a gap. A financing gap is said to exist if firms that merit financing cannot obtain it in financial markets due to the existence of market imperfection. *(Source: Gaps in SMEs Financing; An Analytical Framework, Industry Canada, 2001)*

According to the *Carleton University Center for Study of Training, Investment, and Economic Restructuring*, "a financing gap is considered to be any factor in the market that restrict access to capital sources". Despite considerable effort by the public sector to close financing gaps in the market, these gaps are still present for SMEs, in particular for knowledge-based businesses.

Gaps exist for various reasons; size gaps exist because financing requirements of SMEs are often not large, and therefore, SMEs do not represent enough potential to attract interest from financial institutions; risk gaps exist because financing for growth is rejected as financing ratios either do not match what lenders expect or lenders demand more collateral than SMEs can pledge; knowledge gaps exist because financial institutions do not understand knowledge-based businesses; and flexibility gaps exist because flexible terms and conditions are not offered on loans from financial institutions and SMEs do not even try to request terms other than those dictated by their financial institutions. *(Source: Angus Reid Group, "Financing Services to Canadian Small and Medium-Sized Enterprises", Supporting Small Business Innovation; Review of the BDC, 2000)*

3.2. Debt Financing

Debt is the major source of financing for SMEs in Canada as reported in a survey conducted by the Canadian Federation of Independent Business (CFIB) in 2001. The most frequently used instruments reported were (in order of frequency): line of credit (short-term debt), business loans (demand or short-term debt), commercial mortgages and personal loans/mortgages (long-term debt).

According to the 2001 Survey on Financing of Small and Medium Enterprises in Canada, only 18% of such enterprises applied for debt financing – the most common type of financing sought by SMEs – compared with 23% the previous year.

Overall, SMEs reported applying for $38.9 billion in debt financing in 2001, down from $54.2 billion in 2000. Similarly, they reported that the total amount of debt financing approved in 2001 was $28.3 billion down from $44.3 billion in 2000. Only 73% of the total amount applied for was approved, compared to 82% in 2000. *(Source: Small and medium-sized enterprises financing in Canada, The Daily, Statistics Canada, June 30, 2003*)

3.3. Risk Capital

Risk capital financing is particularly important for firms in the knowledge-based sector of economy. Typically these firms do not have many tangible assets, particularly at the early stages in their growth that can act as a security for providers of debt.

Generally, informal investors such as angels believe that most potential SMEs are not "investor ready" either because business plans and market knowledge are not well developed or because business owners are unwilling to relinquish control of their businesses. Informal investors claim that lack of preparedness by SMEs for investments is the leading factor inhibiting informal investment in Canada, edging our taxation and regulation. *(Source: Equinox Management Consultants Ltd., Practices and Patterns of Informal Investment, 2001, commissioned by Industry Canada)*

Venture Capital (VC) is long-term, hands on equity investment in privately held high-growth-potential companies, initiated and managed by professional investors. It is one component of risk capital spectrum, along with informal investments, quasi-equity, buy-outs and mezzanine financing and initial public offerings.

According to a 2003 study by the *Small Business Policy Branch, Industry Portfolio Working Group on Venture Capital,* the Canadian VC industry face a number of issues, which limit the growth of this sector and of Canadian SMES. In order to grow, among other things the VC industry needs a critical mass of "investors-ready" firms and to provide a higher investment returns to attract more capital and new suppliers. Canadian SMEs need:

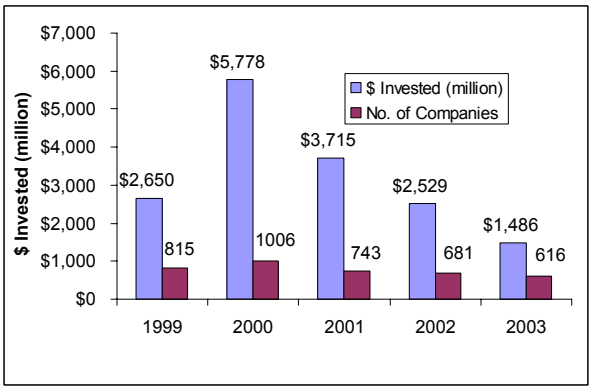
- to improve their managerial and marketing skills,
- an increased access to larger & expansion VC financings and to small and seed financings,
- to expand knowledge about risk capital financing and access to market information and experts, and
- a strong angel and IPO markets.

The ability of SMEs to adopt effective business strategies, and their lack of awareness of equity financing options, restricts effective demand for VC, and therefore, the continued growth of the Canadian VC industry.

1.3.1. VC Overview in Canada

Investment activity in Canada's venture capital industry continued to decline in 2003, with disbursements totaling $1.5 billion at December 31st, down by a substantial 41% from the $2.5 billion of 2002. As shown in Figure 2, in 2003 a total of 616 Canadian businesses received VC, 10% less from the previous year (681). The Canadian story of slower VC industry activity had its parallel in the United States (US). *(Source: Canada's Venture Capital Industry in 2003, An Overview, Macdonald & Associates)*

Figure 2: VC investment activity in Canada



Source: Macdonald & Associates Ltd., 2003

The life science industry ranks first in terms of capital invested with $392 million distributed in 110 life science companies, representing 26% share of all disbursements. The computer software ranks second with $250 million, or 17% of total capital invested, going to 97 companies (see Table 6).

Table 6: Venture capital investment activity by industry

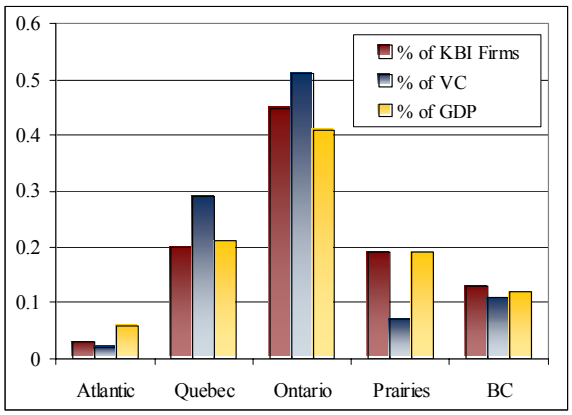
Industry Sector	2002		2003	
	$ (mm)	%	$ (mm)	%
Life science	479	19	392	26
Communications	632	25	187	13
Computer Related	425	17	264	18
Internet Related	144	6	78	5
Electronics	449	18	225	15
Other Technologies	103	4	52	3
Total Technology	**2,232**	**88**	**1,198**	**81**
Consumer Related	143	6	164	11
Manufacturing	108	4	38	3
Miscellaneous	45	2	87	6
Total (traditional)	297	12	288	19
Grand Total	**2,529**	**100**	**1,486**	**100**

Source: Macdonald & Associates Ltd.

1.3.2. VC by Region

In Canada, as shown in Figure 3, the distribution of VC, GDP and Knowledge-based Industry (KBI) firms across regions is an appropriate proxy for the demand for VC. Ontario and Quebec attract a relatively high share of VC and of KBI firms and GDP. The Prairies' share of total VC of 7% is much lower than their 19% for KBI firms – an imbalance mostly observed in Alberta which had, in 2002, about 16% of KBI firms but only 3% of VC. *(Source: Canada's Venture Capital Market: Strengths and Challenges of a Critical Industry, Industry Canada's Small Business Policy Branch and the Industry Portfolio Working Group on Venture Capital, 2003)*

Figure 3: Regional distribution of Canadian VC activity, GDP and KBI (Average % 2001)



Source: Macdonald & Associates Limited, 2003, Statistics Canada, Industry Canada

4. SMES R&D EXPENDITURES

Note: This section contains special tabulations provided by Statistics Canada. Additional tabulations by province can be consulted in Annex 1.

SMEs are an important source of innovation. The Statistics on Scientific Research and Experimental Development tax credits reveal that SME spend far less than large firms do in terms of absolute amounts in R&D. However, as a percentage of revenue (R&D intensity), spending on innovation by SMEs far outstrips that of larger firms. About two-third of the industrial R&D in Canada is performed by a relatively small number of companies. Out of 8,893 companies, which reported performing R&D in 2001, just 40 accounted for more than 50% of the total R&D performed.

The total R&D expenditures in Canada for 2001 was $22.116 billion. The business enterprise sector continued to be largest performing sector with 54% of all Canadian R&D, followed by Higher Education (33%) and the Federal Government (11%). Ontario has the highest proportion of R&D expenditures with 51% followed by Quebec with 28%. British Columbia and Alberta spent respectively 8% and 7%. The other provinces represent 6% of total R&D expenditures.

Table 7: Total R&D spending by province, 1999-2001 ($000,000)

Geography	1999	2000	2001
Newfoundland and Labrador	127	138	142
Prince Edward Island	26	36	35
Nova Scotia	346	368	365
New Brunswick	166	160	154
Quebec	4,926	5,632	6,200
Ontario	8,862	10,309	11,182
Manitoba	384	411	453
Saskatchewan	323	374	391
Alberta	1,164	1,336	1,511
British Columbia	1,298	1,617	1,679
Canada	**17,931**	**20,360**	**22,116**

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 5

Table 8: Provincial R&D as a percentage of Canadian R&D

Geography	1999	2000	2001
Newfoundland and Labrador	0.7	0.7	0.6
Prince Edward Island	0.1	0.2	0.2
Nova Scotia	1.9	1.8	1.7
New Brunswick	0.9	0.8	0.7
Quebec	27.5	27.7	28.0
Ontario	49.4	50.6	50.6
Manitoba	2.1	2.0	2.0
Saskatchewan	1.8	1.8	1.8
Alberta	6.5	6.6	6.8
British Columbia	7.2	7.9	7.6
Canada	100	100	100

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 5

According to Statistics Canada, the business enterprises expenditures on R&D (BERD) for 2001 have remained stable at 1.1% of Gross Domestic Product (GDP). Canada is in the "middle rank" of OECD member countries with BERD/GDP ratios similar to countries such as Norway and Netherlands. Countries with the highest ratios continue to be Sweden (3.3%), Japan (2.3%), and United States (2.1%). *(Source: Industrial Research and Development, 2003 Intentions, Cat. No. 88-202-XIE)*

4.1. Business R&D Expenditures by Size of Firm

The R&D expenditures per company are influenced by the size of a company. Two common comparison size variables are normally used: the company revenue and number of employees. On average, companies with higher revenues show higher R&D expenditures. Also, the average expenditure on R&D per company increases as employment size rises (see Table 9).

In 2001, large companies (>500 employees) accounted for 64% of total business R&D expenditures, small companies (<100 employees) 18% and medium-sized companies (>100 < 499 employees) 16%.

Table 9: Scientific research and experimental development expenditures by number of employees, 2001

Number of Employees	Number of Companies	R&D Expenditures ($M)	Average Expenditure per Company ($M)	% of Performing Company Revenues
Non-commercial	21	180	8.6	¡[a]
1-49	6 746	1 372	0.2	5.5
50-99	907	998	1.1	7
100-199	568	1 128	2	5.6
200-499	335	1 041	3.1	3.1
500-999	126	1 364	10.8	3.5
1 000-1 999	96	1 555	16.2	2.3
2 000-4 999	56	1 038	18.5	1.1
Over 5 000	38	4 504	118.5	1.6
Total	**8 893**	**13 179**	**1.5**	**2.2**

Source: Statistics Canada, Industrial Research and Development - 2003 Intentions, Cat. No. 88-202-XIB, December 2003

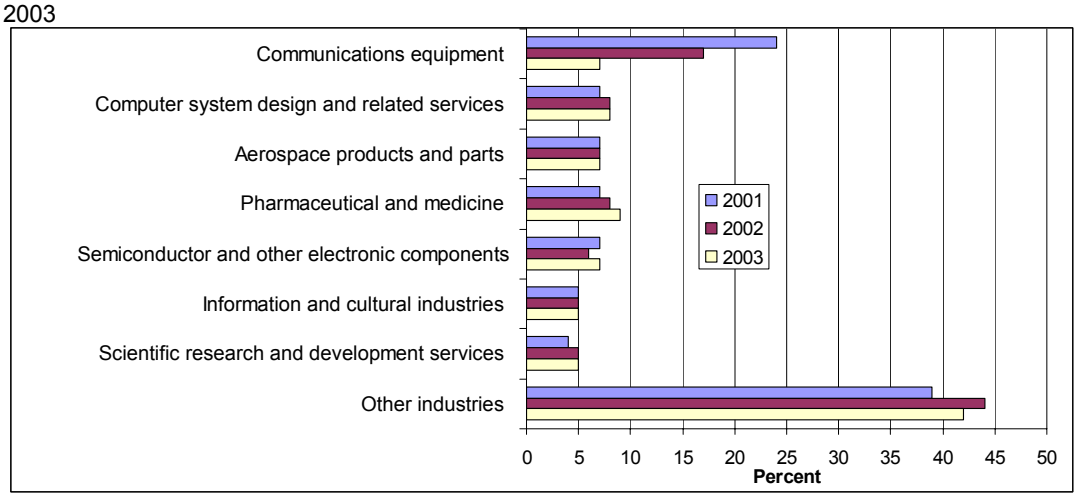
Note: For firms funding or performing less than $1 million in R&D and applying for a tax credit under the Scientific Research and Experimental Development program, the data are derived from administrative data of the Canada Revenue Agency, For firms spending more than $1 million, the data are obtained from a mail-out survey of all firms.

4.2. Business R&D Spending by Industry

The most important decrease in R&D spending was felt is in the communication equipment industry with a forecasted 36% decrease in their R&D spending in 2002. The Pharmaceuticals and medicine industry continues to forecast growth in 2003 (see Figure 4).

In 2001, the top five major industries represented $6,853 million or 52% of all intramural R&D. These industries – communications equipment, computer system and related services, aerospace products and parts, pharmaceutical and medicine, and semiconductor and other electronic components - consistently dominate the industrial R&D sector over the five years.

Figure 4: Estimated relative R&D spending for selected industries as a share of total R&D spending, 2001 to 2003



Source: Industrial Research and Development, 2003 Intentions, Statistics Canada, page 20

4.3. Business R&D Spending by Region

R&D establishments are concentrated in Ontario and Quebec, which represent 76% (7,047) of all R&D establishments in Canada for a total of $11.2 billion intramural R&D expenditures. The western provinces, British Columbia and Alberta, totaled $1.6 billion or 12% of total intramural expenditures. All other provinces had a minor share of the total industrial R&D for 2001 (see Table 10).

The dominant industries in Quebec and Ontario continued to be Aerospace products & parts and Communications equipment respectively.

Table 10: Provincial distribution of industrial intramural R&D expenditures, 2001

Region	R&D units	Current expenditures	Capital expenditures	Total expenditures
	no.		in millions of $	
Newfoundland and Labrador	58	20	1	20
Prince Edward Island	17	4	0	4
Nova Scotia	167	74	4	78
New Brunswick	129	33	1	34
Quebec	4,182	3,534	364	3,897
Ontario	2,865	6,497	798	7,296
Manitoba	230	153	8	161
Saskatchewan	143	74	9	82
Alberta	607	565	49	614
British Columbia	855	873	119	992
Yukon, Northwest Territories and Nunavut	4	1	0	1
Total	**9,257**	**11,827**	**1,352**	**13,179**

Source: Industrial Research and Development, 2003 Intentions, Statistics Canada, Appendix11, Table 8 and 9

In 2001, business R&D as a percentage of provincial GDP was highest in Quebec and Ontario with 1.7% and 1.6% respectively. During the period 2000 to 2001 there was a slight increase of 0.1% in business R&D as percentage of provincial GDP in Quebec, Ontario, Alberta and British Columbia, the other provinces have remained stable.

Table 11: Business R&D as a percentage of provincial GDP

Geography	1999	2000	2001
Newfoundland and Labrador	0.1	0.1	0.1
Prince Edward Island	0.1	0.1	0.1
Nova Scotia	0.3	0.3	0.3
New Brunswick	0.2	0.2	0.2
Quebec	1.4	1.6	1.7
Ontario	1.4	1.5	1.6
Alberta	0.5	0.4	0.5
Saskatchewan	0.3	0.2	0.2
Manitoba	0.4	0.4	0.4
British Columbia	0.6	0.7	0.8
Canada	**1.1**	**1.1**	**1.2**

Sources:
Industrial Research and Development, 2003 intentions, Statistics Canada
CANSIM 384-0002

Table 12: Business R&D per capita, 1999-2001

Geography	1999	2000	2001
Newfoundland and Labrador	34	38	38
Prince Edward Island	22	37	29
Nova Scotia	71	77	84
New Brunswick	53	52	45
Quebec	416	483	527
Ontario	502	575	613
Alberta	166	194	201
Saskatchewan	77	73	82
Manitoba	130	115	140
British Columbia	180	241	243
Canada	**342**	**397**	**425**

Sources:
Industrial Research and Development, 2003 intentions, Statistics Canada
CANSIM 051-0001

5. NETWORKS AND PARTNERSHIPS

SMEs need access to external sources of information, knowledge, know-how and technologies, in order to build their own innovative capability and to reach their markets. Empirical studies have confirmed that collaborating firms are more innovative than non-collaborating ones, irrespective of their size *(Source: OECD, 2001)*. They have also shown that the propensity to engage in knowledge-based networks decreases with firm size. Firm size also affects how collaboration influences the in-house innovation process.

SMEs barriers in seizing networking and partnering opportunities are:

- the relatively high level of senior management input required for initiating and sustaining a participation in cooperative venture;
- the need to commit resources for a long period; and
- the difficulty of gaining enough influence within a network to justify such investment and commitment, given the pivotal role of large firms within high-tech, and especially science-based innovation networks.

A lack of collaboration between SMEs which reduces the circulation and exchange of information, insufficient interaction between high-tech firms and others and geographical imbalances in international co-operation patterns create obstacles and disincentives to networking by SMEs. Public policy may address market failures at different stages of the networking process through SME-specific measures:

- raising awareness of networking opportunities and helping search for partners
- organizing, financing and operating networks,
- interfacing scientific and innovation networks through public-private partnership, and
- creating international linkages and building global networks.

(Source: Networks, Partnerships, Clusters and Intellectual Property Rights: Opportunities and Challenges for Innovative SMEs in a Global Economy, OECD, 2004, Background Information for the 2nd OECD Conference of Ministers Responsible for Small and Medium Enterprises, Instanbul, Turkey, 2004)

Based on a study with firms in the IT industry, it was found that firms are using relations for a variety of purposes and that every firm has an individual relational mix, which change with the development of the firm. While relative importance of social and

reputational networks decrease with firms' development, co-opetition networks increase over time. Knowledge and innovation networks are a function of reputation and management capacity while the development of marketing networks depends on the firm's culture and management style. Firm growth is determined by path-dependent relational capability that eventually reaches its limits and leads to the reconfiguration of a rather stable network. *(Source: Firm Networks: Externalo Relationships as Sources for the Growth and Competitiveness of Entrepreneurial Firms, Lechner, Christian, Dowling, Michael, 2003)*

6. INTELLECTUAL PROPERTY RIGHTS

In recent years, the importance of IP rights in a knowledge-based economy has increased. However, SMEs face a number of difficulties in using the IP system. The costs of patenting are generally perceived as one of the greatest barriers for SMEs. Also, there are a number of additional elements of the application process that may act as a disincentive for SMEs to seek IP protection, including the time required to be granted a patent or to obtain a trademark registration. Not only is the propensity to apply for protection of IP rights among SMEs low, but so is the use of information contained in patent databases. *(Note de recherche, Intellectual Property Rights, Business Management Practices: A survey of literature, Petr Hanel, 2004)*

In Canada, Japan and Europe SMEs are less inclined to patent than large corporations. The evidence for Canada shows that the propensity to use Intellectual Property Rights (IPRs) is increasing with the size of firm *(Source: Baldwin and Hanel, 2003)*. In contrast to SMEs who patent mostly in Canada only, the largest firms tend to patent both in Canada and the US *(Source: Hanel, 2001)*.

The increasing level of licensing activities is evidence that firms are capable of creating value from intellectual assets. As such, IP assets are increasingly integrated in corporate financial strategy. IP is leveraged in investment banking transactions. The following barriers limit the use of the IP system by SMEs:

- poor IP management skills within SMEs; low awareness of the system limits the exposure SMEs have to the IP system and their ability to use all the elements effectively, including not just patents but also utility models, trademarks, industrial designs, trade secrets, patent databases, copyright and other IP rights,
- limited access to the necessary human resources and/or accessible legal advice, and
- high cost not just for acquiring and maintaining but also for monitoring and enforcing IP rights.

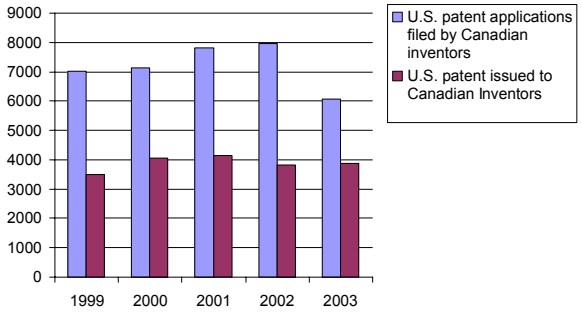
Given some barriers, SMEs often use alternatives to patenting such as secrecy, exploitation of lead-time advantages, moving rapidly down the curve, use of complementary sales and service capabilities, technical complexity, on-going innovation, relationships based on trust and use of trademarks. Key policy recommendations include enhancing SME awareness and knowledge of all elements of the IP system and strengthening the integration of IP issues in programs and policy initiatives aimed at fostering innovation in SMEs. *(Source: Networks, Partnerships, Clusters and Intellectual Property Rights: Opportunities and Challenges for Innovative SMEs in a Global Economy, OECD, 2004, Background Information for the 2nd OECD Conference of Ministers Responsible for Small and Medium Enterprises, Instanbul, Turkey, 2004)*

6.1. IP Statistics

There are a number of reasons for inventors to apply for patents in other countries: over the past few years the number of U.S. patents obtained by a country has become a norm against which to evaluate its innovative capabilities; patents are first sought in the U.S. in order to evaluate and learn about the legal quality of a technology; and if returns from innovations have to be quickly appropriated, it is the intellectual property in some target countries, such as the U.S., that have to be protected.

In 2003, the number of U.S. patents issued to Canadian inventors was 3,869, more than three times the number of Canadian patents issued to the same group. As shown in Figure 5, the number of patent applications filed by Canadian inventor in the U.S. has decreased by 24% compared to 2002.

Figure 5: Patenting activities by Canadian inventors in the United States



Source: United States Patent and Trademark Office, Annual Report 2003

IP Statistics in Canada

Table 13: Patents applications filed and granted to residents of Canada and foreign countries by province/territory

Patent	Filed		Granted	
	2001-2002	2002-2003	2001-2002	2002-2003
Canada				
Alberta	714	785	186	195
British Columbia	578	583	126	115
Manitoba	93	102	29	34
New Brunswick	41	54	10	10
New Foundland and Labrador	21	21	4	4
Northwest Territories	0	1	1	1
Nova Scotia	59	49	8	17
Nunavut	0	0	0	0
Ontario	2,311	2,200	534	490
Prince Edward Island	4	5	1	1
Quebec	1,321	1,450	319	318
Saskatchewan	97	124	27	26
Yukon	3	11	0	0
Subtotal	**5,242**	**5,405**	**1,245**	**1,211**
Foreign countries	**40,175**	**34,130**	**11,200**	**10,594**
Total	**45,417**	**39,535**	**12,445**	**11,805**

Source: Canadian Intellectual Property Office, Annual Report 2001-2002, 2002-3003

Table 14: Trade-mark applications filed and registered by province/ territory

Trade-Mark	Filed		Registered	
	2001-2002	2002-2003	2001-2002	2002-2003
Alberta	1507	1,476	718	885
British Columbia	2,135	2,245	855	1,144
Manitoba	395	378	200	216
New Brunswick	160	201	97	75
New Foundland and Labrador	56	70	28	30
Northwest Territories	12	10	3	1
Nova Scotia	123	202	66	91
Nunavut	3	1	0	0
Ontario	8,147	8,166	4,075	4,406
Prince Edward Island	19	16	13	17
Quebec	4,053	4,091	1,789	2,097
Saskatchewan	168	181	75	121
Yukon	0	8	1	8
Province not specified	10	22	0	3
Total	**16,788**	**17,067**	**7,920**	**9,094**

Source: Canadian Intellectual Property Office, Annual Report 2001-2002, 2002-3003

Table 15: Copyright applications filed and registered by province/territory

Copyright	Filed		Registered	
	2001-2002	2002-2003	2001-2002	2002-2003
Alberta	524	545	484	544
British Columbia	934	886	839	883
Manitoba	219	130	194	131
New Brunswick	58	53	54	55
New Foundland and Labrador	38	31	24	35
Northwest Territories	5	3	5	3
Nova Scotia	148	60	100	58
Nunavut	0	4	0	4
Ontario	1,890	3,084	2,136	3,076
Prince Edward Island	7	18	4	18
Quebec	1,394	1,983	1,599	1,982
Saskatchewan	130	106	111	108
Yukon	6	4	6	4
Total	**5,353**	**6,907**	**5,556**	**6,901**

Source: Canadian Intellectual Property Office, Annual Report 2001-2002, 2002-3003

Table 16: Industrial design applications filed and registered by province/territory

Industrial Design	Registered	
	2001-2002	2002-2003
Alberta	45	19
British Columbia	41	50
Manitoba	22	2
New Brunswick	2	1
Newfoundland and Labrador	1	0
Northwest Territories	0	0
Nova Scotia	18	9
Nunavut	0	0
Ontario	231	172
Prince Edward Island	4	2
Quebec	130	133
Saskatchewan	4	0
Yukon	0	0
Total Canada	**498**	**388**
Foreign Countries	**2630**	**1710**
Grand Total	**3128**	**2098**

Source: Canadian Intellectual Property Office, Annual Report 2001-2002, 2002-3003

In 2002-2003, the number of patents filed and granted in Canada has decreased by 3% from the year before. Alberta, Ontario and Quebec accounted for the largest share of domestic patent granted. Alberta, Manitoba, and Nova Scotia have increased the number of patent granted. The number of patent applications filed has decreased in Nova Scotia and Ontario compared to the year before.

In 2002-2003, the Trade-mark applications registered have increased by 15% compared to the year before. The highest percentage increase was in Saskatchewan (61%), Nova Scotia (38%), British Columbia (34%) and Prince-Edward Island (31%). Total copyright applications registered have increased by 24% while total industrial design registered have decreased by 34% (22% Canada and 35% foreign countries).

7. GLOBAL REACH

Note: see also section 12: International Trades for more on profile of Canadian Exporters

In a global marketplace, internationalization is vital for SMEs. Although most SMEs continue to focus on local markets, a significant share are becoming internationalized and need to design products and services for international markets. Market liberalization and deregulation, which contributed to the global restructuring trend, is exposing many SMEs to fierce international competition and imposes substantial adjustment costs on them. The growing complexity of technology and the high cost of R&D are driving small firms to seek global linkages and alliances. *(Source: OECD Small and Medium Enterprises Outlook, 2002)*

Many SMEs are unprepared for participating in these kinds of business linkages and need assistance for:

- accessing strategic information (including legal and linguistic assistance) and technology, especially information and communication technologies (ICT);

- many SMEs also lack adequate management skills and highly skilled employees in order to meet the challenges of a global market.

According to a study with more than 3,000 Canadian manufacturing SMEs on internationalization process from 1994 to 1997, the strongest determinants to exports are import activities, Research and Development, access to distribution, knowledge intensity and size of firm (the latter is related to export performance).

Import activities	Dealing beyond national frontiers is not limited to exports. Imports allow SMEs to experience cross-border activities with minimal risks.
Research and development	As competition is increasingly technology-based, it is expected that technological capabilities play a major role in determining a firm's propensity to export. Among technological capabilities, R&D not only generates innovations, but also allows firms to better assimilate external technological knowledge.
Access to distribution	SMEs turn to commercial agreements and strategic alliances with other domestic and foreign firms and rely on intermediaries (distributors and manufacturing agents) to enhance their export performance.
Knowledge intensity	The shortage of technological skills can seriously hamper innovative capabilities. The number of engineers, scientists, and technicians reflects, to a great extent, a firm's stock of technological knowledge, and its technological knowledge intensity is related to its export performance.
Size of the firm (related to export performance)	In 1994, size of firm was among the strongest determinants of export performance. In 1997, size of firm plays a slightly less important role. However, size of firms is related with export performance.

Source: SMEs, Exports and Job Creation: A Firm-Level Analysis, Élisabeth Lefebvre and Louis A. Lefebvre, CIRANO and École Polytechn, Occasional Paper Number 26, December 2000

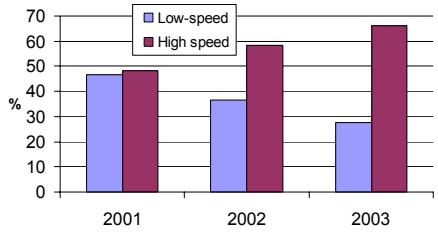
8. INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)

Small firms have shown an ability to adopt basic ICT technologies because of the growing ease of installation and the need of few resources, either financial or human, to implement them. The use of more complex technologies such as websites, Intranets and Extranets continues to be dominated by large firms. Advanced e-commerce such as selling online is also dominated by large firms because of the infrastructure that is necessary to conduct on-line sales.

Small firms continue to lag behind large firms in establishing a presence on the World Wide Web. Between 2000 and 2002, the percentage of small firms with websites increased from 21% to 27%. This is a general trend occurring in e-commerce as enterprises are able to use their technology in a more functional manner. In 2002, small firms made important gains in on-line purchasing, starting to close the gap with large firms. The gap between large and small firms had gone from a 35-percentage point gap in 2000 to a 28-percentage gap in 2002. *(Source: Information and Communication technology use: are small firms catching up?, Statistics Canada, 2004)*

A major factor in rising e-commerce is the adoption of high-speed access to the Internet. In 2003, two-thirds (66%) of all private firms used broadband to connect to the Internet, up from 58% the year before (see Figure 5).

Figure 6: Private sector firms using high-speed Internet access



Source: Statistics Canada, Catalogue No. 88-003-XIE (2003 Survey of Electronic Commerce and Technology)

The common barriers for SMEs to adopt ICT include:

- unsuitability for the type of business,
- enabling factors (availability of ICT skills, qualified personnel, network infrastructure),
- cost factors (cost of ICT equipment and networks, software and re-organisation, and on-going costs), and
- security and trust factors (security and reliability of e-commerce systems, uncertainty of payment methods, legal frameworks).

(Source: ICT, E-Business an SMEs, Background Information for the 2nd OECD Conference of Ministers Responsible for Small and Medium Enterprises, Instanbul, Turkey, 2004)

Some potentially high growth SMEs would greatly benefit from engaging in more business-to-business (B2B) e-commerce. However, ICT investments carry risks that are more difficult for small firms to bear. The degree of preparedness for e-business varies considerably among SMEs. SMEs serving a local market have different needs than others active in a global market. The use of certain ICT tools would most likely require a shift in their business model. This reflects the fact that most SMEs need quite customized assistance to implement ICT solutions. *(OECD Small and Medium Enterprise Outlook, OECD, 2002, page 22-23)*

9. GROWTH OF FIRMS

According to a recent survey delivered to over 500 technology-based firms, CEOs are returning to a level of optimism, which was last seen two years ago. Rather than focusing on further reductions and ways to manage their cash flow, CEOs are turning their sights towards strategies to grow their businesses again. *(Source: 2004 Technology Fast 500, CEO Survey Results, Deloitte)*

While there is much debate about the reasons for the productivity gap, one factor is the failure to grow more Canadian SMEs into mid-sized, or even large, businesses with the scale and scope to participate successfully in the global economy. In 2002, the result of an Ipso-Reid survey combined with review of recent research was used to draw some observations regarding the Canadian environment; Canada has proportionally more micro-businesses than the United States; and while Canada has been good at starting new businesses, it has been far less successful in growing them and, in particular, growing them into market leaders or Canadian champions. *(Source: The path to prosperity: Canada's small- and medium-sized enterprises, A study sponsored by Canadian Federation of Independent Business, Canadian Manufacturers & Exporters, and RBC Financial Group)*

9.1. SME Challenges to Growth

Many of Canadian SMEs business owners are missing opportunities to promote their companies for two key reasons: they are unaware of government programs and other funding opportunities, and have not been trained to effectively communicate the investment potential of their company or the most effective ways to approach financiers or lending institutions. Based on a recent study, Managing for Growth, it was found that managers of firms with the capacity for profitable growth often lack the necessary organizational and leadership skills to respond to business challenges and fail to achieve commercial success. Nine major challenges around the firm management capability were observed.

Strategy for growth	Weak strategic planning practices occur when insufficient attention is paid to an action plan. Management teams that become preoccupied formulating and revising plans ignore the most important part of the plan – the action that results from it.
Managing the financing gap	Managers often fail to communicate the potential of their company to investing institutions. Managers can improve their chances of obtaining financing by learning the language of finance, using advisors.
Creating external networks and market connectivity	Entrepreneurs need to connect to suppliers, markets, financiers, competitors, advisors and colleagues.
Upgrading managing skills and capabilities	Key personnel for one growth stage may not be suited to the working environment of the next stage.
Challenging the leader's assumptions	The perspective of outside advisors, especially those with relevant experience, is critical for successful transitions from one growth stage to the next.

Managing succession and exits	Entrepreneurs who enjoy being the manager and cornerstone of the company during the excitement of the start-up stage need to envision what they expect their role to be once the company becomes sustainable.
Growth and organizational change	Managers need to deal with organizational inertia in the face of rapidly changing environment; yet many companies are unable to cope with change.
Professionalizing the business infrastructure	Once in the fast-growth stage, a company needs to formalize its operations. This formalization is a structured and accountable way for the manager to delegate responsibility.
Maintaining organizational culture and values	Companies with positive culture tend to have more loyal and dedicated employees, which contribute to productivity.

Source: Managing for Growth, Enabling Sustainable Success in Canadian SMEs, RBC Financial Group, the Canadian Manufacturers & Exporters Association, and Queen's School of Business, 2003

The report also provides an interesting SME growth framework (see Annex 2) that can be used as a tool for assessing the management needs of growth-oriented SMEs. It illustrates the trajectory of management issues as a firm grows and matures.

9.2. Stage of Growth

There are a number of variables that can be used to measure stages of growth and the boundaries of each stage can vary between industries and between firms within an industry. Also, firms do not change uniformly at the same point in the growth path and the evolution through the stages is not a linear process as firms may have a period of high growth followed by less rapid growth or even decline.

A recent study prepared for the Government of Ontario examined the growth pattern of leading growth firms - firms with 20 to 500 employees that generate sales growth of 50% or more in three-year period – and CEO characteristics. Six stages of growth were defined based on employment change. According to the study, there is conclusive evidence that there are quite distinct stages in terms of the priorities, challenges, practices and plans through which the CEOs pass as they lead their firms along the path of growth. CEO's key characteristics at each stage of growth are described below.

Stage 1 (0-9 employees) One-person bands	• most own 100% of the share in their company • have yet to find a product that meet with market acceptance • take all the decisions themselves, usually without consulting their employees or managers • their businesses have limited range of products, markets and clients
Stage 2 (10-19 employees) Early success	• commit themselves to build a viable business around the product that meets market acceptance • develop new product lines and they expand their client base through new markets • adopt a niche strategy • early stage of building a formal management structure • pay more attention to training • don't think long-term, it is too early to know where their diversification is taking them

Stage 3 (20-29 employees) Operationalizing	• "heads-down" rush to "nail the market" • set up systems, add an extra layer of management and create an organized distribution of responsibilities and authority • upgrade their people, their organization and their technology • broaden their shareholder base bringing in more private investors • don't think long-term, nor are they looking for alternative strategies • take lead from their existing customers • client base start shrinking, concurrently with an expansion in their product lines to meet their customers' needs
Stage 4 (30-49 employees) The People crunch	• "heads-up" approach – maintain their niche strategy but assess the multiplicity of available options and judge the capacity of firm's products and people to capitalize on those options • look critically at the capacity of their senior managers to grow with the requirement of their jobs – look for new talent to cope with new organizational imperatives (build management structure to sustain rapid growth) • most of them reduce their reliance on their customers for strategic guidance and support • expand by adding new clients and markets and exporting to more countries
Stage 5 (50-99 employees) Professionalizing	• firm is ready to make the leap into a fully professional organization with sufficient management depth to successfully diversify its products and markets • upgrade their management teams by hiring professional managers from much larger, more complex organizations • expand the scale of their businesses: increase the number of product lines, clients and markets, and commit to new product development and more diverse exports • drop the classic niche strategy and seek to compete on price and to rely less on being flexible enough to meet all their customers' needs • with high-powered management team – and more powerful boards of directors – they don't need to spend much time training themselves • spend most of their time on planning and strategy • as they bring in new shareholders, many let their ownership position slip
Stage 6 (100 + employees) The Corporation	• firm has multiple product lines and markets, most are exporters, often to a wide range of countries • CEO is leader rather than manager, presiding over a multi-layered management team with embedded processes of planning and decision making • compete on all fronts • quality and competitive prices are a condition of survival • competitive edge lies in the unique skills of their employees and flexibility in meeting their customers' current and future needs • CEOs' strategic priorities are mostly visioning, developing talent and team building • CEOs seek out independent consultants for advice, although they don't abandon their boards of directors or their customers • broad-based growth makes access to capital a greater problem than in earlier stages and many more CEOs let their voting control slip or disappear in the process of raising equity financing • some firms are bought by large corporations, others go public

Source: From The Six Stages of Growth (from the Leading Growth Firms Series), researched and written by Donald Rumball for the Ministry of Economic Development and Trade, Ontario, 2000-2001

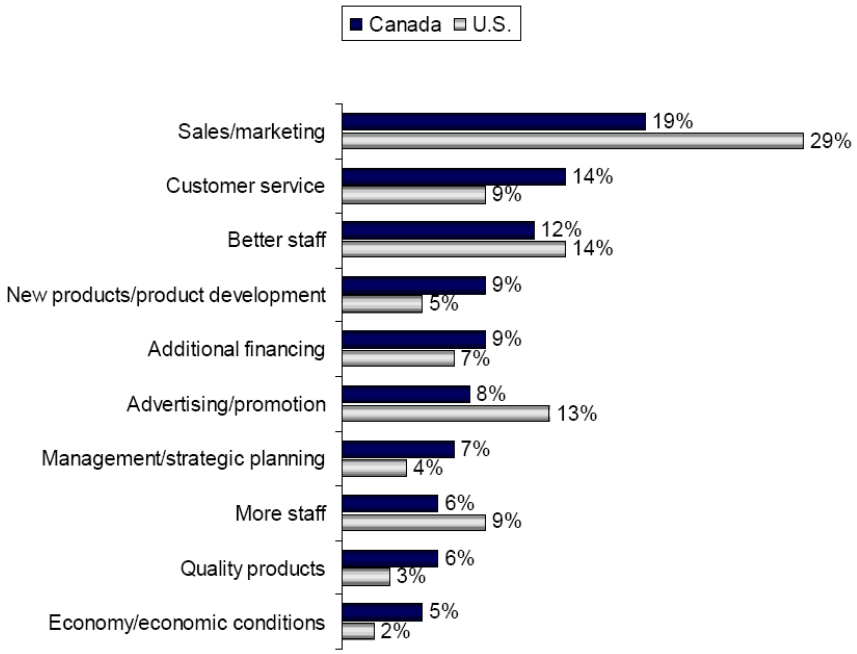
9.3. Barriers and Incentives to Growth

In 2002, an Ipsos Reid study was conducted with firms in Canada and in the United States about the growth of SMEs[1]. Within the Canadian participating firms, 45% had product development experience compared with 48% in the United States. The majority of the firms for both groups were in the moderate growth stage (at the same rate as the economy).

While most firms had a growth strategy (75% Can. – 83% U.S.), only a small portion was likely to seek new financing (26% Can. – 15% U.S.). Canadian firms that intend to maintain their current size for the short-term do so because they are satisfied with the current size and market conditions. Canadian firms are more likely to see "barriers" as reason for not growing instead of "not interested" to grow. Regardless of whether they intend to grow or not, they are more likely to see competition, staffing and economy as primary barriers to growth. Management and business development ranked low.

Canadian firms believed that factors (within the control of the firm) such as sales and marketing, customer service and better staff would be incentives to help business grow (see Figure 7). A certain number of firms considered also new product development and additional financing as incentives.

Figure 7: What are the factors that you feel are within your control that would help your business grow?



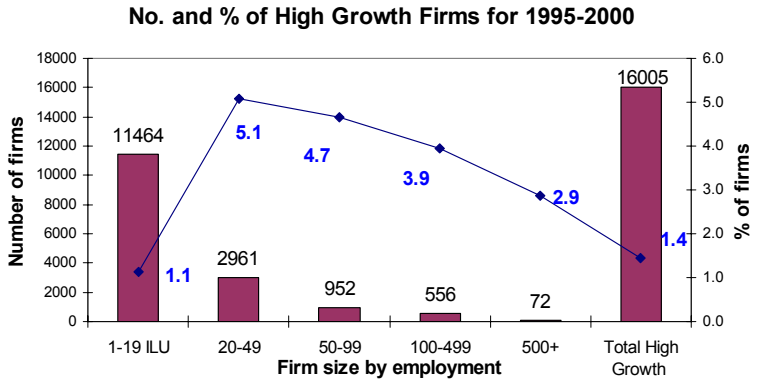
Source: SME Growth Study: A Canada/U.S. Perspective, Ipsos Reid, Presentation to RBC Financial Group, September 2002

[1] SMEs were defined as those with 250 employees or less. The study used a sample of 800 firms in Canada and 400 firms in the United States.

9.4. Characteristics of Firms that Grow from Small to Medium Size – Highlights and Conclusions

In 2003, Statistics Canada and NRC-IRAP joined efforts to improve the understanding of characteristics of firms that grow from small to medium size. High growth firms, also called gazelles, were defined as firms that double employment in a five-year period and have at least 20 employees at the end of the period. In Canada, as shown in Figure 8, only 1.4%, or 16005, of Canadian business employers are high growth firms. The majority has fewer than 20 employees (11, 464), which represent only 1.1% of firms in that size category. Firms with 20-49 employees show the highest percentage of high growth firms in their size category at 5.1%, or 2,961 firms.

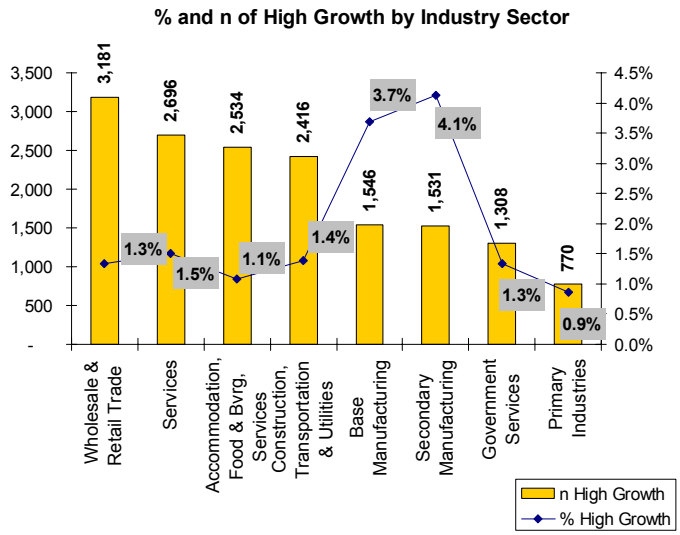
Figure 8: Growth distribution among Canadian business employer



Source: Statistics Canada, LEAP/SAF

The number of high growth firms varies by industry sector. The highest numbers of high growth firms are found in the wholesale and retail trade, services and accommodation sectors. However, the secondary-manufacturing sector shows the highest percentage of high growth firms (see Figure 9) followed by the base-manufacturing sector.

Figure 9: High growth distribution among industry sector for the period between 1995-2000



Secondary Manufacturing
Fabricated Metal Products (Except Machinery and Transportation Equip) 30, Machinery (except Electrical Machinery) 31, Transportation Equip. 32, Electrical and Electronic Products 33, Non-Metallic Mineral Products 35, Refined Petroleum and Coal Products 36, Chemical and Chemical Products 37, Other Manufacturing 39

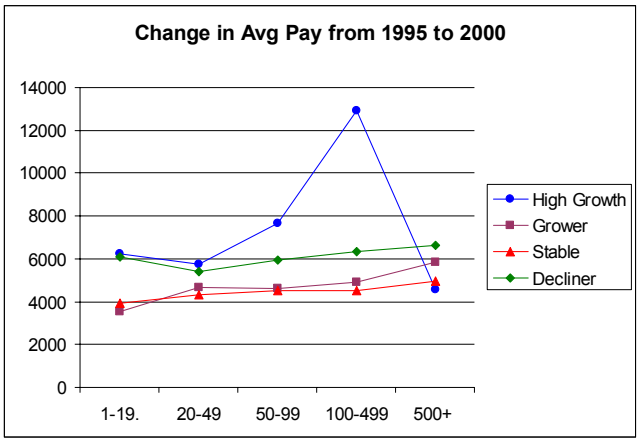
Base Manufacturing
Food 10, Beverage 11, Tobacco Products 12, Rubber Products 15, Plastic Products 16, Leather and Allied Products 17, Primary Textile 18, Textile Products 19, Clothing 24, Wood 25, Furniture and Fixture 26, Paper and Allied products 27

Source: Statistics Canada, LEAP/SAF

Special grouping was used for the manufacturing sector. It was found that the plastic products (6.9%) and electrical electronics products (5.9%) were the top two sectors with the highest percentage of high growth firms.

During the period 1995 and 2000, high growth small (1-19, 20-49, and 50-99 employees) and medium (100-499 employees) firms show the highest increase in average pay compared to large (500+ employees) firms where the change is the lowest. Medium high growth firms exhibit the largest positive change – 70% higher than the closest size range. See Annex 3 for definition of "grower", "stable" and "decliner" firms.

Figure 10: Change in average pay by growth and by size



Source: Statistics Canada, LEAP/SAF

Proponents of "clusters" argue that firms will thrive in an environment where there are a concentration of their suppliers, competitors and support organizations. According to this perspective, one would expect that high growth firms, including small ones, are more likely to be located in larger cities where resources for the firms would be concentrated. Data from the study does not support this hypothesis (see Table 17).

See Table 18 for a provincial distribution of highest percentage of high growth firms by census metropolitan areas (CMA) and census agglomerations (CA)[2].

[2] A CMA is delineated around an urban core with a population of at least 100,000, based on previous census. Census Agglomeration are centred on urban cores with populations of at least 10,000. A CMA/CA describes the zone of influence of an urban core according to the measure of commuting flows derived from census place of work data. A CA adjacent to a CMA can be merged with the CMA if the total percentage commuting interchange between the CA and CMA is equal to at least 35% of the employed labour force living in the CA, based on work data form the census.

Table 17: Percentage of small (1-99) high growth regional enterprises by top 15 communities, 1995-200

Community	Percentage of Small High Growth Regional Enterprises	Number of Small High Growth Regional Enterprises
Yellowknife, NWT	3.41%	26
Wood Buffalo, Alberta	3.04%	50
Saint-Georges, Quebec	2.78%	43
Chatham, Ontario	2.53%	46
Grand Prairie, Alberta	2.47%	56
Kitchener, Ontario	2.36%	295
Leamington, Ontario	2.36%	38
Guelph, Ontario	2.23%	85
Fort St. John, British Columbia	2.19%	27
Calgary, Alberta	2.18%	779
Halifax, Nova Scotia	2.11%	236
Oshawa, Ontario	2.08%	142
Sherbrooke, Quebec	2.02%	120
Ottawa-Hull, Ontario/Quebec	2.04%	523
Toronto, Ontario	2.00%	2,613

Source: Statistics Canada, LEAP/SAF

Table 18: Percentage of high growth firms during the period, 1995 - 2000 (All size classes)

Top Three CMA/CA's	% High growth	Top Three CMA/CA's	% High growth
Newfoundland and Labrador		**Ontario**	
St. John's	1.8	Chatham	2.6
Gander	1.2	Kitchener	2.4
Corner Brook	0.9	Leamington	2.4
Prince Edward Island		**Manitoba**	
Charlottetown	1.1	Winnipeg	1.6
Summerside	1.1	Portage la Prairie	1.2
N/A	…	Brandon	0.9
Nova Scotia		**Saskatchewan**	
Halifax	**2.2**	Prince Albert	1.7
Kentville	**1.6**	Saskatoon	1.7
Truro	1.3	Yorkton	1.6
New Brunswick		**Alberta**	
Moncton	**1.7**	Wood Buffalo	3.2
Campbellton	**1.5**	Grande Prairie	2.6
Edmundston	1.3	Calgary	2.3
Quebec		**British Columbia**	
Saint-Georges	**2.9**	Fort St. John	2.1
Sherbrooke	**2.1**	Abbotsford	1.4
Alma	**2.0**	Vancouver	1.3
Montréal	**2.0**	Kelowna	1.3
Drummondville	**2.0**		

Source: Statistics Canada, Longitudinal Employment Analysis Program (LEAP)– (Small Area File) 1995 and 2000, Special Tabulations

Based on the Survey of Innovation 1999, done with manufacturing establishments in Canada, there is no significant difference between small high growth firms and non-high growth firms in terms of level of R&D activities. However, the percentage of R&D performers is slightly higher for high growth firms compared to decliners.

However, based on the Research and Development in Canadian Industry (RDCI) survey, done with R&D performers in Canada, small high growth firms spent more on R&D activities than non-high growth firms. On average, small high growth firms with 20-49 employees spent close to $100,000 more than the firms categorize as growers (see " growth" definition in annex 3). On average, small high growth firms with 50-99 employees spent close to $200,000 more than the firms categorize as growers.

Over the period 1995-2000, small high growth R&D performers with 20-49 employees have increased their revenues by 197% compared with the growers at 43%; and high growth firms with 50-99 employees have increased their revenues by 75% compared with the "growers" at 36%.
(Source: Characteristics of Firms that Grow from Small to Medium Size, Synthesis Report, Statistics Canada, April 2004, page 29)

In very general terms, based on the Survey of Innovation 1999, high growth firms with 20-49 employees are significantly different from other types of firms in the same size category. The high growth firms:

- are more innovative,
- apply more for patents,
- use more confidentiality agreements,
- use more R&D Tax Credit programs, and
- are more involved in innovation collaborations.

There is no significant difference between high growth and grower firms with 20-49 employees in terms of involvement in R&D activities, use of at least one government program, and introducing a world first innovation.

In very general terms, based on the indicators developed for the Innovation Survey 1999, there is not much difference between high growth firms with 50-99 employees and non-high growth firms. These firms exhibit almost the same behavior. Some exceptions exist between high growth and decliners in terms of " innovators"; high growth and non-high growth in terms of "introducing world first innovation"; high growth and stable and decliner firms in terms of "patent applications", and high growth and decliners in terms of "use of confidentiality agreements".

9.5. Distribution of High Growth Firms by Industry Using Different Growth Indicators

Growth can be related to employment or revenues or profits or some combination of these measures. During the preliminary phase of the 2003 study between NRC-IRAP and Statistics Canada on factor of growth, a variety of indicators of growth were considered. It was found that for R&D performing firms, the profile of high-growth firms changed noticeably depending on how the concept of high growth was defined. Table 19 provides an overview of the differences in number and percentage of high-growth firms by industry when using the various definitions. Four different indicators of high growth are compared based on a period of five years from 1995 to 2000:

- doubling revenue and employment,
- doubling revenue,
- doubling employment, and
- doubling in revenue or employment.

Regardless of which indicator is selected, the industry with the highest number of high-growth R&D performing firms is computer systems design services, follow by machinery manufacturing, architectural and engineering services. Generally, industries with high R&D spending and high R&D intensities were more likely to report a higher proportion of high-growth firms.

Overall 40% of R&D performing firms were high-growth firms based on the broadest measure, revenue or employment growth. *(Source: Innovation Analysis Bulletin, Charlene Lomno, SIEID, Statistics Canada, June 2004)*

Table 19: High growth firms by industry and type of growth indicator

Industry	Revenue **and** employment indicator		Revenue indicator(1)		Employment indicator		Revenue **or** employment indicator	
	#	%	#	%	#	%	#	%
Agriculture, forestry, fishing etc.	7	12	13	22	16	**27**	22	**37**
Oil, gas and mining	4	11	8	21	8	21	12	**32**
Utilities	1	9	2	18	2	18	3	**27**
Construction	7	12	13	22	15	**26**	22	**38**
Food, beverages and tobacco	7	6	16	13	22	18	32	**27**
Textile	4	8	4	8	10	20	12	24
Wood, paper and printing	10	10	19	18	24	23	33	**31**
Pharmaceutical and medecine	9	20	20	**44**	14	**31**	25	**56**
Petroleum and other chemical products	16	8	30	15	38	19	**53**	**26**
Plastic products	13	12	19	17	27	24	34	**31**
Non-metallic mineral products	3	9	3	9	8	**25**	9	**28**
Primary metals	5	13	8	20	12	**30**	16	**40**
Fabricated metal products	7	13	9	17	11	20	14	**26**
Machinery	23	13	38	21	46	**25**	**63**	**34**
Computers, peripherals and other electronics	**54**	14	**82**	21	**101**	**26**	**139**	**35**
Communications equipment	13	16	18	23	28	**35**	35	**44**
Semiconductor and other electronic components	17	19	33	**37**	24	**27**	42	**47**
Navigational, measuring, medical and control instruments	21	**25**	41	**49**	33	**39**	**53**	**63**
Electrical equipment, appliance and components	42	24	**62**	**36**	**55**	**32**	**78**	**45**
Motor vehicle and parts	14	14	25	**26**	24	24	36	**37**
Aerospace products and parts	6	16	9	24	13	35	18	**49**
All other transportation equipment	3	15	5	**25**	6	30	8	**40**
Furniture and other manufacturing industries	18	12	34	23	43	**29**	**60**	**40**
Wholesale trade	30	11	**53**	20	**66**	24	**93**	**34**
Information and cultural industries	43	**25**	**61**	**36**	**67**	**40**	**88**	**52**
Architectural, engineering and related services	44	16	**76**	**27**	**87**	**31**	**125**	**45**
Computer system design and related services	**122**	**28**	**167**	**38**	**188**	**43**	**238**	**54**
Management, scientific and technical consulting services	12	17	18	**25**	17	24	23	**32**
Scientific research and development services	30	24	39	**31**	47	**38**	**58**	**46**
Health care and social assistance	5	16	13	**42**	10	**32**	18	**58**
All other services	31	14	**58**	**25**	**70**	**31**	**98**	**43**
Total	631	16	1,015	**26**	1,151	**29**	1,588	**40**

Source: Statistics Canada. Survey of Research and Development in Canadian Industry.

1. Note that this figure measure all firms which reported a doubling of revenues regardless of how employment changed, nost just those who reported only doubling of revenue. Similarly, the employment figures show all firms which doubled based on employment, not just those who reported only a doubling of employment. Instances where an industry has 50 or more firms reporting high growth are highlighted in bold, as are instances where the proportion of firms that are high-growth is 25% or greater.

10. PRODUCTIVITY

10.1. Understanding Canada Performance

Productivity – the efficiency with which the economy transforms inputs into outputs – is important because this largely determines real incomes changes. Productivity can be measured in different ways: productivity can be applied to a single input such as output per hour worked (labour productivity) as well as to combined labour and capital inputs

(multifactor productivity). The multifactor productivity measures the extent to which inputs are used efficiently in the production process. Either way, productivity is a key indicator of technological and organizational efficiency.

The Canadian productivity is being hampered not only by the greater labour reliance, but also because Canadian firms are less innovative in the products they produce and the way they use the materials, capital and labour that they have at their disposal. An "Excellence Gap" analysis by the Canadian Manufacturers and Exporters demonstrates that Canada is also seriously lagging in innovation – particularly in utilization of capital and research and development.

One answer to the challenge is innovation; another is the increased use of capital, particularly for technology. The best solution is a combination of the two. Innovation in product and services increases its uniqueness and the competitiveness, ultimately impacting productivity. Using technology or innovating in the processes used to produce those products will also result in a competitive cost advantage. The infrastructure is in place. Canada has one of the most comprehensive research and development tax credit program in the world but surprisingly few companies take advantage of it. *(Source: Greater innovation will fuel greater profitability; Canada's reliance on labour and not capital is hurting our manufacturers, Chris Johnsen, Advanced Manufacturing Magazine, November 2003)*

Much has been said about Canada 's poor productivity performance compared to the U.S. It is generally agreed that part of the explanation is the different composition of the two economies. For example, the U.S. has a larger IT sector, which has above-average productivity growth. Another reason is the composition of the economy. The Canadian economy has a greater proportion of SME than U.S., which normally does not experience as strong productivity growth as larger establishments.

10.2. Statistics on Productivity

Last year's slower performance occurred in a context of slow economic growth in Canada's business sector. The business sector accounts for close to 80% of the GDP of the whole economy. Real Gross Domestics Product (GDP) in the business sector increased by only 1.7% in 2003, compared to 3.7 the year before. The 1.7% gain came from a 1.2% increase in the combined inputs of labour and capital and a 0,5% increase in multifactor productivity.

Labour productivity in the manufacturing sector slowed markedly in 2003. Productivity growth in the manufacturing advanced at 1.2% in 2003, compared with 2.8% in 2002. Ten of the 20 industries forming the manufacturing sector recorded a decline in productivity, while another quarter recorded a slowdown in productivity growth. Much like the manufacturing sector, the majority of other industries in the business sector recorded a decline or a slower productivity growth. In contrast, sectors such as agriculture, forestry, fishing and hunting; professional services; as well as arts, entertainment and recreation; and other commercial services, experienced an acceleration of productivity growth in 2003. *(Source: Canadian Productivity Account, Statistics Canada, Catalogue no. 15-003, May 2004)*

Table 20: Productivity

Sources of gross domestic product growth in Canada's business sector							
	1981 to 2000	1981 to 1988	1988 to 2000	2000 to 2001	2001 to 2002	2002 to 2003	2000 to 2003
	percentage points contribution (average annual growth)						
Gross domestic product	3.1	3.4	3.0	1.7	3.7	1.7	2.4
Contribution of capital services	1.3	1.3	1.3	0.8	0.3	0.4	0.5
Information technology	0.4	0.4	0.5	0.3	0.1	0.2	0.2
Computers	0.3	0.3	0.3	0.2	0.1	0.2	0.1
Software	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Communication	0.1	0.1	0.1	0.1	0.0	-0.2	0.0
Other machinery and equipment	0.3	0.4	0.3	0.2	0.0	0.0	0.1
Structures	0.5	0.6	0.5	0.3	0.2	0.2	0.2
Contribution of labour services	1.4	1.6	1.2	0.5	0.9	0.8	0.7
Multifactor productivity	0.4	0.4	0.5	0.4	2.5	0.5	1.1
Note: Contribution is the product of the growth of the variable and its share in nominal gross domestic product.							

Source: The Daily, July 14, 2004, Statistics Canada

10.3. Small Business Contribution to Gross Domestic Product

The organization for Economic Cooperation and Development (OECD) has published estimates of the contribution to GDP by small businesses in member countries. Its 2000 Canada profile (based on 1998 data) states that 43% of private GDP can be attributed to SMEs, where SMEs are defined as businesses with fewer than 500 employees.

In Canada, the Government of British Columbia's statistical service (BC Stats) has developed a method to determine the small business contribution to GDP by province, using the income-based approach of the System of National Accounts. As shown in Table 21, it is estimated that, in 2002, small businesses accounted for approximately 25% of Canada's GDP *(Source: Key Small Business Statistics, Industry Canada, April 2004).*

Table 21: Small business contribution to GDP by province, 1993 to 2002 [1]

Province	Small Business Contribution to GDP (percent)									
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
British Columbia	32	31	32	31	30	29	27	28	30	30
Alberta	26	25	28	26	26	27	24	21	24	26
Saskatchewan	29	27	29	31	26	27	25	22	25	23
Manitoba	24	24	25	26	24	22	21	22	24	23
Ontario	22	22	24	23	22	22	22	23	24	24
Quebec	26	26	27	26	24	23	23	25	26	26
New Brunswick	26	25	27	25	24	23	22	23	25	25
Nova Scotia	24	24	27	26	24	23	22	25	26	25
Prince Edward Island	34	33	34	28	27	26	25	29	29	31
Newfoundland and Labrador	21	20	21	21	21	19	17	17	19	16
Canada	**25**	**24**	**26**	**25**	**24**	**24**	**23**	**23**	**25**	**25**

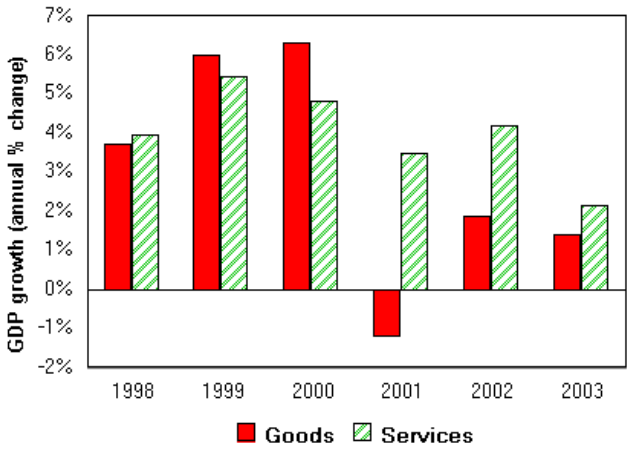
Source: BC Stats.

Note 1: In these data small businesses comprise businesses with fewer than 50 employees, plus those operated by the self-employed with no paid employees

10.4. Goods vs Services Producer Gross Domestic Product

GDP by industry measures the value of output of an industry less the value of intermediate inputs required in the production process. In this sense, it is an output-based measure of economic activity and is commonly referred to as the value-added of an industry.

Figure 11: Growth in Gross Domestic Product (GDP) Canadian Economy Goods vs Services 1997-2003



Source: Statistics Canada, System of National Accounts, CANSIM Table 379-0017 and CANSIM 379-0020

Between 1997 and 2003, GDP growth in the Canadian Economy increased at a rate of 3.6% per year. The goods-producing industries displayed a compound annual growth rate (CAGR) of 3%. On the other hand, services-producing industries exhibited GDP growth at 4.0% per year. In 2003, GDP for goods-producing industries increased 1.4%, while growth for services-producing industries was 2.2%. *(Source: Industry Canada, Strategis, Economic Analysis and Statistics, Canadian Industry Statistics – "Strategis.ic.gc.ca/sc_ecnmy/sio/cis41-91gdpe.html")*

Under the North American Industry Classification System (NAICS) the Canadian Economy is divided into 20 economic sectors. These can be grouped into five largely goods-producing industries and fifteen entirely services-producing industries as shown in Figure 12 and 13.

Figure 12: Annual GDP Growth Services-producing Industries NAICS 41 to 91,2002 and 2003

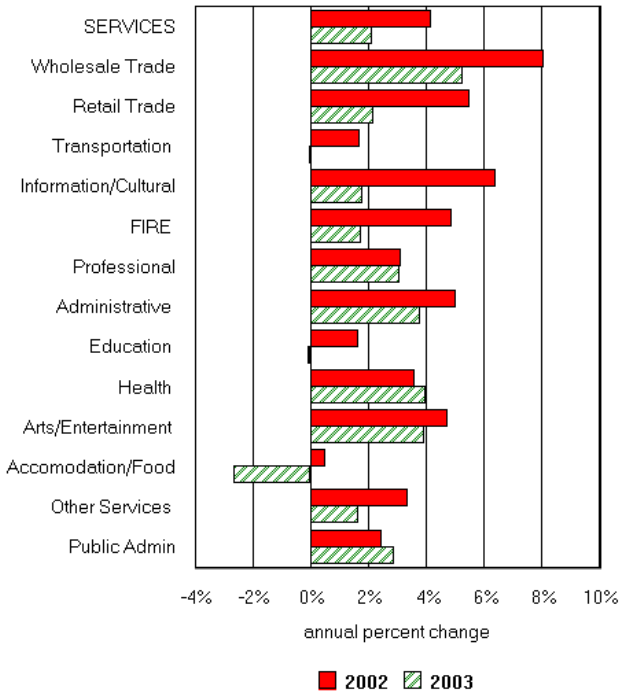
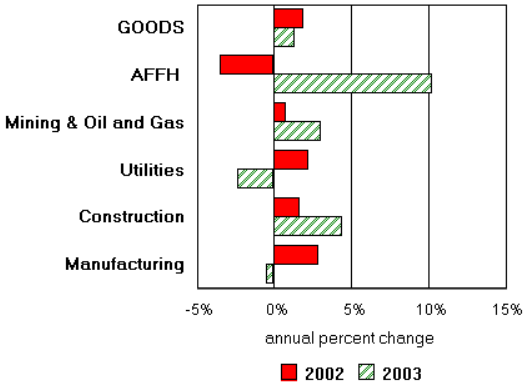


Figure 13: Annual GDP Growth Goods-producing Industries NAICS 11 to 31-33, 2002 and 2003



AFFH: Agriculture, Forestry, Fishing and Hunting

Source: Statistics Canada, System of National Accounts, CANSIM Table 379-0017 and CANSIM 379-0020

11. PRIVATE SECTOR CONTRIBUTION TO EMPLOYMENT

In the first quarter of 2001, large businesses were responsible for over half of the net job growth. However, in all subsequent quarters, more jobs appeared in small businesses that in either large or medium-sized firms. Small businesses with more than 20 but fewer than 100 employees showed a robust contribution to job creation throughout the period 2001-2002.

Table 22: Year-to-year percent contribution by size of business enterprise, quarterly, 2001 Q1 to 2002 Q4

Year and Quarter	Total Net Change	% Contribution to Private Sector Employment Change by Size of Business								
		0–4	5–19	20–49	50–99	Small <100	100–299	300–499	Medium 100–499	Large 500+
2001 Q1	100%	10.8%	1.6%	9.9%	7.1%	29.4%	13.6%	5.0%	18.6%	52.0%
Q2	100%	2.3%	10.9%	15.4%	14.5%	43.1%	14.6%	2.8%	17.4%	39.5%
Q3	100%	34.2%	4.9%	20.8%	19.5%	79.4%	6.9%	-1.8%	5.1%	15.5%
Q4	100%	45.3%	47.3%	45.5%	17.4%	**155.5%**	-20.4%	-31.7%	**-52.1%**	**-3.4%**
2002 Q1	100%	-7.0%	30.8%	43.4%	34.6%	101.8%	-3.9%	-23.5%	-27.4%	25.6%
Q2	100%	-0.9%	3.9%	34.5%	37.4%	74.9%	20.0%	-13.1%	6.9%	18.2%
Q3	100%	-0.9%	1.3%	24.4%	29.1%	53.9%	22.9%	-7.4%	15.5%	30.6%
Q4	100%	-1.1%	2.7%	23.1%	26.7%	**51.4%**	17.4%	-3.6%	**13.8%**	**34.8%**

Source: Statistics Canada, Survey of Employment, Payrolls and Hours (SEPH), September 2003 and calculations by Industry Canada

12. TOP THREE INDUSTRY SECTORS BY PROVINCE

According to the Innovation Survey 1999, the distribution of industry sectors where the highest percentage of innovative firms[3] is found varies widely from west to east coast. As shown in Table 23, Newfoundland and Labrador, Prince Edward Island and Saskatchewan exhibit the highest percentage of innovative manufacturing firms in Food manufacturing industry sector. Nova Scotia and Manitoba both exhibit the highest percentage in Fabricated metal product manufacturing industry sector. Other provinces such as Ontario and New Brunswick exhibit a completely different mix of sectors.

Table 23: Percentage of Innovative Firms During the Period, 1997 - 1999

Top Three Manufacturing Industries by Province	Innovators Percent
Newfoundland and Labrador	
Food Manufacturing	92.3
Non-Metallic Mineral Products Manufacturing	57.1
N/A	…
Prince Edward Island	
Food Manufacturing	87.5
N/A	…
N/A	…
Nova Scotia	
Fabricated Metal Product Manufacturing	92.3
Sawmills and Wood Preservation	86.3
Printing and Related Support Activities	81.3
New Brunswick	
Sawmills and Wood Preservation	100.0
Paper Manufacturing	92.9
Plastics and Rubber Products Manufacturing	90.0
Quebec	
Computer and Peripheral Equipment Manufacturing	100.0
Communications Equipment Manufacturing	100.0
Railroad Rolling Stock Manufacturing + Ship and Boat Building + Other Transportation Equipment	95.1
Ontario	
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	100.0
Computer and Peripheral Equipment Manufacturing	100.0
Semiconductor and Other Electronic Equipment Manufacturing	100.0
Manitoba	
Fabricated Metal Product Manufacturing	94.1
Printing and Related Support Activities	89.1
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	87.3
Saskatchewan	
Food Manufacturing	94.7
Machinery Manufacturing (excluding 3331 & 3332)	80.0
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	69.2
Alberta	
Electrical Equipment, Appliance and Component Manufacturing	100.0
Furniture and Related Products Manufacturing	92.3
Agricultural, Construction and Mining + Industrial Machinery Manufacturing (3331 & 3332)	88.4
British Columbia	
Communications Equipment Manufacturing	100.0
Navigational, Measuring, Medical and Control Instruments Manufacturing + Manufacturing and Reproducing Magnetic and Optical Media	100.0
Machinery Manufacturing (excluding 3331 & 3332)	86.6

Source: Statistics Canada (Science, Innovation and Electronic Information Division), Survey of Innovation 1999, Special Tabulations

[3] The definition of an innovator in the Survey of Innovation 1999 is a relatively broad one. Innovation is the introduction of new and significantly improved products or processes. As long as it is the first time the firm introduces the innovation, it is considered to be an innovation, even though other firms might have already introduced the same innovation.

According to a most recent survey (2003) with selected service industries, Computer system design and related services sector is where the highest percentage of innovative firms is found in five provinces in Canada (see Table 23). The Software publishers sector exhibits the highest percentage of innovative firms in three other provinces and Office and professional equipment wholesaler distributor arrives at the top in only one province, Saskatchewan.

Table 23: Percentage of Innovative Firms During the Period, 2001 - 2003

Top Three of Selected Service Sector Industries by Province	Innovators Percent
Newfoundland and Labrador	
Computer systems design and related services	75.0
Engineering services	26.3
N/A	…
Prince Edward Island	
N/A	…
N/A	…
N/A	…
Nova Scotia	
Computer systems design and related services	89.5
Office and professional equipment wholesaler-distributor	52.2
Engineering services	48.1
New Brunswick	
Computer systems design and related services	81.8
Engineering services	55.0
Management consulting services	37.5
Office and professional equipment wholesaler-distributor	37.5
Quebec	
Computer systems design and related services	86.2
Software publishers	86.0
Computer and communications equipment and supplies wholesaler-distributor	80.0
Ontario	
Software publishers	100.0
Geophysical surveying and mapping	100.0
Computer systems design and related services	88.4
Manitoba	
Computer systems design and related services	84.2
Office and professional equipment wholesaler-distributor	63.3
Office and store machinery and equipment wholesaler-distributors	56.7
Saskatchewan	
Office and professional equipment wholesaler-distributor	85.7
Computer systems design and related services	72.7
Research and development in physical, engineering and life sciences	57.1
Alberta	
Software publishers	88.9
Computer systems design and related services	88.3
Other scientific and technical consulting services	76.9
British Columbia	
Software publishers	100.0
Internet service providers	88.9
Computer systems design and related services	86.4

Source: Statistics Canada (Science , Innovation and Electronic Information Division) Survey of Innovation 2003, Special Tabulations

13. INTERNATIONAL TRADES

Canada's exports and imports have grown dramatically over the past decades, surging from roughly 22% of GDP in 1980 to well over 40% for exports and 35% for imports. Fully 87% of Canadian exports of goods and services are destined for U.S. This reliance on the U.S. has been rising over time and has increased by approximately 10 percentage points over the last decade alone.

Although, Canada has strong trade ties with the U.S. it has also been expanding trade with the rest of the world. Exports from Canada to the rest of the world rose by an average annual pace of 3.5% over the last decade, about half the 7.1% annual growth in exports to the U.S. Over the past ten years, this has amounted to a cumulative increase of 42% and 100% respectively. While Canadian merchandise exports to China have grown at a solid average annual 7.4% pace since the early 1990s, Canadian merchandise imports from China have surged by 18% per year on average.

Despite the fact that the service sector accounts for a massive 69% of Canadian GDP, service only make up a quarter of all Canadian exports and roughly one-sixth of Canadian imports. The simple reason is that many services are virtually impossible to export or import. Nevertheless, Canada's goods and services sectors saw exports increase at a similar pace over the 1993-2001 period, with both recording growth of 9.6% per year average. *(Source: Canadian Business Goes Global for Growth, Globalization: Peril or Panacea for Canadian Business?, TD Bank Financial Group, June 2004)*

13.1. Profile of Canadian Exporters

Small businesses make up 85% of all Canadian exporters and account for 44% of total value of exports. Firms with 200 and more employees represent 7% of all exporters and 45% in total value of exports. According to the Canadian Federation of Independent Business (CFIB), while the majority of Canada's exporters are SMEs, only a small share of SMEs are exporters – just 18% of the total.

Since 1993, the number of establishments that export merchandise declined for the first time in 2002, according to Statistics Canada. As shown in Table 24, a total of 42,489 establishments were exporters in 2002, down 2% from 2001. This implies that only 3.5% of all Canadian business employers generate revenues from exports. Exporters in the smallest size classes accounted for most of the overall decline in the number of exporters. The value of merchandise exports from all exporters totaled $359 billion in 2002, down from $367 billion in 2001. Lower activity among exporters in the largest size class (over $25 million in annual exports) accounted for most of the overall decline in the value of exports in 2002.

The 50 largest exporting enterprises accounted for almost 46% of all merchandise exports in 2002, compared with a high of 50% in 2000. In 2002, 4% of exporting establishment accounted for 82% of the total value of merchandise exports. Almost three-quarters of exporting establishments had fewer than 50 employees in 2002, yet they accounted for only 24% of the total value of merchandise exports.

On an industry basis, over three-quarter of the decline in the number of exporters was concentrated outside the manufacturing sector. The wholesale trade industry accounted for the largest drop in the number of exporters. *(Profile of Canadian Exporters, The Daily, Statistics Canada, March 22, 2004)*

All provinces exhibit a decrease in number of exporters. The highest decrease is from Saskatchewan (5%) and British Columbia (4%). Newfoundland (38%), Prince Edward Island (12%), Saskatchewan (12%), Nova Scotia (4%) and Ontario (1%) exhibit increase in total value of domestic exports.

Table 24: Exporters population by province of residence, 1993 to 2002

Province of residence	Number of exporters (establishments)									
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Newfoundland	155	149	162	201	198	185	207	213	208	202
Prince Edward Island	130	134	139	135	130	143	160	163	153	150
Nova Scotia	717	723	774	852	857	821	883	908	892	867
New Brunswick	616	681	745	740	768	787	779	804	823	799
Quebec	6,390	7,001	7,727	8,279	8,695	8,766	9,041	9,365	9,411	9,128
Ontario	14,601	15,882	17,313	18,008	18,675	19,059	19,312	19,468	19,424	19,216
Manitoba	1,190	1,294	1,300	1,328	1,386	1,415	1,410	1,506	1,533	1,531
Saskatchewan	623	682	758	778	790	794	806	876	899	851
Alberta	2,091	2,353	2,518	2,828	3,007	3,094	3,314	3,583	3,647	3,582
British Columbia[1]	4,251	4,619	5,135	5,498	5,694	5,830	5,969	6,271	6,367	6,123
Yukon[1]	39	14	16	17	x	x	x	x	x	x
Northwest Territories[2]	x	6	10	16	x	x	x	x	x	x
Nunavut[2]	…	…	…	…	…	…	x	x	x	x
Canada	30,803	33,538	36,597	38,680	40,232	40,928	41,924	43,201	43,412	42,489

1. Yukon and Northwest Territories have been combined with British Columbia for the years 1993 and 1997 to 2002.
2. Nunavut is combined with the Northwest Territories for 1999 to 2002.
X indicates confidential data
... Figures not applicable.
Source: Statistics Canada, International Trade Division, Exporter Registry.

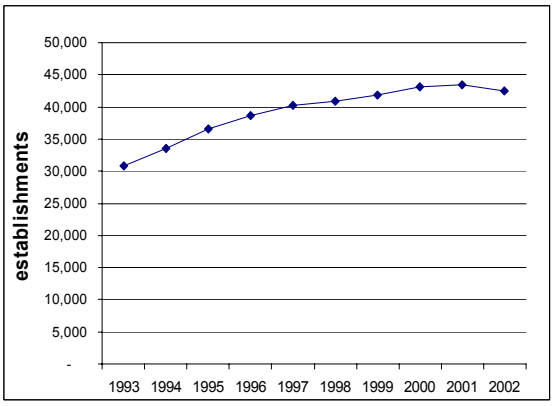
Table 25: Value of domestic exports, by province of residence, 1993 to 2002

Province of residence	Value of exports (millions C$)									
	1993	1994	1995	1996	1997	1998	1,999	2,000	2,001	2,002
Newfoundland	982	665	1,012	1,534	1,605	1,456	1,835	2,437	2,494	3,432
Prince Edward Island	209	286	315	309	328	464	516	516	459	513
Nova Scotia	2,335	2,555	2,950	3,157	3,759	3,748	4,242	4,573	4,856	5,060
New Brunswick	3,250	3,859	4,814	4,934	5,083	5,032	5,698	7,004	8,228	8,080
Quebec	29,170	35,185	46,127	47,104	51,196	57,661	62,047	72,379	67,578	66,334
Ontario	93,096	111,743	123,145	129,058	141,556	152,822	171,789	181,251	175,431	177,885
Manitoba	4,417	5,871	7,087	8,965	8,623	8,480	10,019	11,105	10,618	10,588
Saskatchewan	2,960	3,429	4,098	3,958	4,268	4,567	5,006	5,907	5,310	5,968
Alberta	18,294	20,996	25,129	30,063	32,082	29,716	34,146	57,713	60,706	52,561
British Columbia[1]	21,686	26,532	29,590	28,019	30,127	29,656	29,623	34,620	30,675	27,912
Yukon[1]	x	4	2	14	x	x	x	x	x	x
Northwest Territories[2]	x	22	39	51	x	x	x	x	x	x
Nunavut[2]	…	…	…	…	…	…	x	x	x	x
Canada	176,427	211,147	244,308	257,166	278,965	293,890	325,781	378,375	367,260	359,160

1. Yukon and Northwest Territories have been combined with British Columbia for the years 1993 and 1997 to 2002.
2. Nunavut is combined with the Northwest Territories for 1999 to 2002.
X indicates confidential data
... Figures not applicable.
Source: Statistics Canada, International Trade Division, Exporter Registry.

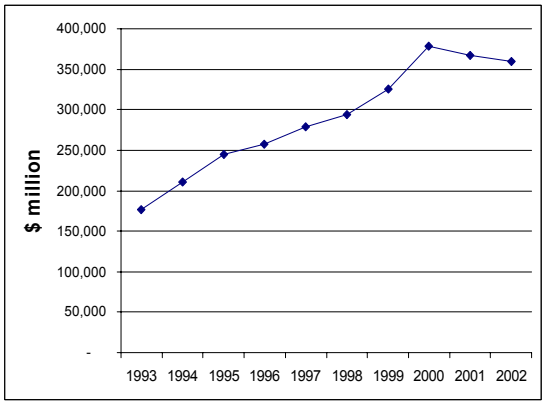
The number of establishments that export merchandise has started to decrease in 2002 after 8 years of consecutive growth. However, the total value of domestic exports has started to decrease in 2001 by 3% followed by 2% in 2002.

Figure 14: Total number of establishments that export merchandise, 1993 to 2002



Source: Statistics Canada, International Trade Division, Exporter Registry

Figure 15: Total value of domestic exports, 1993 to 2002



Source: Statistics Canada, International Trade Division, Exporter Registry

Table 1A

R&D spending by province, 1999-2001
($,000,000)

Geography	1999	2000	2001
Newfoundland and Labrador	127	138	142
Prince Edward Island	26	36	35
Nova Scotia	346	368	365
New Brunswick	166	160	154
Quebec	4,926	5,632	6,200
Ontario	8,862	10,309	11,182
Manitoba	384	411	453
Saskatchewan	323	374	391
Alberta	1,164	1,336	1,511
British Columbia	1,298	1,617	1,679
Canada	**17,931**	**20,360**	**22,116**

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 5

Table 1B

Business R&D spending by province, 1999-2001
($,000,000)

Geography	1999	2000	2001
Newfoundland and Labrador	18	20	20
Prince Edward Island	3	5	4
Nova Scotia	66	72	78
New Brunswick	40	39	34
Quebec	3,047	3,555	3,897
Ontario	5,780	6,721	7,296
Manitoba	148	132	161
Saskatchewan	78	74	82
Alberta	490	582	614
British Columbia	722	975	992
Canada	**10,394**	**12,175**	**13,179**

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 7

Table 1C

Non-Business R&D spending by province, 1999-2001
($,000,000)

Geography	1999	2000	2001
Newfoundland and Labrador	109	118	122
Prince Edward Island	23	31	31
Nova Scotia	280	296	287
New Brunswick	126	121	120
Quebec	1,879	2,077	2,303
Ontario	3,082	3,588	3,886
Manitoba	236	279	292
Saskatchewan	245	300	309
Alberta	674	754	897
British Columbia	576	642	687
Canada	**7,537**	**8,185**	**8,937**

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 5 - Table 7

Table 2A

Provincial R&D as a percentage of Canadian R&D, 1999-2001
(%)

Geography	1999	2000	2001
Newfoundland and Labrador	0.7	0.7	0.6
Prince Edward Island	0.1	0.2	0.2
Nova Scotia	1.9	1.8	1.7
New Brunswick	0.9	0.8	0.7
Quebec	27.5	27.7	28.0
Ontario	49.4	50.6	50.6
Manitoba	2.1	2.0	2.0
Saskatchewan	1.8	1.8	1.8
Alberta	6.5	6.6	6.8
British Columbia	7.2	7.9	7.6
Canada	100	100	100

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 5

Table 2B

Provincial business R&D as a percentage of Canadian business R&D, 1999-2001
(%)

Geography	1999	2000	2001
Newfoundland and Labrador	0.2	0.2	0.2
Prince Edward Island	0.0	0.0	0.0
Nova Scotia	0.6	0.6	0.6
New Brunswick	0.4	0.3	0.3
Quebec	29.3	29.2	29.6
Ontario	55.6	55.2	55.4
Manitoba	1.4	1.1	1.2
Saskatchewan	0.8	0.6	0.6
Alberta	4.7	4.8	4.7
British Columbia	6.9	8.0	7.5
Canada	100	100	100

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 7

Table 2C

Provincial non-business R&D as a percentage of Canadian non-business R&D, 1999-2001
(%)

Geography	1999	2000	2001
Newfoundland and Labrador	1.4	1.4	1.4
Prince Edward Island	0.3	0.4	0.3
Nova Scotia	3.7	3.6	3.2
New Brunswick	1.7	1.5	1.3
Quebec	24.9	25.4	25.8
Ontario	40.9	43.8	43.5
Manitoba	3.1	3.4	3.3
Saskatchewan	3.3	3.7	3.5
Alberta	8.9	9.2	10.0
British Columbia	7.6	7.8	7.7
Canada	100	100	100

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
Table 5 - Table 7

Table 3A

R&D per capita, 1999-2001
($ per person)

Geography	1999	2000	2001
Newfoundland and Labrador	238	261	272
Prince Edward Island	191	264	256
Nova Scotia	371	394	391
New Brunswick	221	213	205
Quebec	673	766	838
Ontario	770	882	940
Manitoba	336	358	393
Saskatchewan	318	371	391
Alberta	394	445	494
British Columbia	324	400	412
Canada	**590**	**663**	**713**

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
CANSIM 051-0001

Table 3B

Business R&D per capita, 1999-2001
($ per person)

Geography	1999	2000	2001
Newfoundland and Labrador	34	38	38
Prince Edward Island	22	37	29
Nova Scotia	71	77	84
New Brunswick	53	52	45
Quebec	416	483	527
Ontario	502	575	613
Alberta	166	194	201
Saskatchewan	77	73	82
Manitoba	130	115	140
British Columbia	180	241	243
Canada	**342**	**397**	**425**

Sources:
Industrial Research and Development, 2003 intentions, Statistics Canada
CANSIM 051-0001

Table 3C

Non-Business R&D per capita, 1999-2001
($ per person)

Geography	1999	2000	2001
Newfoundland and Labrador	204	223	234
Prince Edward Island	169	227	227
Nova Scotia	300	317	308
New Brunswick	168	161	160
Quebec	257	282	311
Ontario	268	307	327
Manitoba	207	243	254
Saskatchewan	241	298	309
Alberta	228	251	293
British Columbia	144	159	168
Canada	**248**	**267**	**288**

Sources:
Industrial Research and Development, 2003 intentions
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
CANSIM 051-0001

Table 4A

R&D as a percentage of provincial GDP, 1999-2001
(R&D / GDP (%))

Geography	1999	2000	2001
Newfoundland and Labrador	1.0	1.0	1.0
Prince Edward Island	0.8	1.1	1.0
Nova Scotia	1.5	1.5	1.4
New Brunswick	0.9	0.8	0.7
Quebec	2.3	2.5	2.7
Ontario	2.2	2.3	2.5
Manitoba	1.2	1.2	1.3
Saskatchewan	1.0	1.1	1.2
Alberta	1.0	0.9	1.0
British Columbia	1.1	1.2	1.3
Canada	1.8	1.9	2.0

Sources:
Service Bulletin Science Statistics, Vol.28, No.2, Statistics Canada
CANSIM 384-0002

Table 4B

Business R&D as a percentage of provincial GDP, 1999-2001
(R&D / GDP (%))

Geography	1999	2000	2001
Newfoundland and Labrador	0.1	0.1	0.1
Prince Edward Island	0.1	0.1	0.1
Nova Scotia	0.3	0.3	0.3
New Brunswick	0.2	0.2	0.2
Quebec	1.4	1.6	1.7
Ontario	1.4	1.5	1.6
Alberta	0.5	0.4	0.5
Saskatchewan	0.3	0.2	0.2
Manitoba	0.4	0.4	0.4
British Columbia	0.6	0.7	0.8
Canada	**1.1**	**1.1**	**1.2**

Sources:
Industrial Research and Development, 2003 intentions, Statistics Canada
CANSIM 384-0002

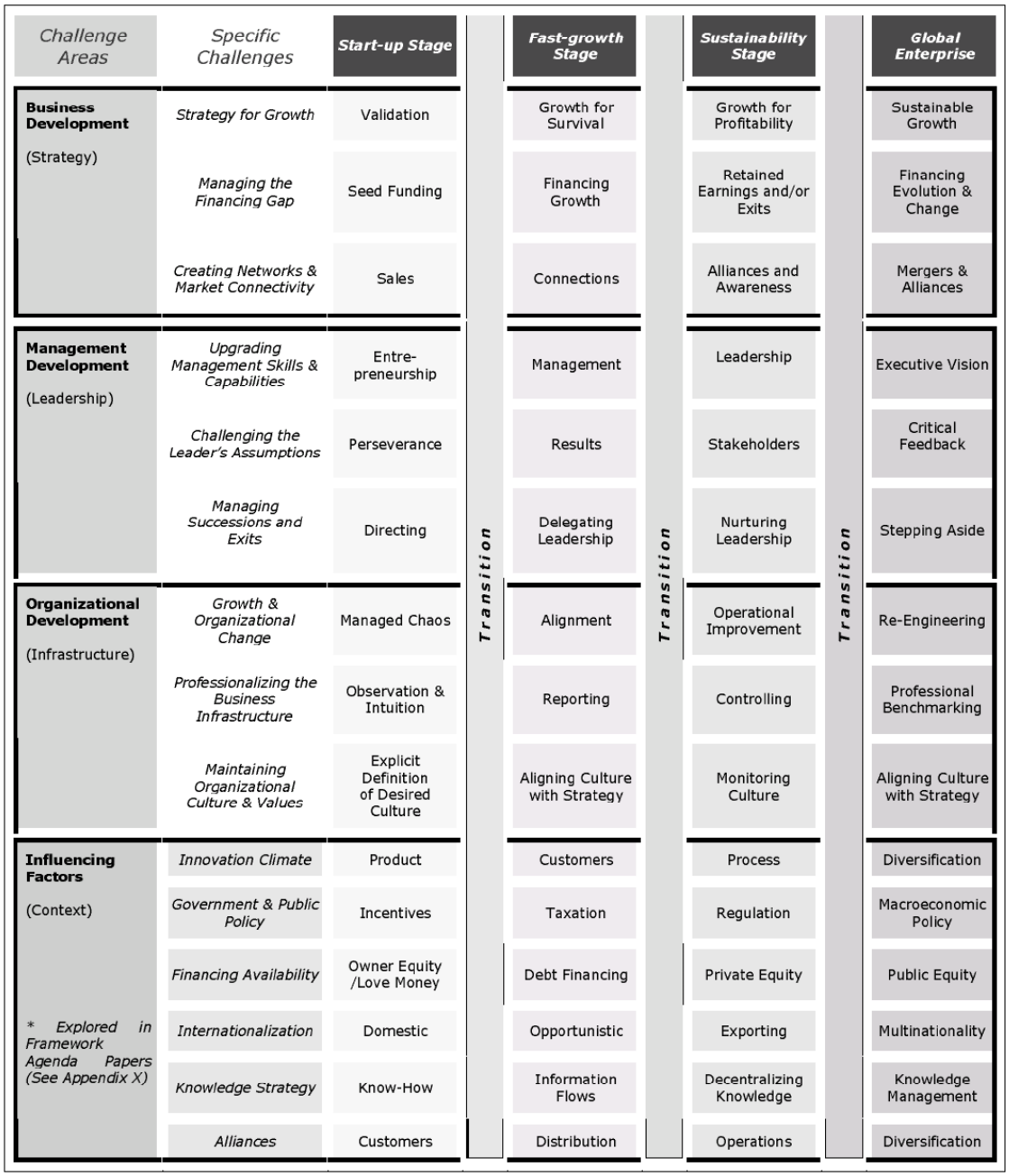
Table 4C

Non-Business R&D as a percentage of provincial GDP, 1999-2001
(R&D / GDP (%))

Geography	1999	2000	2001
Newfoundland and Labrador	0.9	0.9	0.9
Prince Edward Island	0.7	0.9	0.9
Nova Scotia	1.2	1.2	1.1
New Brunswick	0.7	0.6	0.6
Quebec	0.9	0.9	1.0
Ontario	0.8	0.8	0.9
Alberta	0.7	0.8	0.8
Saskatchewan	0.8	0.9	0.9
Manitoba	0.6	0.5	0.6
British Columbia	0.5	0.5	0.5
Canada	**0.8**	**0.8**	**0.8**

Sources:
Service Bulletin Science Statistics, Vol.28, No.2
Industrial Research and Development, 2003 intentions, Statistics Canada
CANSIM 384-0002

Figure 1: **SME growth framework**



Challenge Areas	Specific Challenges	Start-up Stage	Transition	Fast-growth Stage	Transition	Sustainability Stage	Transition	Global Enterprise
Business Development (Strategy)	*Strategy for Growth*	Validation		Growth for Survival		Growth for Profitability		Sustainable Growth
	Managing the Financing Gap	Seed Funding		Financing Growth		Retained Earnings and/or Exits		Financing Evolution & Change
	Creating Networks & Market Connectivity	Sales		Connections		Alliances and Awareness		Mergers & Alliances
Management Development (Leadership)	*Upgrading Management Skills & Capabilities*	Entre-preneurship		Management		Leadership		Executive Vision
	Challenging the Leader's Assumptions	Perseverance		Results		Stakeholders		Critical Feedback
	Managing Successions and Exits	Directing		Delegating Leadership		Nurturing Leadership		Stepping Aside
Organizational Development (Infrastructure)	*Growth & Organizational Change*	Managed Chaos		Alignment		Operational Improvement		Re-Engineering
	Professionalizing the Business Infrastructure	Observation & Intuition		Reporting		Controlling		Professional Benchmarking
	Maintaining Organizational Culture & Values	Explicit Definition of Desired Culture		Aligning Culture with Strategy		Monitoring Culture		Aligning Culture with Strategy
Influencing Factors (Context)	*Innovation Climate*	Product		Customers		Process		Diversification
	Government & Public Policy	Incentives		Taxation		Regulation		Macroeconomic Policy
	Financing Availability	Owner Equity /Love Money		Debt Financing		Private Equity		Public Equity
* *Explored in Framework Agenda Papers (See Appendix X)*	*Internationalization*	Domestic		Opportunistic		Exporting		Multinationality
	Knowledge Strategy	Know-How		Information Flows		Decentralizing Knowledge		Knowledge Management
	Alliances	Customers		Distribution		Operations		Diversification

Source: Managing for Growth, Enabling Sustainable Success in Canadian SMEs, RBC Financial Group, the Canadian Manufacturers & Exporters Association, and Queen's School of Business, 2003, page 4

Growth Definition

High Growth Firms (also called Gazelles) are firms that doubled the number of employees in five years and at the end of the five years have at least 20 employees

Growers are firms that increased the number of employees by at least 20% and less than 100%

Stable firms are firms that remained within 20% range of their employment from the start of the reference period

Decliners are firms that decreased their employment by more than 20% form the start of the reference period

Deaths are firm did not exist at the end of the five years.