



**HOUSE OF COMMONS
CANADA**

**A STUDY OF THE CRISIS FACED BY CERTAIN
INDUSTRIAL SECTORS IN CANADA**

**Report of the Standing Committee on
Industry, Science and Technology**

**Hon. Michael D. Chong, MP
Chair**

JUNE 2009

40th PARLIAMENT, 2nd SESSION

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THE STANDING COMMITTEE ON INDUSTRY, SCIENCE AND TECHNOLOGY

has the honour to present its

FIFTH REPORT

Pursuant to the Order of Reference from the House of Commons of Thursday, February 26, 2009, and the motion adopted by the Standing Committee on Industry, Science and Technology on Tuesday, March 3, 2009, the Subcommittee on Canadian Industrial Sectors has studied the crisis faced by certain industrial sectors in Canada and the Standing Committee on Industry, Science and Technology has agreed to report the following:

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CHAIRS' FOREWORD

In March 2009, the Subcommittee on Canadian Industrial Sectors began a study examining the impact of the economic crisis on certain Canadian industries, particularly the aerospace, energy, forestry, high-tech and manufacturing industries. The challenges facing these industries are numerous and onerous. Each industry faces a unique set of structural issues, but they all share the current overriding cyclical issue of an exceptionally deep global economic recession and a large contraction in credit and financing. For these industries, these cyclical issues are particularly acute because they compete in global markets and are, therefore, extensively dependent on export sales. Although Canada has been spared the full force of the global economic recession because of a very robust financial sector, the recession has hit other countries, notably the United States, extraordinarily hard. The United States is Canada's largest export market and, in an increasingly globalized world, market demand problems in the United States often become industrial production problems in Canada.

The Standing Committee on Industry, Science and Technology's final report reflects a wide perspective on both structural and cyclical challenges facing the industries studied and on the potential solutions proposed by the witnesses.

We would like to thank all of the witnesses who appeared before the Subcommittee for their thoughtful and often candid remarks, as well as the members of both the Subcommittee and the Committee for their hard work on this study.

David Van Kesteren, M.P.
Chair of the Subcommittee on Canadian Industrial Sectors

The Honourable Michael Chong, M.P.
Chair of the Committee on Industry, Science and Technology

INTRODUCTION

In March 2009, the Subcommittee on Canadian Industrial Sectors (hereinafter the “Subcommittee”) of the House of Commons Standing Committee on Industry, Science and Technology (hereinafter the “Committee”) began its study of “the crisis faced by certain industrial sectors in Canada, such as aerospace, energy, forestry, high-tech and manufacturing.” The study embraced all of the industries cited in this mandate and went further to include other important and struggling industries, such as minerals and metal products, chemicals and chemical products, and railway equipment suppliers.

This study covers much of the same economic terrain as did the Committee’s report in 2007, entitled *Manufacturing: Moving Forward — Rising to the Challenge*, but its scope has been broadened beyond manufacturing activities to include upstream operations in the forestry, mining and energy sectors. The economic context today is also much different than it was back in 2007. Between 2003 and 2007, the worldwide “commodities boom” produced huge price spikes in a number of primary commodities, most notably in energy prices, and a rapid and large appreciation in the value of the Canadian dollar. As a consequence of the latter, many Canadian manufacturers became considerably less competitive with their foreign rivals. Today, the global economic recession is the principal challenge and agent of change in terms of the business practices adopted by Canadian manufacturers, as well as by many forestry, mining and energy operations. The common economic thread among these industries is that they are highly focused on export sales and, therefore, must battle vigorously in very competitive global markets. Their managers’ business acumen is being put to the test, probably the greatest test that they, as a group, have ever faced.

The global economic recession is obviously a cyclical event. It will come to an end and an economic recovery will follow. The timing of any recovery is always an important matter, but expert opinion has converged on the proposition that this recovery will be predicated on the stabilization of the global financial system. Canada has little role to play here; it is essentially hostage to the actions that have or will be taken by decision-makers of international and foreign country institutions. In the interim, Canadian fiscal and monetary policies are focused on stimulating aggregate spending, both consumer and government components, and shoring up credit conditions, with the forging of industry-specific policies and programs (i.e., for the automotive sector, the forestry sector) to handle the most acute economic hardships.

A second important issue surrounds the questions: What type of recovery will follow? And will Canadian industry be ready and well equipped to take advantage of this recovery when it arrives? In answer to the first question, although most economic forecasts differ on the timing and strength of the forthcoming recovery in Canada, they all seem to agree that most “emerging economies”, such as China, India and Southeast Asia, will resume their high growth rates that they had experienced before the global recession hit. For the Canadian manufacturing sector, this scenario might mean a return to “commodities

boom” conditions as experienced between 2003 and 2007 that included an appreciation of the Canadian dollar to approximately parity with the U.S. dollar and a loss in competitiveness. In answer to the second question, given a return to “commodities boom”-like conditions, it remains an open question of whether or not the Government of Canada’s temporary tax measure of an accelerated capital cost allowance (CCA) on manufacturing and processing machinery and equipment (M&E) will stimulate sufficient investment in M&E to raise labour productivity levels across the manufacturing sector. This tax measure was put in place for a limited period to enable the manufacturing sector to more effectively compete with rivals when the Canadian dollar reached parity with the U.S. dollar.

The Committee’s report first summarizes the salient facts of the two external shocks that recently hit the Canadian economy: the worldwide “commodities boom” and the global economic recession. The inclusion of the first shock is intended to be more than an update on its manufacturing report of 2007, as the Committee believes that it might provide a window on the economic forces that will continue to shape Canada’s manufacturing sector with the forthcoming economic recovery. The second shock, on the other hand, will provide the latest details on the likely depth and duration of the current recession and on credit conditions in Canada.

The Committee will next address the economic circumstances of the manufacturing sector as a whole, being careful to distinguish between the different impacts of the two external economic shocks. The Committee will then focus on the economic circumstances, challenges (both structural and cyclical), industry responses of specific sectors — the ones mentioned above.

CHAPTER 1: THE ECONOMY AND CREDIT CONDITIONS

Since the turn of the second millennium, two very powerful external shocks have, one after the other, hit the Canadian economy. First, a worldwide “commodities boom” took hold in 2003 that sent many commodities prices and the Canadian dollar soaring to record levels and forced a restructuring of the Canadian economy away from manufacturing and towards primary commodities. The second external shock, a worldwide economic recession that began in late 2008, put an end to the first shock only by broadening the existing dampening effect on demand — both domestic and foreign — from Canadian manufactured products to include all Canadian goods and services. Matters, nevertheless, did get worse for the Canadian manufacturing sector, particularly specific industries focused on export markets such as forestry products, minerals and metal products, segments of the energy sector, motor vehicle manufacturers, automotive parts manufacturers,¹ aerospace, and high-tech manufacturing. Both of these economic events, as they have affected the Canadian economy and credit markets, are the topic of this section.

The “Commodities Boom” and the Rise of the Canadian Dollar

Beginning in 2003, rapid world economic expansion,² led largely by China, India and Southeast Asia, fuelled the demand for primary commodities, most notably energy and base metals, and led to rapidly rising commodity prices.³ These price increases were also accompanied by a large and rapid appreciation of the Canadian dollar, particularly against the U.S. dollar. These more or less simultaneous events were not unrelated. Canada is rich in energy and minerals both in absolute terms and, more importantly, on a per capita basis relative to other countries, a circumstance that has allowed and even encouraged Canada to develop along commodity export lines. For a commodity exporting country like Canada, rising commodity prices mean higher export prices, while an appreciating home currency means lower import prices in Canadian dollar terms. Hence, Canada enjoyed a much improved terms of trade performance (i.e., the ratio of Canadian export to import prices) in

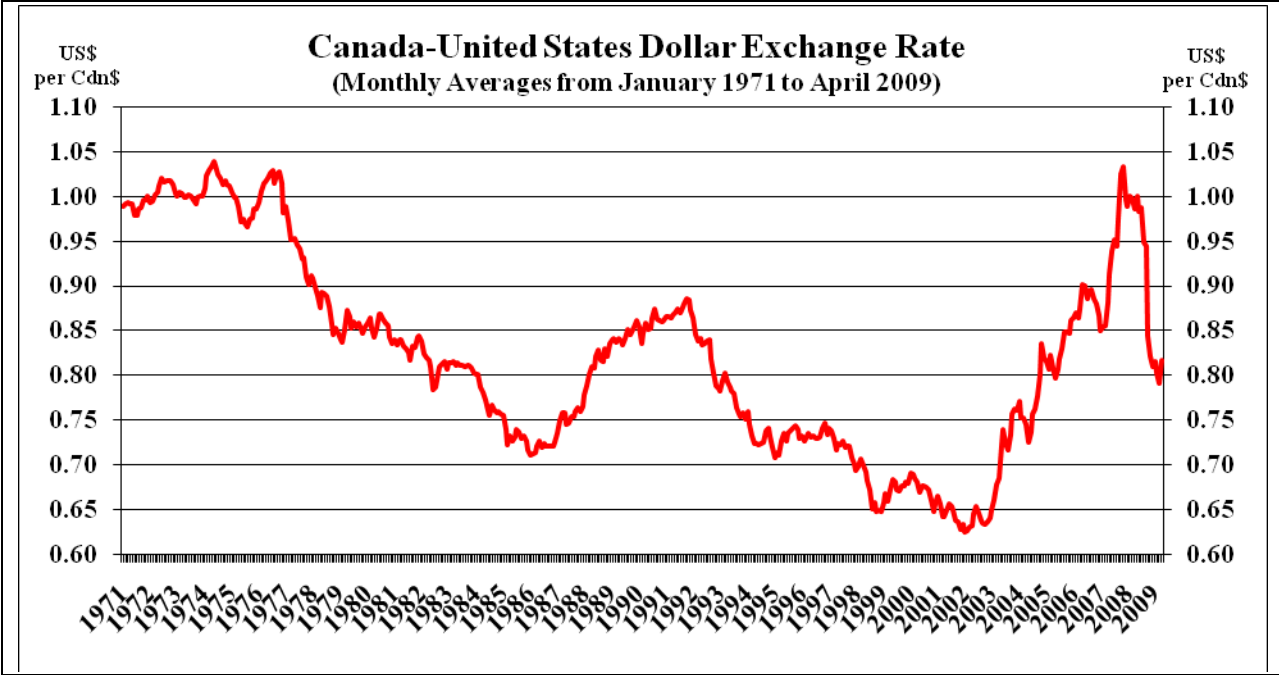
1 The Committee dealt with the automotive sector separately in another subcommittee and an earlier report (see <http://www2.parl.gc.ca/HousePublications/Publication.aspx?DocId=3783523&Language=E&Mode=1&Parl=40&Ses=2>). This Subcommittee will not duplicate this work and will instead focus on the other highlighted industries.

2 Global Insights Inc. reports world real gross domestic product (GDP) growth rates of 2.6%, 4.1%, 3.4%, 3.9% and 3.7% between 2003 and 2007, respectively. “Real GDP” refers to nominal GDP discounted for inflation.

3 Statistics Canada’s commodity price index, which is a fixed-weight index of the spot or transaction prices (in U.S. dollars) of 23 commodities produced in Canada and sold in world markets, rose by 196% between 2002 and June 2008 or by more than 33% per annum. The energy component of this price index rose by 354% between 2002 and the June 2008, resulting in an average annual increase of 59%.

the wake of the “commodities boom”,⁴ and hand-in-hand with foreigners wanting more Canadian commodities and willing to pay more for them came both increased domestic production and a general rise in economic welfare across the country. Canada’s much improved terms of trade appears to have also sparked international investors’ interest in Canada. Net foreign direct investment (FDI) flows, which had been mostly outbound rather than inbound to Canada in the last two decades of the 20th century, reversed course. Dominated by large foreign acquisitions of Canadian natural resource companies beginning in 2006, Canada recorded a net FDI inflow of \$27.0 and \$62.3 billion in 2006 and 2007, respectively. This positive capital inflow bolstered the terms of trade inspired rise in the Canadian dollar... until the global recession struck.

Figure 1



Source: Bank of Canada, http://www.bankofcanada.ca/en/rates/can_us_lookup.html.

4 The most immediate terms of trade cycle began in the fourth quarter of 2001 when the ratio of Canadian export-to-import prices index (2002 = 100) rose from 97.8 to 124.3 in the second quarter of 2008, representing a 27.1% increase in just six and a half years or an average annual increase of about 4.2%.

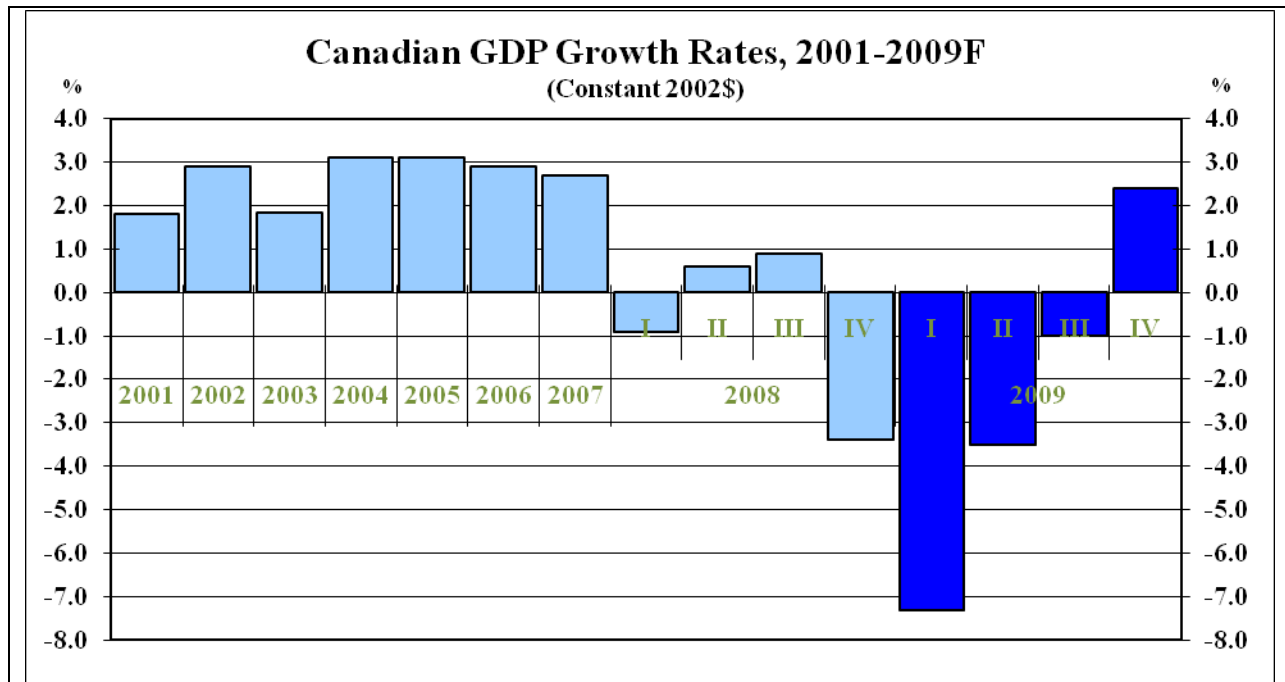
A further outcome of Canada's terms of trade spike has been a rapid and substantial appreciation of the Canadian dollar against the U.S. dollar and, indeed, against many other currencies.⁵ The Canadian dollar had surged 78.5% in value relative to the U.S. dollar in just five and three-quarter years before resting in the vicinity of parity with the U.S. dollar throughout the first half of 2008 and then resettling in the 79¢ to 85¢ US range since October 2008 and the beginning of the global recession (see Figure 1).^{6,7} Of course, this currency performance is not uniquely a Canadian story. Another contributing factor has been currency traders' concerns over both the large U.S. current account deficit and the U.S. government's growing tendency to borrow in foreign markets to finance its budget deficit.

A Global Recession and a Credit Crunch

In autumn 2008, the U.S. economy began a slowdown that, by the end of the year, accelerated to a pace unprecedented since the Great Depression of the 1930s; it also encompassed a greater breadth of the economy than most recessions. At its origin was the unexpected and huge losses incurred on U.S. subprime mortgages or asset-backed commercial paper (ABCP) that had sparked a financial crisis in the summer of 2007 and would eventually set in motion a string of failures of several prominent global financial institutions. These most recent high profile corporate collapses then led many observers to suspect the liquidity crisis had grown into a solvency crisis. Declining confidence in financial markets next spilled over into housing markets, consumer products markets and, through trade markets, channelled the recession from the United States to all other major advanced economies of the world, including Canada. The fourth quarter of 2008 marked the beginning of a rather abrupt and deep global recession that is expected to further deteriorate throughout the first three-quarters of 2009, if not the entire year.

-
- 5 The Canadian dollar appreciated 55.4% or 45.6% in terms of the Canadian-dollar effective exchange rate index (CERI) between January 2002 and November 2007 and January 2002 and June 2008, respectively. The CERI is a weighted average of bilateral exchange rates for the Canadian dollar against the currencies of Canada's major trading partners. The six foreign currencies in the CERI are the U.S. dollar, the European Union euro, the Japanese yen, the U.K. pound, the Chinese yuan, and the Mexican peso.
- 6 The comparison is made between the base case (denominator) of 61.79¢ US on January 21, 2002 and its peak of US\$1.1030 on November 7, 2007.
- 7 Upon the writing of this report, the Canadian dollar began its most recent ascent to 89¢ US.

Figure 2



Source: Bank of Canada, *Monetary Policy Report*, October 2008 and April 2009.

Canadian exports of manufactured goods to the United States and elsewhere that had already been weak and declining (due to the rapid appreciation in the value of the Canadian dollar) began to plunge further in response to the global economic downturn. Indeed, in December 2008, Canada recorded its first merchandise trade deficit since March 1976. The contraction in demand did not stop at Canadian borders, however. Reductions in real income related to the sudden decline in commodity prices, the reduction in household net worth, and lost consumer and investor confidence also contributed to a decline in domestic demand. With falling demand for Canadian goods and services came a retrenchment in supply: Canadian GDP declined by a startling 3.4% annual rate in the fourth quarter of 2008 (see Figure 2).

Table 1
Global Economic Growth Projection

Country or Region	Share of Real Global GDP (%)	Projected Growth (per cent)			
		2008	2009	2010	2011
United States	22	1.1	-2.4	1.2	2.9
European Union	20	0.7	-3.6	-0.2	1.8
Japan	7	-0.7	-6.2	1.0	2.5
China and Asian NIEs	14	7.1	3.5	6.0	7.3
Others	37	4.9	1.0	3.0	4.0
World	100	3.2	-0.8	2.2	3.7

Source: Bank of Canada, *Monetary Policy Report*, April 2009.

Many forecasters predict the global recession to persist and even deepen throughout the course of 2009. A global economic recovery is not expected until either the fourth quarter of 2009 or sometime in 2010 — or not until 2011 in the case of the European Union (see Table 1). The decline in economic activity in Canada is also forecast by many to continue throughout 2009, with the Bank of Canada projecting an acceleration in the decline to -7.3% in the first quarter of 2009 and the trough in the economic cycle not to be reached until the third quarter of 2009. Put in annual terms, the Bank of Canada forecasts a decline of 3.0% in economic activity in 2009, followed by growth of 2.5% in 2010.⁸

Of course, not all forecasting outfits share this projection. For example, The Conference Board of Canada forecasts a decline in GDP of about 6.4% in the first quarter of 2009 and the trough to be reached in the following quarter. In annual terms, the Conference Board of Canada forecasts a drop in GDP of 1.7% in 2009, followed by growth of 2.5% in 2010.⁹ TD Economics, on the other hand, forecasts a decline in GDP of 5.8% in the first quarter of 2009 and the trough to be reached in the third quarter of 2009. In annual terms, TD Economics forecasts a drop in GDP of 2.4% in 2009, followed by growth of 1.3% in 2010.¹⁰ In summary, the Bank of Canada holds the view that the recession in Canada will be deep and long, but the recovery will be brisk. TD Economics, on the other hand, believes the recession in Canada will be deep by historical standards (but shallow compared to the Bank of Canada and The Conference Board), followed by a slow and tepid recovery. The Conference Board's forecasts are found in the middle of these two projections.

8 Bank of Canada, *Monetary Policy Report*, April 2009.

9 The Conference Board of Canada, *Canadian Outlook Executive Summary*, Spring 2009.

10 TD Economics, *TD Quarterly Economic Forecast*, March 12, 2009.

Despite these differing views of the near future, all forecasts of economic recovery are predicated on the stabilization of the global financial system, and in the latter lies the greatest source of uncertainty to any economic projection at this time. Moreover, the resolution of this uncertainty and the emergence of an economic recovery in Canada will mostly be found in the actions taken by others — in the fiscal and monetary actions of international and foreign country institutions. The Canadian economy is, therefore, largely hostage to the economic and financial acumen of decision-makers in other countries.

It is important to note that Canada benefits from an exceptionally robust financial sector, the linchpin being its banking industry. Indeed, in October 2008, the World Economic Forum declared that Canada has the soundest financial system in the world. There are a number of reasons for this status and why Canada finds itself in a more favourable financial condition than most other advanced countries. First and foremost, Canadian banks have a history of adopting conservative lending practices compared to other banks, and this conservatism showed up in its relative insignificant involvement in the U.S. subprime market and thus modest exposure to the ABCP market meltdown.¹¹ A second source of mortgage delinquency in the United States appears related to its adjustable rate mortgages, whereby in the early years of the mortgage the interest rates are discounted from market rates and gradually rise above them in later years. It is generally believed that loan delinquencies (and their frequency) will rise with the upward adjustments in the contracted interest rate. Canadian banks never introduced these types of loan products into their domestic mortgage market. Finally, U.S. investment banks were lightly regulated and had low capital ratios that averaged 4% on the eve of the financial crisis, whereas, in the 1980s, Canadian commercial banks acquired most large investment dealers until only the small were left, and they were folded into larger diversified lending institutions that were considerably more regulated and had Tier 1 capital ratios averaging 9.6% in December 2007.¹²

With all recessions, there will be a contraction in both the demand for, and the availability of, credit. Referring to the Bank of Canada's most recent *Business Outlook Survey*, the balance of opinion on credit conditions — that is, the percentage of people who reported a tightening minus the percentage of people who reported an easing of credit conditions — reached a record high in the fourth quarter of 2008 (see Figure 3).

11 TD Economics reports that, in 2006, subprime mortgages accounted for close to 25% of all new mortgages in the United States, while in Canada the ratio was 5%.

12 TD Economics, *Why Canada's Banks Have Fared Better than their International Peers during the Credit Crunch*, February 24, 2009.

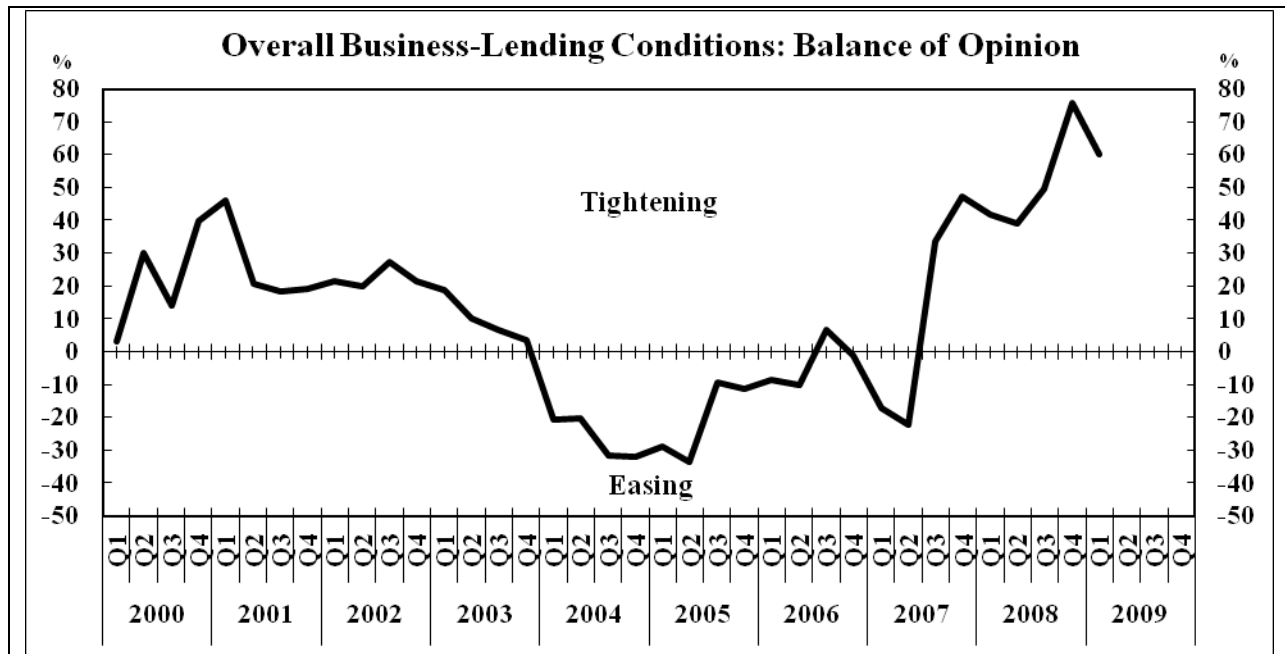
Most firms reported that the tightening came in the form of higher borrowing costs. So it seems that, in Canada as elsewhere, the supply of credit has contracted more than the demand for credit since the third quarter of 2007 and before the beginning of the recession.

However, the first sign of a turnaround in credit conditions appeared in the first quarter of 2009. The overall balance of opinion on lending conditions fell from 76% in the fourth quarter of 2008 to 60% in the first quarter of 2009. The source of this decline was reported to be based on more favourable non-pricing conditions (i.e., not on the interest rate charged). Improvements in the terms of borrowing (most likely with respect to capital availability and collateral requested) suggest that financial institutions — mostly banks — are moderating the demands they place on borrowers.¹³ Although credit conditions remain very tight, perhaps the Bank of Canada's recent decision to hold its target for the overnight rate at 0.25% over the next year and to focus on a combination of quantitative easing and credit easing in the months ahead will further unclog Canada's credit markets.¹⁴

13 Non-price conditions placed on a loan, such as collateral, are designed to mitigate adverse selection problems; that is, these additional conditions place a disproportionate burden on the more risky investment projects or loan opportunities, thereby reducing the probability of their coming to fruition and thus rebalance a lender's portfolio towards less risky loans. A reduction in these non-price conditions suggests that there are increasing signs of improved economic and lending opportunities.

14 At very low overnight lending rates, monetary policy actions regarding interest rate movements become less certain and less effective in terms of the economic stimulus they provide. For one, at very low interest rates, money market funds will face a dilemma in the form of offering very little (or next to zero) return on investment after subtracting management fees. Such a situation may lead some investors to flee these offerings in favour of other types of investments, a situation that could only be mitigated by lowering management fees. Reduced management fees, however, may lead to operating losses and could eventually force some money market funds out of business. On the other hand, "quantitative easing", which would complement the Bank of Canada's recent efforts in "credit easing" through its offering of purchase and resale agreements (PRAs) that do not expand the monetary base, refers to printing money and using this money to purchase financial assets, most notably government bonds but also private sector assets such as asset-backed securities or corporate bonds. The flush of new money within the banking system would then reduce yields on these securities, encourage greater lending to households and businesses, increase the supply of deposits and, in turn, further increase the demand for other financial assets, pushing prices of these assets up and their yields down.

Figure 3



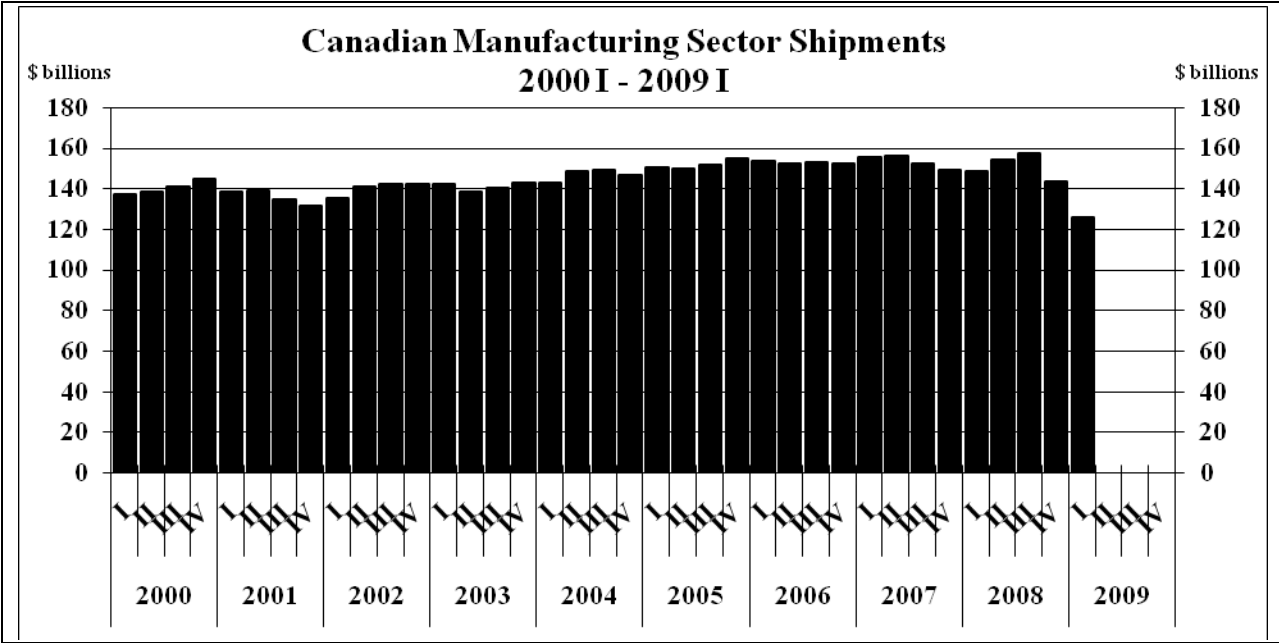
Source: Bank of Canada, *Business Outlook Survey*, Vol. 6.1, April 13, 2009.

CHAPTER 2: THE CANADIAN MANUFACTURING SECTOR

Product Sales and Shipments

Sales of Canadian manufactured goods rose steadily but modestly each year between 2002 and 2007 even while the Canadian dollar rose in value, and only began to fall slightly in 2008 in response to the rising currency (paradoxically at a time when the Canadian dollar was actually retreating). Canadian manufacturers sold \$559.9 billion and \$607.3 billion worth of goods in 2002 and 2007, respectively, representing an increase of only 9.6% in this five-year period. By way of comparison, Canadian manufactured goods sales grew by 29.4% in the five years preceding the rise in the value of the Canadian dollar — a period noted for the Canadian dollar’s decline in value to an all-time low of 61.79¢ US. Canadian manufactured goods sales, however, dipped to \$604.7 billion in 2008, representing a decline of just 0.4% over 2007.

Figure 4



Source: Statistics Canada, *The Daily, Monthly Survey of Manufacturing*, May 15, 2008 and various other issues.

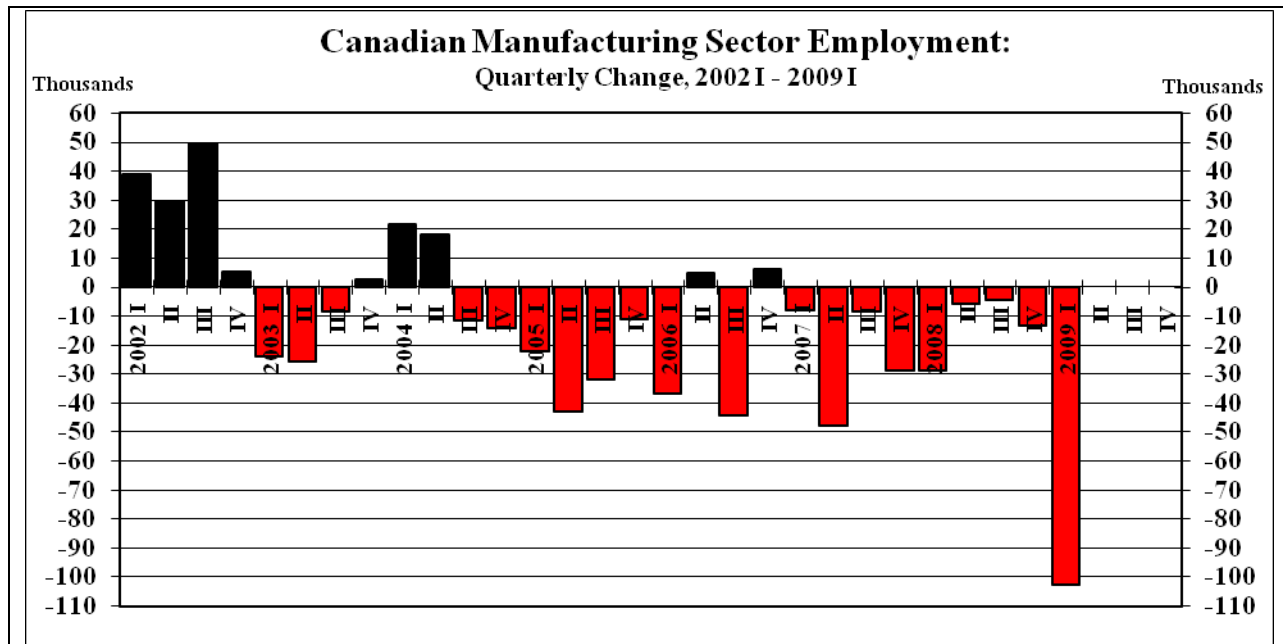
The annual data actually mask a more disturbing trend in the sector's most recent sales performance. In 2008, manufactured goods sales were down only slightly, but changes in the value of the Canadian dollar were not the principal cause. Indeed, the retreat of the Canadian dollar since November 2007 bolstered manufactured goods sales in the second and third quarters of 2008 to a record high. When the data is presented on a quarterly basis, however, it becomes clear that the poor sales performance in 2008 was limited to the fourth quarter of 2008 (see Figure 4), the result of the global recession. Canadian manufactured goods sales were \$143.2 billion in the fourth quarter of 2008, down 9% from \$157.4 billion in the third quarter of 2008. The recession continued to have an adverse effect on manufacturing sales in 2009. Manufacturing sales were \$126 billion in the first quarter of 2009, a drop of 12% over the fourth quarter 2008. These two quarterly declines were the largest declines in sales from one quarter to the next since Statistics Canada began collecting the data in 1992. The next largest quarterly decline in sales was less than half this size, -4.4% from the fourth quarter of 2000 to the first quarter of 2001.

The Canadian manufacturing sector is heavily concentrated in Ontario, followed distantly by Quebec and Alberta. These three provinces accounted for more than 85% of total Canadian manufacturing shipments in 2008. Not surprisingly, Ontario incurred the greatest decline in shipments in both absolute and relative terms of any province between 2002 and 2008. In fact, manufacturer shipments from all provinces but Ontario were higher in 2008 than in 2002. So Ontario, which accounted for 53% of total Canadian shipments in 2002, accounted for only 46% of Canadian shipments in 2008.

Employment

Depressed foreign demand and poor financial results — the consequence of the large appreciation in the value of the Canadian dollar — have brought about numerous plant closures and shutdowns and many rounds of employee layoffs in the manufacturing sector. Since its peak of 2.3 million in November 2002, employment in the manufacturing sector has been in decline. By July 2008, manufacturing employment was just shy of 2 million. The total number of employees laid off by the manufacturing sector in this period was 375,100 or 16.1% of its employed labour force in November 2002 (see Figure 5).

Figure 5



Source: Statistics Canada, *Labour Force Survey*, various dates.

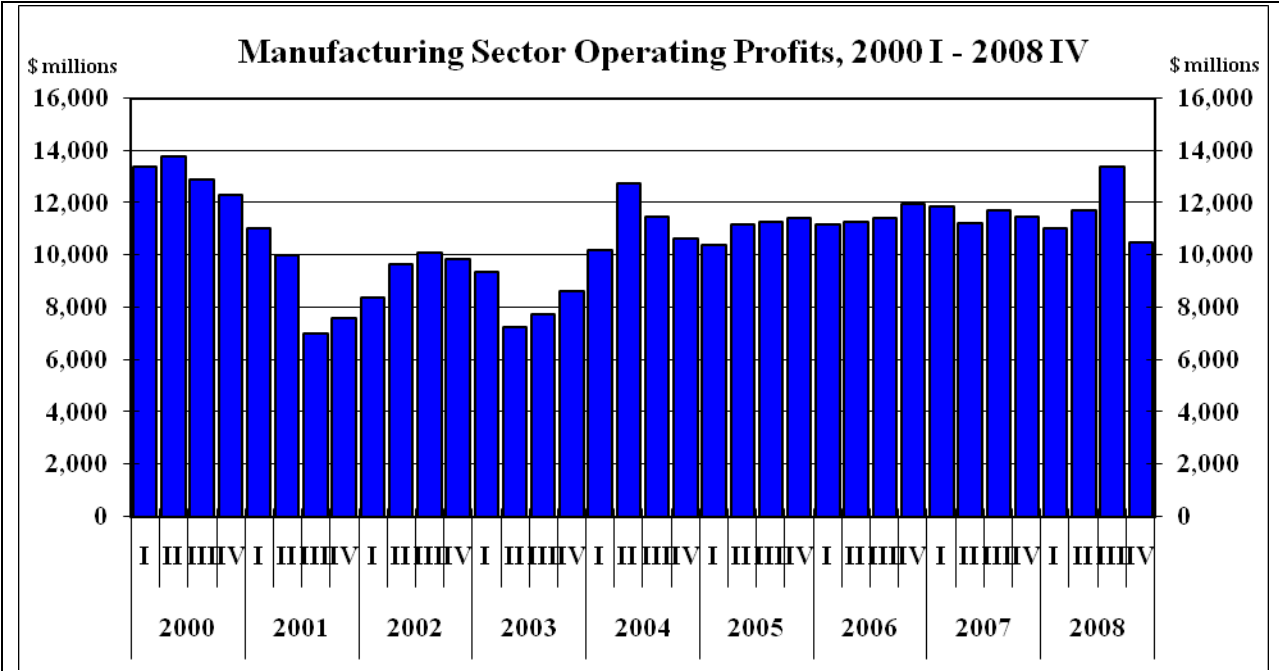
Employment within the sector recovered for three months following July 2008 — when the Canadian dollar retreated and manufacturing sales recovered — but as the recession took hold in the United States in the second half of the year, employment turned downward once again. By March 2009, manufacturing employment in Canada stood at 1.8 million, down a further 136,900 in just eight months since July 2008. Furthermore, job losses in the first quarter of 2009 were 102,400, a loss that is twice as large as any quarterly loss incurred during the “commodities boom”. Clearly, the global recession has been far more devastating to employment in Canada’s manufacturing sector than was the global “commodities boom”.

Profitability

With the retrenchment of shipments beginning in 2001, falling prices in “real” or purchasing power terms (i.e., rising less than the rate of general inflation) as of 2001, and soaring energy costs since 1998, operating profits in the manufacturing sector declined from \$54.7 billion in 2000 to \$33.5 billion in 2003, representing a decrease of 39% in just three years. Management responded to the more competitive environment by laying off a substantial number of employees and shutting down numerous plants beginning in 2003, with the result that operating profits rebounded to \$45.2 billion in 2004 and hovered about

that level ever since. On a quarterly basis, operating profits within the sector hovered in the \$11 to \$12 billion range until the recession hit in the fourth quarter of 2008 when they declined to \$10.5 billion (see Figure 6).

Figure 6



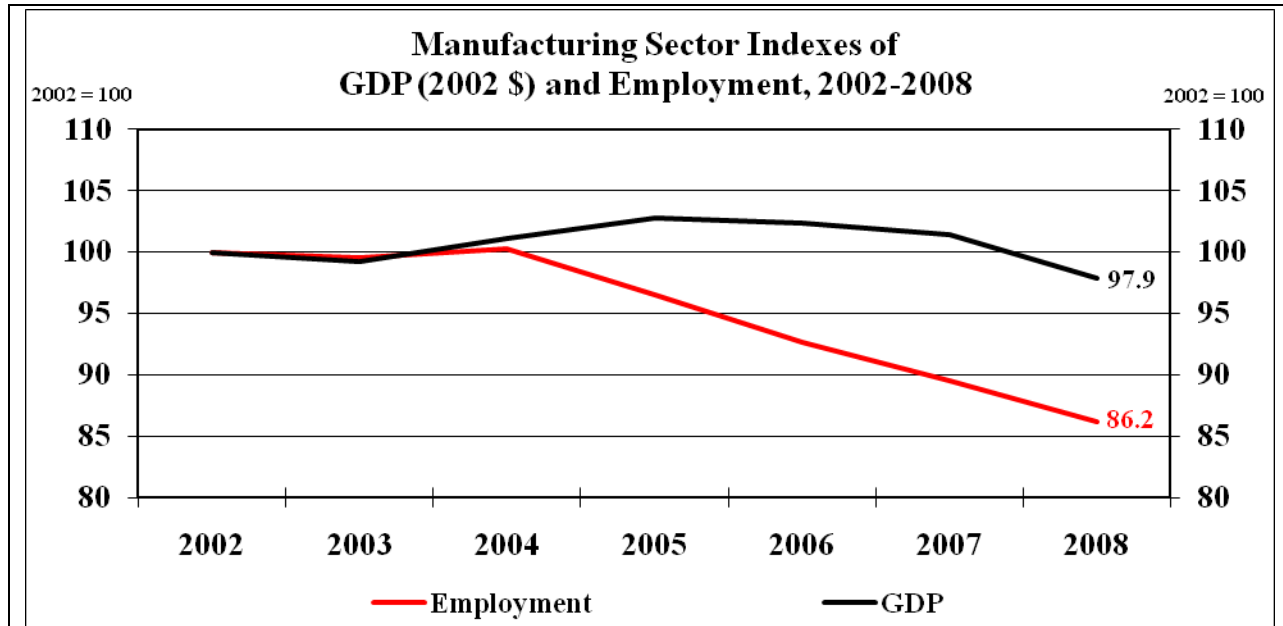
Source: Statistics Canada, *Canadian Economic Observer*, various dates.

The manufacturing sector’s net profit or earnings performed similarly to operating profits, declining from \$35.6 billion in 2000 to \$19.5 billion in 2001, representing a decrease of 45% in just one year, before recovering to \$30.4 billion in 2007. Net profits in 2007 and 2008 were about 15% below that recorded in 2000. Finally, the manufacturing sector’s profit margin and return on capital employed that were in the vicinity of 8% and 9% in 2000, respectively, have both declined and hovered about 7% in this period.

Competitiveness Factors: M&E Investment and Labour Productivity

The Canadian manufacturing sector’s austere employment performance between 2002 and 2008 stands in stark contrast to its sales performance and contribution to GDP. The sector’s employment in 2008 declined 13.8% from its 2002 level, whereas the sector’s contribution to GDP declined by only 2.1% in the same period (see Figure 7). The difference between these two economic indicators of the sector suggests that the loss in competitiveness of the Canadian manufacturing sector as a result of the rather large appreciation of the Canadian dollar forced manufacturers to raise their labour productivity levels by focusing on labour shedding rather than on investing more on productivity-enhancing M&E.

Figure 7

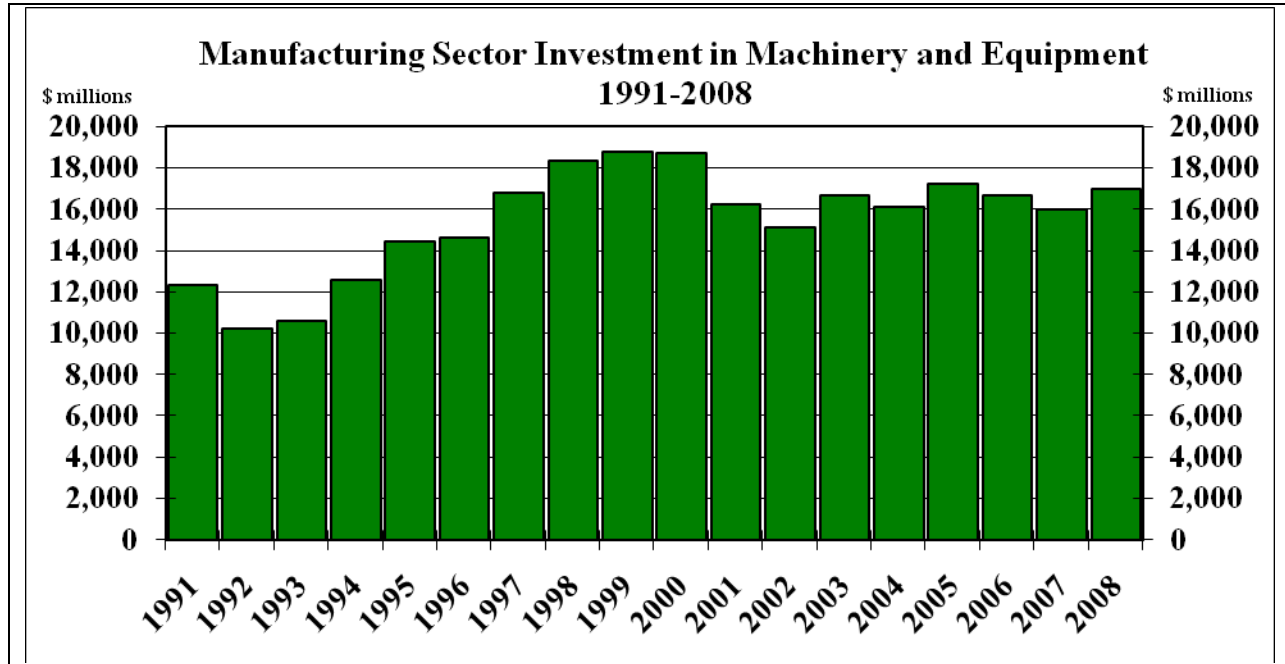


Source: Statistics Canada, Gross Domestic Product by Industry and Labour Force Survey, various dates.

The manufacturing sector's record of investment in M&E parallels its operating profits record, though the turning points of the former precede those of the latter by about one year. Manufacturing sector M&E investment peaked at \$18.8 billion in 1999, retreated to \$15.1 billion in 2002, and then marched upward to \$17.0 billion in 2008 (see Figure 8). Throughout this period, M&E investment averaged approximately 40% of operating profits.¹⁵

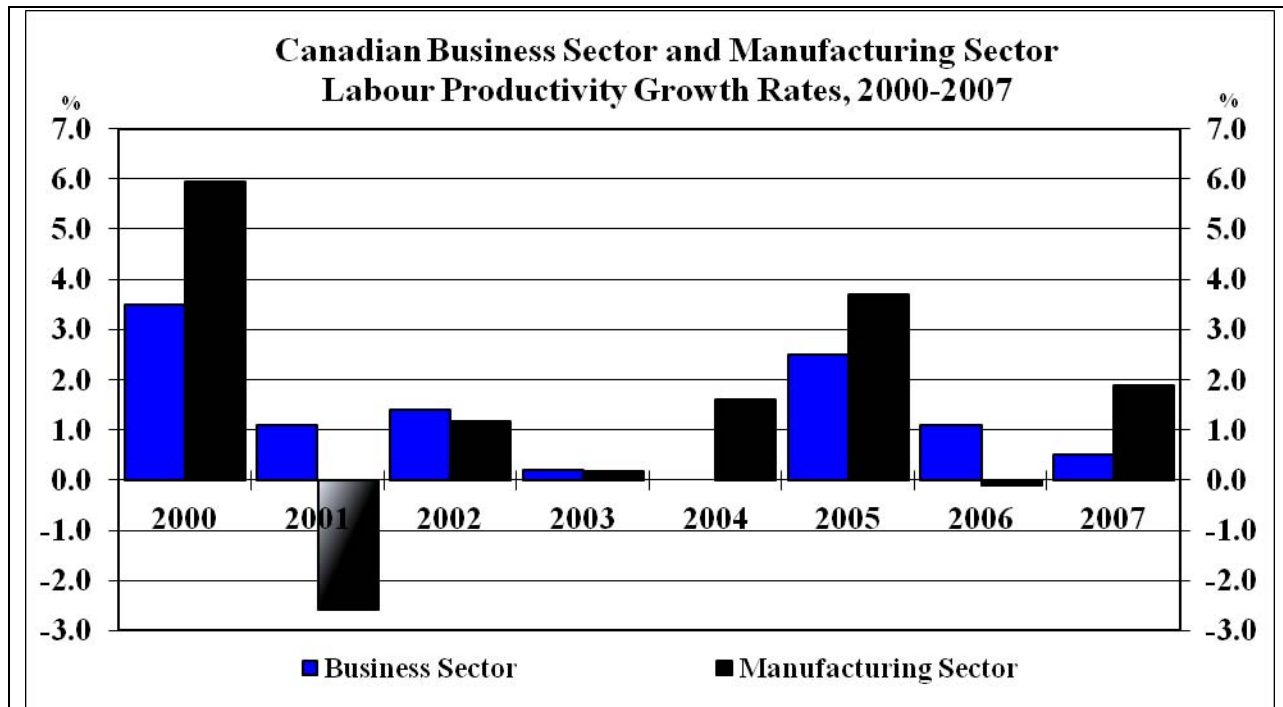
15 Statistics Canada, CANSIM Table 281-0009.

Figure 8



Source: Statistics Canada, CANSIM Table 281-0009.

Figure 9



Source: Russell Kowaluk and Will Gibbons, *Manufacturing: The Year 2007 in Review*, Statistics Canada, Catalogue No. 11-261-M, April 2008.

Despite the respectable record of the manufacturing sector in managing the business conditions under its direct control (i.e., reallocating production, shedding labour, reducing product lines, outsourcing non-core inputs) between 2002 and 2007, lost economies of scale due to declining demand and stagnant investment in M&E because of relatively low profitability have conspired to produce a chequered labour productivity growth record. Labour productivity in the manufacturing sector had grown, on average, by 1.7% per annum between 2002 and 2007, which is considerably below its 1998-2000 performance of more than 4% per annum (see Figure 9). On a more positive note, the manufacturing sector outperformed its much larger business sector counterpart, whose labour productivity averaged only 1.1% growth in the 2002-2007 period.

Looking Ahead: New Orders, Business Opportunities and Financing

The preceding analysis covers the past and takes us to the present. The Committee now looks to the manufacturing sector's immediate future. For such a perspective, the Committee relies heavily on witness testimony and the economic indicators that they provided to the Committee. Particularly informative was the Canadian Manufacturers & Exporters' (CME) business conditions survey of March 2009. This survey included responses by 717 companies with operations across Canada and varying in size from those that employ as few as one person to those employing more than 500 persons.

About one half of all manufacturers who responded to the survey expect the value of their new orders to fall from current levels over the next three months; one-third of these manufacturers believe new orders will remain about the same as in the first quarter of 2009; and the remaining 18% of manufacturers believe that their new orders will increase in the second quarter of 2009 (see Table 2). Although these responses are not, in the main, positive, they are more positive than the February responses to the same set of questions.

Table 2

Canadian Manufacturers & Exporters *Business Conditions Survey*, March 2009

New Orders		Inventories	
Over the next three months, orders are likely to be:	Percentage of Respondents	Materials Inventories:	Percentage of Respondents
Higher in Value	18%	Too High	43%
About the Same	33%	Just About Right	53%
Lower by up to 5%	11%	Too Low	5%
Lower by 5% to 10%	13%	Finished Goods Inventories:	
Lower by 10% to 20%	11%	Too High	32%
Lower by 20% to 30%	8%	Just About Right	63%
Lower by more than 30%	6%	Too Low	5%

Source: Canadian Manufacturers & Exporters.

In the aggregate, manufacturer inventory levels, whether of materials or finished goods, are believed to be too high (see Table 2). This suggests that the lower levels of new orders that manufacturers expect to receive over the next three months will more often be drawn from their finished goods inventories rather than leading to new production (and, hence, new employment opportunities). Materials inventories are also likely to be drawn down in the next three months, so their demand for materials is likely to be lower as well (therefore, the indirect employment effects of the new orders received will also likely be suppressed).

Table 3

Canadian Manufacturers & Exporters *Business Conditions Survey*, March 2009

Requested Increase in Line of Credit in Last three Months:	Percentage of Respondents	Has your Financial Institution Agreed to Increase your Operating Line of Credit:	Percentage of Respondents
Yes	22%	Yes	49%
No	78%	No	33%
		I Don't Know Yet	18%
Reasons to Increase Line of Credit:	Percentage of Respondents	Reasons Why Operating Line of Credit Cannot Be Increased:	Percentage of Respondents
To Cover Current Expenses to Grow Business	22%	Company's Overall Debt Too High	12%
To Cover R&D and Other Expenses to Support Growth	15%	Assets Given as Security Do Not Meet Bank's Requirements	27%
To Cover Current Expenses During the Present Slowdown	52%	Bank Thinks the Industry my Company Is In Is Too Risky	31%
Other	11%	Withdrew Application, Bank Fees Were Too High	4%
		Other	27%

Source: Canadian Manufacturers & Exporters.

In the initial stages of an economic downturn, companies tend to hang onto their employees — they do not want to lose them and their acquired and specialized skills — and do not resort to laying them off until it becomes clear that a recovery is not firmly in sight and it is more important to preserve their “bottom line”. In this stage, companies often choose to either internally finance or seek increases in their operating line of credit to compensate for their depressed operational cash flow. According to the CME survey, only 22% of manufacturers sought to increase their line of credit; 78% did not require such a financial measure (see Table 3). More than half of those companies who sought to increase their line of credit did so to cover current expenses (52%); while 37% of them did so to expand their businesses (either to cover current expenses or research and development (R&D) expenses). About half of those companies who sought an increase in their line of credit received it (49%), one-third was refused, and the remaining 18% have not yet received a reply. Of those refused, the financial institution thought that, in 31% of the cases, the industry that the loan applicant was engaged in was too risky; in 27% of these cases, the company did not have the required collateral; in 12% of these cases, the company had too high of a debt load; and, in 4% of these cases, the company withdrew its application because of high bank fees.

Many Canadian companies realize that they must get ready to take advantage of the new opportunities that the forthcoming economy recovery will present. Such a belief is best captured in the testimony of one of the Committee's witnesses:

We should not lose sight of the fact that in this very challenging economic time there are also opportunities that the many companies have. As we emerge from this recession knowing that customers will be wanting different things, and things delivered differently, the nature of manufacturing itself is going to change. We have to spend some time not only looking at the current condition of the sector but also at what the nature of Canadian manufacturing is going to be over the next decade or so as we emerge from the recession.

Jayson Myers, Canadian Manufacturers & Exporters, 6: 9:15

Ongoing structural changes in manufacturing were singled out by the witnesses. Most notably, the appearance of China and other "emerging economies" on the international trade scene were proving to be stiff competition in the production of both intermediary goods and consumer products, particularly those products that tend to use low levels of labour skill and technologies. One witness was quick to remark on both the appearance of China on the international scene and on the increased skill requirements demanded by Canadian manufacturers:

We're also seeing increasing competition from emerging markets. Perhaps most telling has been the emergence of China on the world's stage, as a result of their entering into the WTO in 2001. ... Another big change is that the skill requirements for our manufacturing workforce are increasing. We're becoming more skill intensive, and this means manufacturers are increasingly competing with other segments of the economy for workers. Finally, we're seeing the disappearance of low-value-added, labour-intensive industries here in Canada.

Michael Burt, The Conference Board of Canada, 6: 9:10

The Committee believes that these two developments are somewhat related: the emergence of China on the international scene with its array of manufactured products that are intensive in low-skilled labour has forced an industrial restructuring within Canadian industry towards manufactured products intensive in highly skilled labour and the newest technologies.

This structural adjustment means that Canadian manufacturers must continue to change, must adapt and must reorient their activities accordingly:

The money today is not made in production. The money is made in the services, the design, the engineering, the research, the innovation, the logistics, the delivery, and the customer service that goes around the product. Nevertheless, the product is an important anchor.

Jayson Myers, Canadian Manufacturers & Exporters, 6: 9:15

The Committee believes that, in general, Canadian manufacturers understand these developments and the challenges they impose. At the same time, many of them realize the opportunities that change often brings. For a number of these manufacturers, the realization of the business opportunities that present themselves or are sought out will require external financing. Unfortunately, 59% of manufacturers report that they are experiencing some difficulties in obtaining adequate levels of financing. The greatest difficulties are experienced in accessing financing for operating lines of credit, working capital purposes, capital investment, and investments in new technology (see Table 4).

Table 4
Canadian Manufacturers & Exporters *Business Conditions Survey*, March 2009

Experiencing Difficulties in Access to:	Unable to Obtain	Experiencing Significant Difficulties	Experiencing Difficulties Including Higher Costs	No Difficulties
	(Percentage of Respondents)			
Financing for Working Capital Purposes	6%	12%	13%	41%
Operating Line of Credit	3%	13%	17%	50%
Equity Financing	2%	7%	6%	22%
Financing for Capital Investment	5%	11%	13%	30%
Financing New Technologies	4%	12%	10%	27%
Equipment Leasing	2%	6%	10%	34%
Financing through Bonds/Commercial Paper	2%	3%	3%	8%
Venture Capital	4%	4%	2%	9%
Financing New Product Development	4%	9%	8%	24%
Export Financing	3%	8%	8%	25%
Export Credit Insurance	2%	7%	9%	24%
Financing for Business Acquisitions	4%	5%	5%	16%
Other Types of Business Financing	2%	5%	2%	18%

Source: Canadian Manufacturers & Exporters.

In conclusion, the Committee understands that in an economic recession credit conditions become tight, which may impair companies with good investment projects in obtaining debt financing. In time, credit conditions will ease and allow manufacturers (in general) to invest in M&E to raise their productivity levels to compete more effectively on world markets with foreign firms. The Committee also recognizes that there is a good chance that, in the wake of a global economic recovery, we may see a return to the worldwide “commodities boom”, led once again by countries such as China, India and

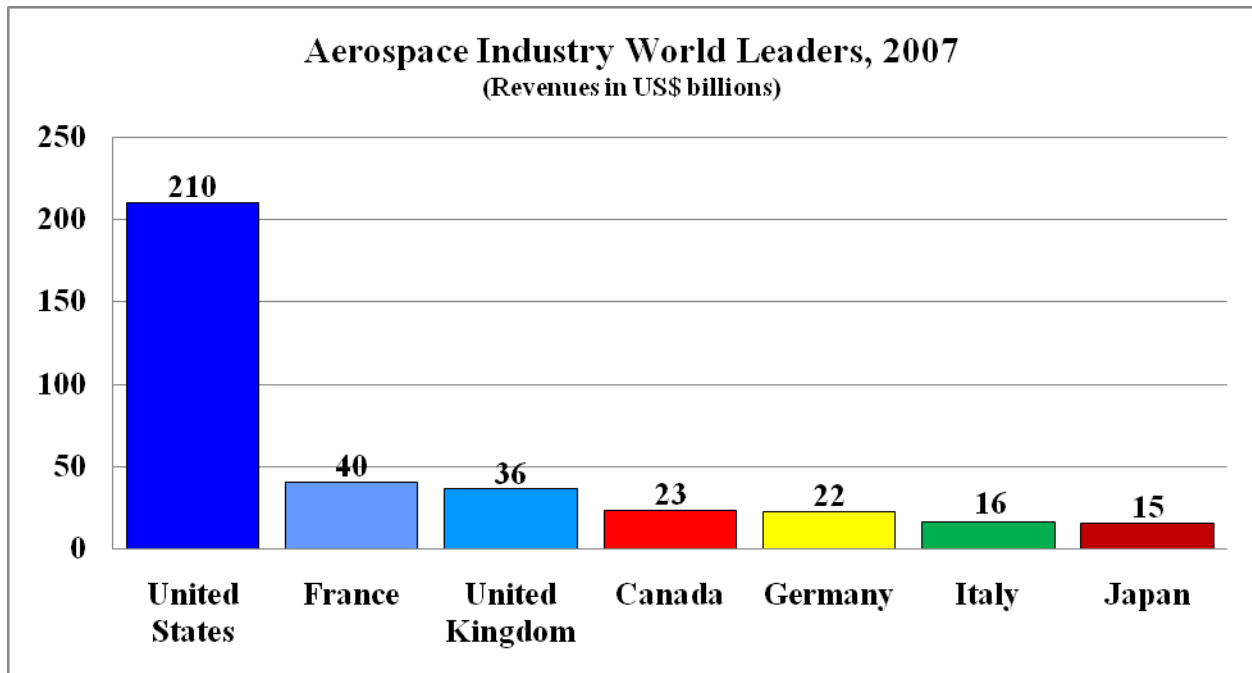
those of Southeast Asia, and a rise in the Canadian dollar in the vicinity of parity with the U.S. dollar. In this scenario, Canada's manufacturing sector will continue to be challenged to raise its labour productivity levels by investing in new M&E rather than continuing on its current path of directly reducing employment. Public policies must reflect this new fundamental reality.

CHAPTER 3: CHALLENGES FACING SELECTED INDUSTRIES

Aerospace

The Canadian aerospace industry includes more than 400 companies with annual revenues of \$22.7 billion in 2007, placing Canada in fourth position behind aerospace industries in the United States, United Kingdom and France, and narrowly ahead of those in Germany, Italy and Japan (see Figure 10). From its most recent trough of \$21.3 billion in 2003, the Aerospace Industries Association of Canada estimates that revenues will total \$23.6 billion in 2008. The industry has, therefore, grown despite the rapid and steep rise in the value of the Canadian dollar between 2003 and 2007 and the global economic recession that ensued. Indeed, the industry's average annual rate of growth in revenues of 2.1% in this period — slightly above the annual rate of price inflation — suggests that the industry held its own compared to other manufacturing industries throughout the “commodities boom” period.

Figure 10



Source: Aerospace Industries Association of Canada, Submission to the Subcommittee on Canadian Industrial Sectors, April 28, 2009.

The Canadian aerospace industry is extraordinarily dependent on foreign buyers of its products. Exports amounted to \$18.6 billion in 2007 or 82% of industry revenues. The United States is Canada's largest market, accounting for \$12.6 billion, followed by the Canadian market itself, which was valued at \$4.1 billion, and Europe also with sales of \$4.1 billion in 2007. Aerospace sales for civil purposes of \$17.7 billion (or 78%) dominate sales with military applications of \$5 billion (or 22%).

The industry employs 82,000 Canadians, including 12,000 scientists and engineers and 20,000 technicians and technologists, paying an average annual salary of approximately \$60,000. Industry employment is greatest in Quebec, followed by Ontario, British Columbia, Alberta, Manitoba and Atlantic Canada.

A better understanding of this industry and its economic circumstance can be gained when the industry is viewed in terms of its major market segments: (1) aircraft, aircraft parts and components; (2) engines and engine parts; (3) avionics and electro systems; (4) simulation and training; and (5) space. Canada is very competitive and a major player in each of these market segments. In fact, Canadian firms are global market leaders in regional aircraft, business jets, commercial helicopters, small gas turbine engines, landing gear, flight simulation, and space applications. For example, Bombardier, with a 47% share of the regional aircraft market, is the third largest aircraft company, after Boeing and Airbus. Bell Helicopter Textron Canada Limited is the world's leading producer of rotary wing aircraft. Pratt & Whitney Canada, with a 34% share of the small gas turbine engine market, is a world leading supplier of turbine-powered aviation engines, engine systems and components for business and regional aircraft, and helicopters. CAE Inc., with a 70% share of the visual simulation equipment market, is the world's leading producer of flight simulators and visual training devices.¹⁶ Finally, Canada's space industry, working in partnership with the Canadian Space Agency, is a world leader in space robotics and automation (i.e., the Canadarm). Canada is also a world leader in satellite systems (i.e., RADARSAT-1 and RADARSAT-2) that collect, record, store and process satellite-based land information.

Canada's aerospace industry clearly punches above its weight on the world stage. Witnesses provided a few interesting observations on how Canada, a relatively small country, achieved such an elevated status in the world:

[W]hen we consider that those countries that rank ahead of us are the benefactors of a massive military presence when compared to Canada's defence expenditures, the success of our company and our sector is all the more remarkable.

Richard Bertrand, Pratt & Whitney Canada, 8: 9:30

16 The source of these data is Industry Canada, "Pursuing Excellence — Canada's Aerospace Sector," September 2008.

Why is CAE a global leader? Part of our success is due to our employees as they continually strive to push the innovation envelope further ... Our success is also the result of supportive government policy that spans back decades. This support has been and must continue to be stable, predictable, and comprehensive. Government support is fundamental to maintain a vibrant and globally competitive aerospace sector.

Nathalie Bourque, CAE Inc., 8: 9:25

You've described ... winning conditions, and those are important to the success of an industry. ... I would add ... that we also have a very strong civil service within Industry Canada, with whom we work constantly. This is a very big plus also for the industry: to have people who understand the needs and who work very hard at responding to these needs.

Claude Lajeunesse, Aerospace Industries Association of Canada, 8: 10:25

At first blush, not many “captains of industry” would boast that their company’s success and competitive advantage is due, in part, to government. However, it must be recognized that the global aerospace industry does not operate in a *laissez-faire* marketplace. Government intervention in the sector is pervasive within the aerospace and defence industry. Governments around the world use various policy instruments to support aerospace industries operating within their jurisdictions, including funding defence programs and purchases, financing research and development infrastructure, and providing loan guarantees and bank financing for aircraft development and production. In Canada, major federal programs and initiatives used by the aerospace industry include: (1) Strategic Aerospace and Defence Initiative (SADI); (2) Scientific Research and Experimental Development (SR&ED) Tax Incentive Program; (3) Defence Industry Research Program; and (4) the National Research Council’s Institute for Aerospace Research, Aerospace Manufacturing Technology Centre and Industrial Research Assistance Program (IRAP).

Industry officials also saluted the efforts of the government in concluding free trade agreements and in its recent decision to negotiate a free trade agreement with the European Union. They stated that such an agreement would make a big difference to all segments of the aerospace industry, if for no other reason than it will help to provide labour mobility, which is one important aspect of their global industry. They also stated that the government should resist protectionism, under whatever guise, and that the role of Canada’s diplomatic missions abroad in terms of promoting the image of Canadian industry was extremely important.

The recession has provided challenges to Canada’s aerospace industry in a number of ways, most notably forcing them to cut employment levels and manage costs more thoroughly. In some ways, the global recession has hit the Canadian aerospace industry hard as its customers are predominantly foreigners — commercial airline companies and aircraft leasing companies — that have had to endure the full force of the financial crisis and global recession.

[L]ike every business today, it is precarious because every business is subject to the vagaries of the international economic climate. ... The critical component of the challenge we face ... is not our lack of liquidity ... but that of our customers. We can only be as successful as our customers are and our customers face tremendous challenges — airlines as well as leasing companies and individual corporations. Their problem is related to the capital, the cash crunch that is affecting all businesses around the world, the shortage of liquidity in the capital markets.

George Haynal, Bombardier Inc., 8: 9:45

Beyond the immediate business cycle, the future of the aerospace industry looks promising. The Aerospace Industries Association of Canada foresees 24,000 new aircraft sales worldwide between 2009 and 2027. This market segment is expected to exceed \$3 trillion.

Because the industry's cyclical challenges are mostly foreign in source, the industry focused its request for government assistance on dealing with its structural challenges. Witnesses from the industry asked for five policy improvements of the federal government:

- 1) SR&ED tax credits be made fully refundable;
- 2) SADI be reinforced and strengthened to support the full spectrum of the industry;
- 3) Federal government procurement policies and practices, including Industrial and Regional Benefits (IRBs) and In-Service Support (ISS), be reformed;
- 4) A long-term space plan be developed; and
- 5) The International Traffic in Arms Regulations (ITAR) be addressed to reduce their trade-impeding effects.

Chemicals

The Canadian chemicals industry, with shipments estimated at \$50.6 billion in 2008, is the fourth largest manufacturing subsector in the country. There are approximately 3,000 firms engaged in chemicals production across the country and they employed 78,340 people in 2008 (see Table 5). The industry is also the third largest exporter of manufactured products in the country, with exports valued at \$31.3 billion in 2008, 76% of which was destined to the United States. With the global chemicals industry producing an

estimated \$3 trillion worth of product,¹⁷ Canadian chemicals production represents 1.5% of total world production. Given this relatively small presence within the industry, Canada has traditionally been a net importer country of about \$10 billion worth of chemicals and chemical products on an annual basis.

Table 5
The Chemicals Industry in Canada: Principal Statistics, 2000-2008

Year	Establishments	Shipments (\$ billions)	Employment	Imports (\$ billions)	Exports (\$ billions)
2000	2,061	37.16	83,252	29.17	18.61
2001	2,067	38.41	87,861	31.08	19.84
2002	2,145	40.52	88,129	32.93	20.21
2003	2,122	42.69	87,166	33.28	20.40
2004	3,315	47.16	84,091	35.57	24.29
2005	3,049	48.64	81,882	37.39	26.86
2006	2,955	49.89	79,990	39.11	28.93
2007	2,945	48.63	78,709	40.15	32.33
2008	2,945	50.62	78,340	41.45	31.39

Source: Statistics Canada, <http://www.ic.gc.ca/eic/site/chemicals-chimiques.nsf/eng/bt01203.html>.

Canada is home to nine of the 10 largest chemicals producers in the world, including BASF, Dow Chemical, DuPont, ExxonMobil, Hexion, Ineos, Lanxess, Sabic and Shell Chemicals. Canada also boasts five large home-grown companies such as Agrium Inc., ERCO Worldwide, Methanex Corporation, Nova Chemicals Corp. and Raymond Industries Inc. Canada's chemicals industry is heavily concentrated in Ontario (with 42% of the country's 3,000 firms), Quebec, (26%), and Alberta (11%). Each region has its own distinct strengths and competitive advantages, but the country's four largest clusters (i.e., Sarnia, Toronto, Montreal and Edmonton) dominate domestic production.

The chemicals industry essentially converts raw materials such as oil, natural gas, electricity and minerals into value-added manufactured products, adding anywhere between five and 20 times the value of these inputs. Chemicals are basic building blocks of many manufactured goods as they are found in more than 30,000 different products.¹⁸ An industry representative described the activities of the chemicals industry in the following way:

17 Canadian Chemical Producers' Association, "The Competitiveness of Canada's Business and Policy Environment for Chemical Producers," 2008-2009.

18 The Chemical Industry, http://chemicalengineering.dal.ca/Files/2_-_The_Chemical_Industry.ppt

We transform oil, gas, salt, and electricity into chemical products. Those products are then used by a wide variety of other industries, which can include pharmaceuticals, aerospace, auto, plastics, lubricants, and petroleum refining. ... In doing that, we add five to twenty times the value to those base resources through this conversion process, thus directly creating wealth for the economy as well as the other sectors we depend on for the supply of those resources.

Richard Paton, Canadian Chemical Producers' Association, 7: 9:05

Canada's petrochemical industry is founded on a secure supply of feedstock and a feedstock price advantage. Industry representatives maintain that the industry's continued livelihood and contribution to the Canadian economy are predicated on preserving and improving these advantages, advantages that are necessary for overcoming transportation, climate and other disadvantages associated with production locations that are often far from their final markets.

The industry's focus on its feedstock is not so surprising once one recognizes that the basic raw materials of chemical products account for about 86% of total manufacturing costs, followed very distantly by energy costs (7%) and labour costs (7%).¹⁹ Forthcoming competition with low-cost Middle East petrochemical suppliers only reinforces this focus:

[T]he Middle East is now becoming a huge player because feedstock — as you know, it's oil or natural gas — is a huge proportion of the cost of our products, and their feedstock costs are 20% or 30% of ours. They need to diversify their economies, so the Middle East is now building huge manufacturing facilities for chemicals.

Richard Paton, Canadian Chemical Producers' Association, 7: 9:35

Industry representatives also indicated that transportation is an important component of the selling price for many chemical products, sometimes exceeding 10% of the selling price.²⁰ The industry, particularly companies with plants situated in Western Canada, requires competitive freight rates and services to assist them in competing in both domestic and export markets, something that they claim they are not receiving at the present moment. According to an industry representative:

19 Industry Canada, <http://www.ic.gc.ca/cis-sic/cis-sic.nsf/IDE/cis325cste.html>.

20 Canadian Chemical Producers' Association, Business and Economic Issues, <http://www.ccpa.ca/files/Library/Reports/KeystoneDocs/Toronto.pdf>.

There is rail service review that needs to be done. Rail is critical to our industry. We think there is a need for better competition in rail and better service.

Richard Paton, Canadian Chemical Producers' Association, 7: 10:00

Electricity is an important input cost to the many of the industry's products, varying from 1% to 5% of the total production cost for petrochemical producers to 40% to 70% of total production costs for some inorganic and compressed gas producers.²¹ The industry claims that Ontario's electricity rates for major industrial users are among the highest in Canada. For these reasons, the cost, availability and reliability of electricity remain concerns for competitiveness and plant safety, particularly in Ontario.

The chemicals industry has experienced considerable cost pressures from high raw material and energy prices since 2000, and from the relatively high value of the Canadian dollar since 2003. Chemical producers are also concerned about the impact on their operations of environmental regulations. They identified layers of duplicative and sometimes conflicting federal-provincial environmental regulations as a concern. As a consequence of these cost pressures and the relatively high value of the Canadian dollar, the industry has had to contract:

In the chemical sector, we have lost about twelve plants in the past five years, including two major plants in Montreal and several plants in Ontario.

Richard Paton, Canadian Chemical Producers' Association, 7: 9:05

Industry officials were uneasy about the current economic recession and the decline in the industry's production since the first quarter of 2009, but saw the current economic crisis as reason to focus policy matters on positioning the industry for future growth. The industry was clear about what it expects of governments:

Industries like ours do not favour subsidies, handouts, or even special treatment, but we expect governments to do their part by creating the policy environment required for manufacturers to compete globally and by avoiding the introduction of measures that undermine or reduce competitiveness. We need policies that encourage investment in manufacturing and upgrading resources that stimulate progress toward sustainability objectives, which we believe is integral to that.

Richard Paton, Canadian Chemical Producers' Association, 7: 9:15

More specifically, the witness from the industry asked for three policy improvements of the federal government:

21 ibid.

- 1) Reform energy and environmental policies to eliminate duplicative and sometimes conflicting regulations;
- 2) Review the *Canada Transportation Act* with the aim of removing barriers to competition in the Canadian rail industry; and
- 3) Make SR&ED tax credits more accessible, along the options introduced in *Manufacturing: Moving Forward—Rising to the Challenge* (2007).²²

Energy

Canada is the world's third largest producer of natural gas and ninth largest producer of crude oil. The industry puts a strong focus on exploration and development since only half of the country's resource base has been exploited. Most of Canada's oil and natural gas production is concentrated in the Western Canadian Sedimentary Basin, which has a mature onshore industry. Offshore petroleum activity is mainly in the Atlantic region, where approximately 18% of the country's remaining petroleum resources are located. In 2008, Canada produced 429,000 cubic metres per day (m³/d) and exported 285,000 m³/d of crude oil. Natural gas production and exports were 458 and 282 million m³/d, respectively, with the vast majority of exports destined for the United States.²³

Canada's oil sector has gone through some consolidation in recent years. Imperial Oil, majority owned by ExxonMobil, is the largest integrated oil and gas operator in the country. EnCana, formed from the merger of the Alberta Energy Company and

22 The House of Commons Standing Committee on Industry, Science and Technology made the following recommendation:

That the Government of Canada improve the SR&ED Tax Incentive Program to make it more accessible and relevant to Canadian businesses. The government should consider making the following changes:

1. Make the investment tax credits refundable;
2. Exclude investment tax credits from the calculation of the tax base;
3. Provide an allowance for international collaborative research and development; and
4. Expand the investment tax credits to cover the costs of patenting, prototyping, product testing, and other pre-commercialization activities.

Finance Canada estimated that, excluding the proposal to extend the tax credit to cover these other activities, the fiscal cost of implementing the above SR&ED measures would vary from \$8.2 billion to \$16.2 billion over five years.

23 Canadian Energy Overview 2008, May 2009. National Energy Board [online]: <http://www.neb.gc.ca/clf-nsi/nrgynfmtn/nrgyrprt/nrgyvrvw/cndnrgyvrvw2008/cndnrgyvrvw2008-eng.html#s5>.

PanCanadian Energy, is the largest independent upstream oil and gas operator in Canada. Other sizeable oil producers include Talisman Energy, Suncor, EOG Resources, Husky Energy, and Apache Canada.²⁴

In addition, there are about 400 small and medium-sized independent oil and gas exploration and production companies, including suppliers of products and services. A typical junior oil and gas company in Canada has fewer than a dozen employees, specializing in geo-science, engineering and finance. Most junior companies concentrate their activities on conventional oil and gas exploration and development in western Canada. However, there is a growing move towards unconventional resources such as oil sands and shale gas. The junior sector is 70% weighted towards natural gas production and it contributes about 25% of the dollars spent on Canada's exploration, development, drilling and production. It also carries out approximately 60% of higher-risk exploration drilling in Canada.²⁵

The current economic slowdown has created financial instability in the market and reduced the global demand for oil and natural gas. In the words of one industry representative:

The recession has hit the Canadian oil and gas industry where we do business. We provide the energy to fuel factories, heat homes, and let people drive their cars. The slowdown in economic activity means our customer, the world, is cutting back and using less of what we produce. When the world buys less, the price goes down. We all know how the price has dropped ... from a record high of \$147 a barrel last summer to lows in the \$35 a barrel range a few weeks ago.

Don Daly, Canadian Association of Petroleum Producers, 9: 9:20

Natural gas producers have been more adversely affected than crude oil producers by the economic recession:

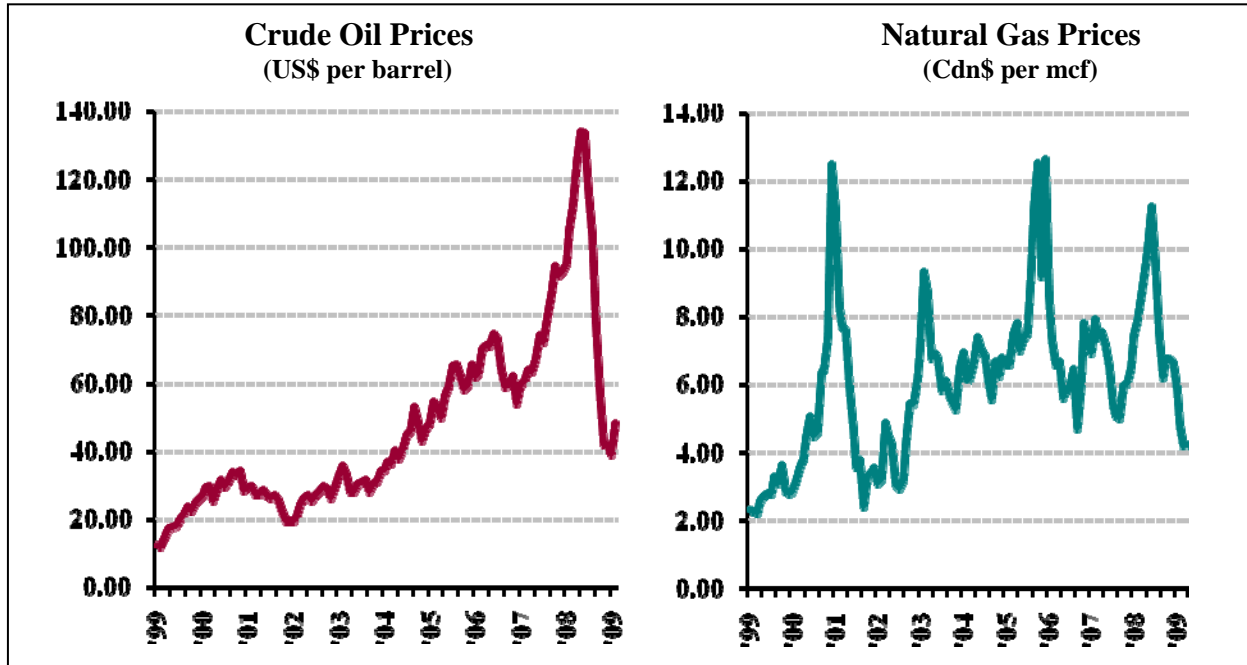
24 Canadian Technology in the Oil and Gas Industry, Industry Canada [online]: <http://www.ic.gc.ca/eic/site/ogt-ipq.nsf/eng/dk00057.html>.

25 Gary Leach, Small Explorers and Producers Association of Canada, *Committee Evidence* [9: 9:30], May 5, 2009.

Gas was at more than \$11 per thousand cubic feet last June; today it trades at a little more than \$3. With this unprecedented drop in prices, we've gone from being a \$150-billion a year industry back in 2008, just last year, to about an \$80-billion a year industry today.

Don Daly, Canadian Association of Petroleum Producers, 9: 9:20

Figure 11



Source: Canadian Association of Petroleum Producers.

It was reported that declining commodity prices reduced cash flows by as much as 75% in the past year.²⁶ But declining prices have further ramifications on financing: declining prices mean declining oil and gas reserve values, which reduce the available financing from banks. Investment levels are also down by one-third from 2008.²⁷ Consequently, about 20,000 of the industry's workers are currently unemployed.²⁸

26 Gary Leach, Small Explorers and Producers Association of Canada, *Committee Evidence* [9: 10:15], May 5, 2009.

27 Gary Leach, Small Explorers and Producers Association of Canada, *Committee Evidence* [9: 10:15], May 5, 2009.

28 Don Herring, Canadian Association of Oilwell Drilling Contractors, *Committee Evidence* [9: 10:25], May 5, 2009.

Crude oil prices have since recovered somewhat and the Committee was told that, at US\$50 per barrel, this price was insufficient to get many new projects “off the ground”.²⁹ Many large projects (e.g., oil sands construction) have been deferred and this deferral is adversely affecting employment across the country, including the manufacturing sector where oil facility components are often made and assembled. It was further suggested that Canada’s oil sands projects require crude oil prices in the range of \$60 to \$75 per barrel for economic viability.³⁰ Looking beyond the industry’s immediate future, experts were generally optimistic:

Tight capital markets remain a concern. ... [However,] the future resource potential remains strong, and industry continues to be optimistic about achieving this potential. But one thing is very clear: technology has been, and will continue to be, the key to unlocking that future. Technology has been the cornerstone of the oil and gas industry.

Don Daly, Canadian Association of Petroleum Producers, 9: 9:30

But the witnesses expressed a number of structural challenges that increase operating costs within the oil and gas industry:

- Financial challenges:
 - Costly operations in remote areas;³¹
 - Low rates of return on investment compared to other countries (10% to 12%);³²
 - Difficult access to tax credit due to the “cumbersome” Canada Revenue Agency application and approval process.³³
- Regulatory challenges:³⁴

29 The Committee notes that upon the writing of this report, West Texas Intermediate crude oil, the North American benchmark price, is selling for more than US\$61 per barrel.

30 David Daly, Canadian Association of Petroleum Producers, *Committee Evidence* [9: 10:50], May 5, 2009.

31 Don Herring, Canadian Association of Oilwell Drilling Contractors, *Committee Evidence* [9: 9:05], May 5, 2009.

32 Gary Leach, Small Explorers and Producers Association of Canada, *Committee Evidence* [9: 9:30], May 5, 2009.

33 David Daly, Canadian Association of Petroleum Producers, *Committee Evidence* [9: 9:45], May 5, 2009.

34 Gary Leach, Small Explorers and Producers Association of Canada, *Committee Evidence* [9: 9:30], May 5, 2009.

- Uncertainty over future greenhouse gas emission regulations, which delays and discourages investment;
- Highly regulated business environment.
- Labour challenges:³⁵
 - Future labour shortages are forecasted due to an aging workforce;
 - Given the technical nature of the industry, substituting existing workforce requires special training.

Witnesses from the industry asked for three policy improvements of the federal government:

- 1) Improve the flow-through share regime to allow the junior sector to more easily raise capital;
- 2) Clarify future regulations on climate change and greenhouse gas emissions; and
- 3) Maintain the existing system with regard to reporting information on the number of hours worked by oil rig drivers.³⁶

Forestry

Canada's forestry industry generates \$29.3 billion in GDP and provides over 250,000 jobs in communities across the country.³⁷ In the western provinces, the industry produces primarily wood products (i.e., lumber) while in central and eastern Canada forestry output is divided between softwood lumber and pulp and paper production. British Columbia, Quebec and Ontario are the largest producers by value of production at \$8.8 billion, \$7.9 billion and \$6.6 billion, respectively. New Brunswick is the province most

35 Gary Leach, Small Explorers and Producers Association of Canada, *Committee Evidence* [9: 10:45], May 5, 2009.

36 Effective January 1, 2007, Transport Canada passed a regulation to govern oil and gas activities based on the number of hours worked by drivers and daily documentation is already produced by the industry and is used as a measuring tool.

37 The forestry industry includes logging, sawmills and pulp and paper manufacturing. All data in this paragraph is for the year 2007, the latest year for which data is available. Source: Statistics Canada CANSIM Series 379-0025 and 281-0024.

heavily dependent on the forest industry, which accounts for 7.4% of its GDP. It is followed by British Columbia at 5.9% of GDP and Quebec at 2.8% of GDP. The vast majority of the industry is located in rural and remote areas. Over 300 communities in Canada are dependent on the forestry sector, whereby dependence is defined as having at least 50% of wages earned in the community coming from forestry jobs.³⁸

Table 6

**Mill Closures and Forestry Sector Employee Layoffs by Province, January 2003-
June 2008**

Province	Permanent Mill Closures	Indefinite Mill Closures	Total Mill Closures	Total Layoffs
Alberta	6	4	10	1,366
British Columbia	20	28	48	10,367
Manitoba	0	0	0	15
New Brunswick	10	3	13	3,046
Newfoundland and Labrador	1	0	1	485
Nova Scotia	0	2	2	430
Ontario	25	18	43	9,450
Prince Edward Island	0	1	1	35
Quebec	26	54	80	11,668
Saskatchewan	2	7	9	1,566
Canada	90	117	207	38,428

Source: Natural Resources Canada, http://canadaforests.nrcan.gc.ca/articletrend/top_suj/23.

Canada is the world's largest exporter of forestry products and the United States is its largest market, accounting for over three-quarters of its exports.³⁹ However, the industry has been in decline for the past six years. Between January 2003 and

38 Natural Resources Canada, "Forest Communities: Weathering Economic Change," <http://canadaforests.nrcan.gc.ca/articletopic/183>, August 12, 2008.

39 Natural Resources Canada, "Trade data," <http://canadaforests.nrcan.gc.ca/statsprofile/trade>.

June 2008, 38,428 forestry workers lost their jobs, 90 mills closed permanently and 117 were indefinitely idled (see Table 6).⁴⁰ Every province in the country has experienced forestry job losses and all but one has experienced mill closures.

The reasons for the decline are numerous. On the pulp and paper side, the precipitous drop in newspaper readership and advertising sales has been hard on this market segment.⁴¹ On the lumber side, housing starts have declined sharply since the United States real estate bubble burst. American housing starts are down by over 75% from their peak in the second quarter of 2005⁴² and Canadian housing starts are off by 9% from their peak in the first quarter of 2006.⁴³ The industry on the B.C. Coast describes this event and its response in the following way:

Over the last two and a half years, as we saw the emergence of the subprime mortgage crisis and the beginning sharp decline in U.S. housing starts, as an industry we began to shift away from the U.S. market and away from commodity-based dimension lumber into those markets. ... In 2008 we increased our shipments to China, Korea, and other Asian countries from about 6% to 17%. ... From a lumber perspective, our dimension lumber production dropped from what would have been normally about 30% down to 13%, and the increases in other market segments were to the cedar market, to the shop remanufactured, specialty custom-cut markets.

R.M. Jeffrey, Coast Forest Products Association, 5: 9:05

The industry has also had to close many mills to bring supply back in line with declining demand:

[W]e have 2.5 billion board feet of capacity, and we are now currently running at 1.284 billion in 2008. That number will be under a billion board feet for 2009.

R.M. Jeffrey, Coast Forest Products Association, 5: 9:05

For other industry segments, however, responses or solutions to problems are harder to come by:

40 Natural Resources Canada, "Forest-dependent Communities in Canada," http://canadaforests.nrcan.gc.ca/articletrend/top_suj/23, August 8, 2008.

41 The Audit Bureau of Circulations reports that American newspaper circulation decreased by 7% in the October 2008-March 2009 period compared with the same period one year earlier. Source: Robert MacMillan, "U.S. newspaper circulation declines worsen," Reuters, April 27, 2009.

42 U.S. Census Bureau, "New Residential Construction," <http://www.census.gov/const/www/newresconstindex.html>.

43 Statistics Canada, CANSIM Table 027-0007.

We are in a context of change, where for several years now we have seen a falling demand for newsprint, particularly because of increased Internet use. The softwood lumber dispute with the United States has reduced the demand for Canadian lumber. The current financial crisis is only prolonging and worsening the difficulties we are experiencing in the forestry sector. ... Because we are very specialized lumber harvesting subcontractors, it is harder for us to find other opportunities for our companies.

Jacques Dionne, Association des propriétaires de machinerie forestière du Québec Inc., 5: 9:15

Yet the industry, in general, realizes that market diversification provides at the very least a partial response to the current economic dilemma:

[T]he variety of our basket of products will count for a great deal in future. The more we diversify our products, the more we'll be able to export internationally. Not being a prisoner of a single market like the United States would no doubt be a major advantage for the Canadian industry.

Guy Chevette, Quebec Forest Industry Council, 2: 10:15

The sharp appreciation in the Canadian dollar between 2003 and 2007 greatly increased the price of Canadian forestry products in international markets. The dollar has subsequently depreciated, but industry representatives say that it will take some time for lost customers to return. The Forest Products Association of Canada (FPAC) claims that high transportation costs are taking a toll on its members. Approximately 70% of forestry products are shipped by rail and the FPAC estimates that uncompetitive freight prices cost the industry \$280 million a year.⁴⁴ The Mountain Pine Beetle epidemic in British Columbia has temporarily increased harvests in the province, as companies rush to harvest trees before they are destroyed. The epidemic will, however, mean lower harvests in the region over the medium and longer term. Finally, some industry analysts say that producers have failed to modernize their mills and equipment and sufficiently invest in research and development. According to the FPAC, the industry's capital stock is, on the whole, older and less productive than that of its international competitors.⁴⁵

FPAC was succinct on both the benefits and limitations of federal government assistance:

Clearly, you [the government] can't increase demand for newsprint or raise lumber prices — we have to wait for markets to do that — but you can help us get from here to the return of markets. The government has made a lot of the right moves in EI work

44 Forest Products Association of Canada, "An Estimate of the Freight Rate Consequences of Rail Captivity to Rail Shippers of Canadian Forest Products," prepared by Travacon Research Limited, April, 2007.

45 Forest Products Association of Canada, "Industry at a Crossroads: Choosing the Path to Renewal, Report of the Forest Products Industry Competitiveness Task Force," May 2007.

sharing, which is keeping many mills open that would have otherwise closed. The announcements to EDC changes and new funding for debt are very positive.

Avrim Lazar, Forest Products Association of Canada, 2: 9:05

The industry was also unequivocal on what its primary issue was and how the federal government might be of further help:

Our member companies have identified access to credit and reasonably priced credit as a top issue to be addressed. ... [T]he forest industry [has] been considered high risk now for several years, and this has definitely added to the challenge. ... In the rare chance that an investor makes capital available to our industry, the industry faces ridiculously high risk premiums — premiums from 8% to 11%, which make it virtually impossible to survive.

Mark Arsenault, New Brunswick Forest Products Association, 5: 9:25

At the same time, a number of industry representatives identified a role to play for the federal government in resolving and/or responding to tax subsidies recently provided by the U.S. government to its pulp and paper industry. Under recently devised renewable energy initiatives, U.S. pulp and paper mills are eligible for substantial tax credits for burning “black liquor” along with diesel fuel in their boilers. U.S. pulp and paper companies are eligible for a 50¢ per gallon excise tax credit on the use of concentrated pulping liquors, the residual waste that is created from the pulping process. Estimates put the value of that credit at \$125 to \$150 per tonne for unbleached mills, and \$175 to \$225 per tonne for bleached mills. This has created a very unlevel playing field:

These credits put Canada at a serious disadvantage. I believe if it's unaddressed, this may be catastrophic to our pulp mills on the Canadian side of the border. ... if a bleached hardwood market kraft mill can actually realize a benefit of \$175 per tonne, it will put the cost structure of our Canadian mills at a huge disadvantage.

Mark Arsenault, New Brunswick Forest Products Association, 5: 9:30

A number of industry representatives highlighted the need for silvicultural financing and investment. For example, one industry representative also suggested that the federal government consider creating a silvicultural savings plan that would enable forest owners to accumulate tax sheltered funds that could be used for the development of woodlots.

To meet both its cyclical and structural challenges, witnesses from the industry asked for five policy improvements of the federal government:

- 1) Continue to expand Export Development Canada's mandate to allow more domestic activity for export-oriented markets;
- 2) Continue to increase funding for research;

- 3) Make SR&ED tax credits fully refundable;
- 4) Fix the transportation system with the aim of eliminating monopolistic behaviour on the part of Canada's railways; and
- 5) Challenge the U.S. "black liquor" tax credit subsidy program under existing trade laws and/or free trade agreements.

High Technology

The high technology sector is made up of industries that make/create technology, whether the technology is in the form of products, communications, or services.⁴⁶ Although innovative activities can be found in many industries, this definition includes only those industries where high technology activity is concentrated. High-tech industries are the product of the rapidly evolving global environment of science, technology and innovation. The information and communications technologies (ICT) sector is a striking example of the shift of our economy into a new era, the digital economy. The emergence of biotechnology companies also points to a new high tech sector, the bio-economy.

A. Information and Communications Technologies

The ICT sector is increasingly important in the economy. Just 30 years ago, the telephone was the most widespread communication technology. Nowadays the influence of ICTs is felt in all aspects of life. In the late 1990s, there was impressive growth in the ICT sector, which became one of the key drivers of national growth. Even since the technology bubble burst in the early 2000s, the ICT sector GDP has grown faster than that of the entire Canadian economy (see Figure 12). In 2008, the ICT sector GDP was \$59.2 billion, with annual growth of 4.8%.⁴⁷

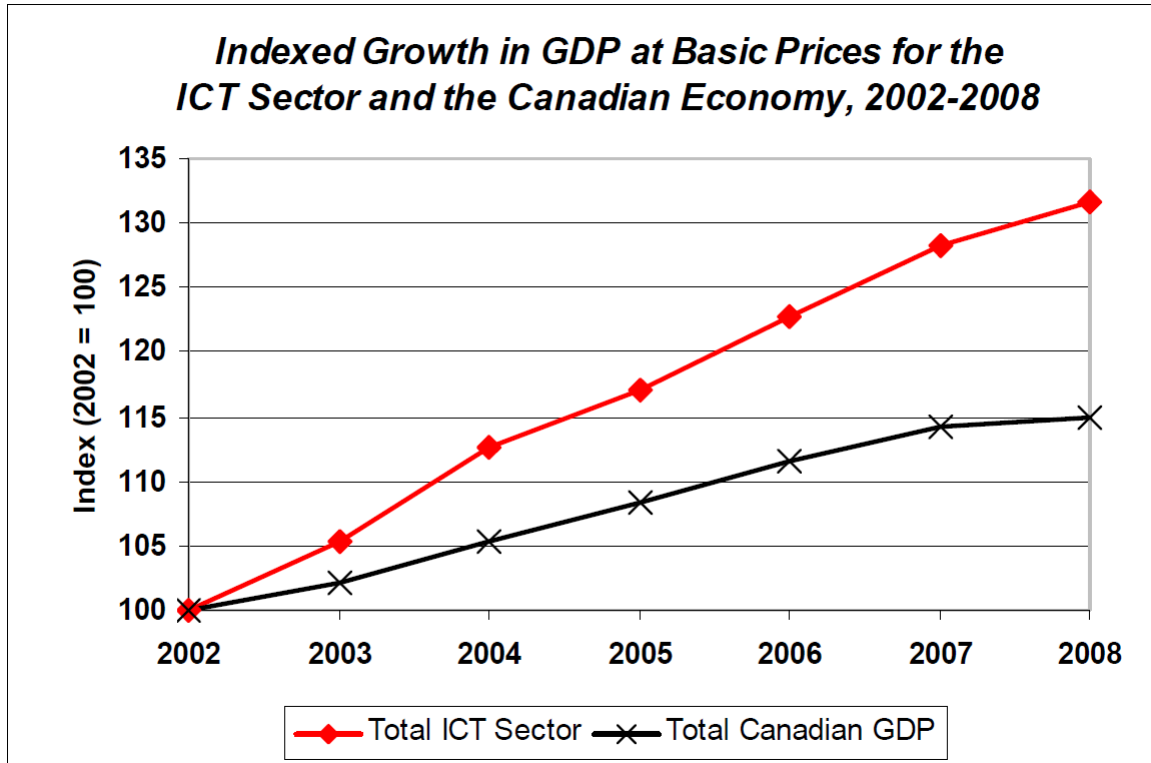
Changes followed the decline in 2000, symbolized by plummeting stock prices on the NASDAQ high technology exchange. Revenues from ICT manufacturing fell while revenues from services increased greatly. A total of 30,300 ICT companies in Canada generated total revenues of \$150 billion in 2007. A bit less than half of that revenue came from the ICT wholesaling and manufacturing subsectors, and 56% came from the

46 See definition of "high technology," which has been used or adapted by many institutions around the world, in Platzer, M., Novak, C.A. and Kazmierczak, M.F. *Defining the High tech Industry*. American Electronics Association, February 2003, http://www.aeanet.org/Publications/idmk_naics_pdf.asp.

47 Industry Canada, Information and Communications Technologies Statistical Overview, April 2009, http://www.ic.gc.ca/eic/site/ict-tic.nsf/eng/h_it05864.html.

subsector made up of telecommunications services, software and informatics services, cable television and other ICT services.⁴⁸

Figure 12



Source: Industry Canada, Information and Communications Technologies Statistical Overview, April 2009.

In 2007, the ICT sector accounted for about 3.5% of workers in Canada, with 592,600 employees, 43% of whom had a university degree, as compared to 24% of workers in Canada in general.⁴⁹ This dynamic sector, therefore, has a highly educated workforce. The sector also accounts for 38% of private sector R&D in Canada, with R&D spending that has been rising since 2002, reaching \$6.0 billion 2007. Companies in the ICT sector are relatively small. In 2007, four out of five companies had less than 10 employees and just one in 50 companies had more than 100. A number of them, such as Cisco and CGI, have experienced so much growth in recent decades that they are internationally known. Others such as Nortel have developed a whole “ecosystem” of

48 http://www.ic.gc.ca/eic/site/ict-tic.nsf/eng/h_it05838.html.

49 Industry Canada, Information and Communications Technologies Statistical Overview, November 2008, [http://www.ic.gc.ca/eic/site/ict-tic.nsf/vwapi/0107229e.pdf/\\$FILE/0107229e.pdf](http://www.ic.gc.ca/eic/site/ict-tic.nsf/vwapi/0107229e.pdf/$FILE/0107229e.pdf).

small regional companies that revolve around it. Although the ICT sector has undeniably matured, it is in a slowdown as a result of the current global recession, and financing is its greatest worry:

What we have during the current crisis, however, is things have fallen off a cliff, so you're not even there at some point. We have very successful companies that actually have sales, have extraordinary, major clients, and all of a sudden they cannot get money. They have very successful business plans, and things have just been disrupted at this point, beyond normal.

Bernard Courtois, Information Technology Association of Canada, 10 : 10:40

B. Biotechnology

Biotechnology is a young sector that has seen especially rapid growth in the past decade. Biotechnology has a variety of branches that affect our lives in many ways and that are now part of the “bio-economy”. The value of this bio-economy is estimated at \$78 billion per year, or 6.4% of Canada’s GDP, and includes the subsectors of health, cattle and truck farming, mining bio-processing, pharmaceutical manufacturing, chemical products and distilleries.⁵⁰ With respect to innovative biotechnology companies, their numbers nearly doubled between 1997 and 2005, rising from 282 to 532.⁵¹ In 2005, biotechnology revenues were \$4.2 billion and R&D expenditures, some of which are publicly funded,⁵² totalled \$1.7 billion. Biotechnology companies report biotechnology products and processes in the thousands: in 2003, for instance, 5,000 products and processes were at the R&D stage and there were over 11,000 on the market. Biotechnology clusters are concentrated in 20 or so cities across Canada in relatively populous regions.⁵³ In 2005, the biotechnology sector employed 13,433 people in Canada.

The results of a survey presented by BIOTECCanada⁵⁴ show that a quarter of companies will be short of funds within six months, that half of companies will disappear by the end of 2009 and that companies are limiting their activities to survive. The financial crisis has had a significant impact on biotechnology companies and hence on the pursuit of innovation in biotechnology. The total capital obtained by biotechnology companies fell by

50 The figures cited here are used by BIOTECCanada and were published in “Measuring the Biobased Economy: A Canadian Perspective,” in *Industrial Biotechnology*, Winter 2008 (vol.4, no.4, pp.363-366), The Feature Commentary by William Pellerin and D. Wayne Taylor.

51 Statistics Canada. Innovation Analysis Bulletin, 2008, No.88-003-X, Vol. 10, no. 2; and Canadian Trends in Biotechnology, Second Edition, p 16, based on data from the Biotechnology Use and Development Survey, various years.

52 OECD Biotechnology Statistics, 2006, p. 19. According to this report, federal spending on biotechnology R&D amounted to 31.5% of private sector biotechnology R&D expenditures.

53 Industry Canada. Biotechnology Clusters, http://www.ic.gc.ca/eic/site/cbc-gccb.nsf/eng/h_bq00009.html.

54 BIOTECCanada. “Biotechnology crucial to future economic prosperity and Canadians agree!”, Situational Analysis: Biotech Industry, January 9, 2009.

41% from 2007 to 2008.⁵⁵ A single initial public offering (IPO) in biotechnology was identified in 2008 with a value of \$5.8 million, as compared to 28 IPOs that raised \$1.7 billion in 2007. In October and November 2008, 13 Canadian biotechnology companies ceased operations, either closing their doors or going bankrupt. Certain major initiatives were shelved and the same could happen to a number of pharmaceutical initiatives at the clinical trial stage. Some companies are vulnerable to takeovers and acquisitions that would export intellectual property developed in Canada to foreign competitors.

We can't afford to have the industry decimated by the credit crisis. Too much has been built into these operations to get them into a commercialization cycle ... These jobs are very portable ... In the world of R&D, we run the risk of just simply exporting our IP like we've exported raw natural resources in the past. Our goal is to make sure that we create an environment, that we capture that value in Canada.

Peter Brenders, BIOTECanada, 10: 9:15

The financing problems resulting in part from the lack of venture capital in Canada are now also affecting ICT and biotechnology industries, which are hoping that appropriate measures will build on their key success factors — factors such as quick access to funding, tax incentives and talented employees.

High tech companies have stressed the importance of building stronger ties with U.S. venture capital investors, but there are impediments that have limited the entry of foreign capital into Canada.

[T]he Canadian venture capital pool is always going to be too thin and not as experienced and mature as what can come from the US. Those investors bring more than money. They bring management experience; they bring experience on how to scale the company. I know, for example, that Israel has a policy of actually encouraging their companies to get their capital from outside the country because they know that they have the science but that they don't have the global marketing and business development that comes with it.

Bernard Courtois, Information Technology Association of Canada, 10: 9:35

As such, biotechnology companies are in favour of clarifying the application of recent changes to section 116 of the *Income Tax Act* so that they can increase their access to U.S. venture capital.

55 BIOTECanada, Situational Analysis, January 9, 2009 (source: Thomson Reuters).

We saw great movement in terms of changing the Canada-US tax treaty in terms of recognition of limited liability companies. The problem is that we're still sitting on an administrative detail called the "116 Certificate", which requires a host of signatures that just can't be done. ... That needs to be fixed.

Peter Benders, BIOTECanada, 10: 9:35

Although high tech companies are strong in developing technology, they could benefit from enhancing their commercialization activities. Intellectual property issues pertaining to the *Copyright Act*, technology transfer (following the University of Waterloo model, for instance) and data security were also raised. Despite these concerns, there is unanimous support in the high tech sector for the creation of value and capitalizing on technology and innovation as a path to success.

Industry representatives praised the government for its Advantage Canada strategy and its SR&ED tax credit program that they characterized as far more generous than similar programs in other countries. They also had positive comments to make on elements of the government's recent budget:

On the whole issue of knowledge infrastructure, I want to commend the government for recognizing in its February 2009 budget that infrastructure goes beyond bricks and mortar to putting broadband, that we've talked about, which looks like a civil engineering project, but it's obviously an economic enabler. ... the electronic health record, the electronic medical record, may look like an IT project, but it's not really. It's a fundamental infrastructure to run a modern health care system.

Bernard Courtois, Information Technology Association of Canada, 10: 10:45

Witnesses from the high tech sector asked for seven improvements from the federal government to meet current and future challenges:

- 1) Ensure that additional funding recently allocated to the Business Development Bank of Canada and EDC supports venture capital;
- 2) Develop a program, perhaps within the BDC, whereby loans may be provided to high technology firms that are engaged in R&D, secured by their tax losses;
- 3) Exempt new investments from capital gains for companies investing in R&D;
- 4) Extend the refundability of SR&ED program tax credits beyond Canadian controlled private corporations;

- 5) Eliminate “Certificate 116”;
- 6) The government should become a model user of high technology; and
- 7) Update the *Copyright Act*.

Minerals and Metals

The minerals and metals industry contributed \$42 billion to Canada’s GDP in 2007, including \$10 billion in mineral extraction and \$32 billion in mineral processing and manufacturing. In 2007, the industry employed 363,000 Canadians, including 51,000 in mineral extraction, 55,000 in non-metal manufacturing, 79,000 in primary metal fabrication, and 179,000 in fabricated metal manufacturing.⁵⁶

Canada is one of the largest mining nations in the world, with 222 active mines producing more than 60 minerals and metals. These mines are located in all regions of the country. Indeed, most mining communities are located in rural and northern regions of the country, and given that these mines are located in the vicinity of more than 1,200 Aboriginal communities, they are significant employers of Aboriginal peoples.⁵⁷ Canada also has a relatively large mineral processing industry, with 38 nonferrous metal smelters and refineries operating in six provinces (see Table 7).

56 Mining Association of Canada, *Facts and Figures 2008: A Report on the State of the Canadian Mining Industry*, 2009.

57 Natural Resources Canada, *Canada’s Minerals and Metals Key Facts*, 2009.

Table 7

Nonferrous Smelters and Refineries, January 2008

Province	Type of Facility	Commodities
British Columbia	2 smelters, 1 smelter/refinery, 1 processing plant	aluminum, bismuth, cadmium, germanium, lead, molybdenum, zinc and precious metals.
Alberta	1 refinery	cobalt and nickel
Manitoba	2 smelters/refineries	cadmium, cobalt, copper, nickel and zinc
Ontario	3 smelters, 4 refineries, 4 smelters/refineries, 1 conversion facility	aluminum, cadmium, cobalt, copper, gold, indium, lead, nickel, platinum, selenium, silver and precious metals
Quebec	13 smelters, 4 refineries, 1 smelter/refinery	aluminum, antimony, cadmium, copper, iron, lead, lithium, selenium, tellurium, tin, titanium, zinc and precious metals
New Brunswick	1 smelter	bismuth, lead and precious metals

Source: Mining Association of Canada, Facts & Figures 2008: A Report on the State of the Canadian Mining Industry, 2009.

Canadian mining companies are often multinational in activity. Canadian-listed companies have interest in more than 8,000 exploration and mining properties in more than 100 countries.⁵⁸

The Mining Association of Canada reports that there are 3,034 Canadian firms that provide various expertise to the industry, including:

- 94 geotechnical consulting firms;
- 233 environmental consulting firms;
- 127 exploration consulting firms;
- 108 legal and financial firms;
- 65 education and training organizations;

58 Ibid., p. 1.

- 32 mineral processing contractors;
- 65 crusher/conveyor equipment companies;
- 89 laboratory and appliances equipment companies;
- 223 mineral processing equipment companies; and
- 108 transportation companies.⁵⁹

Although the industry is very visible in many small and remote communities across Canada, it also contributes to the economy of Canada's largest cities. Toronto is the world's leading city for financing mining activities. The Toronto Stock Exchange handled 80% of worldwide mining equity transactions in 2007.⁶⁰

The mining industry in Canada is coping with the current downturn in the world economy, something it does periodically given the industry's cyclical nature:

In terms of the present situation, companies are adjusting to mineral prices. One of their fundamental roles is to adjust operations to reflect mineral prices. These prices are generally global prices and they're derived through international trading exchanges. ... Some countries in particular have been managing their debt loads ... to ensure their future prosperity.

Paul Stothart, Mining Association of Canada, 10: 11:00

Unlike many other industries that are focused almost entirely on manufacturing activities, the Canadian minerals and metals industry does not face a new and strong foreign competitor in China with its accession to the World Trade Organization in 2001. China's presence in the international market is mostly felt on the demand side ... and it's a favourable influence:

The main effect of China is as a driver of mineral prices. Most of our mineral exports still go to the U.S., but the prices are driven globally by Chinese demand. Obviously with higher prices, everybody from companies to employees make more money.

Paul Stothart, Mining Association of Canada, 10: 11:20

Industry representatives identified a number of challenging structural issues that the industry must contend with: (1) declining mineral reserves; (2) human resource problems

59 Mining Association of Canada, Op. Cit., 2009.

60. Ibid.

that are driven by demographic factors and industry perceptions; (3) environmental regulation and policy; and (4) the need for more national cooperation and collaboration.

Canada's reserves of base and precious metals have declined significantly over the past quarter-century. The most dramatic decline in reserves occurred in lead, zinc, molybdenum and silver; they declined by more than 80% between 1980 and 2005. Copper and nickel reserves declined by more than half in this period and, in 2005, gold reserves were one-third lower than a decade earlier (see Table 8). An industry representative expounded on this issue:

Mineral reserves are an issue for this industry. Canada's proven and probable reserves of base metals and some others have gone down over the last quarter century so there's a need to reverse that.

Paul Stothart, Mining Association of Canada, 10: 10:55

Table 8

Canadian Reserves of Selected Minerals, 1980-2005

Year	Copper (000 t)	Nickel (000 t)	Lead (000 t)	Zinc (000 t)	Molybdenum (000 t)	Silver (t)	Gold (t)
1980	16,714	8,348	9,637	27,742	551	33,804	826
1985	14,201	7,041	8,503	24,553	331	29,442	1,373
1990	11,261	5,776	5,643	17,847	198	20,102	1,542
1995	9,250	5,832	3660	14,712	129	19,073	1,540
2000	7,419	4,782	1,315	8,876	97	13,919	1,142
2005	6,589	3,960	552	5,063	95	6,684	965

Note: t = metric tonne.

Source: Mining Association of Canada, Facts & Figures 2008: A Report on the State of the Canadian Mining Industry, 2009.

A representative from the Mining Association of Canada argued that unless new and effective exploration is undertaken, Canadian reserves of key minerals will remain at critically low levels and thereby weaken the case for investing in value-added facilities. Moreover, without sustained and effective exploration, production will continue to outstrip reserve additions, Canadian smelters and refiners will be forced to increasingly rely on imported raw materials, and Canada's mineral and metals industry could be put in a position of heightened competitive and strategic risk. The representative further stated that federal and provincial government investment in geo-science has declined by one-half since 1988, with the result that important Canadian regions remain poorly mapped.

The industry also faces a significant human resource challenge in the coming decade. As one industry representative put it:

A ... challenge is attracting new people ... [the] mining industry has a demographics problem. The young people don't go into mining-oriented courses when things are down; they go in when things are up. When they come out, there are no jobs ...

Jon Baird, Canadian Association of Mining Equipment
and Services for Export, 10: 11:05

It is estimated that approximately 65% of geoscientists will reach retirement age (i.e., 65 years) in the next decade and that the industry will need between 60,000 and 90,000 new workers by 2017.⁶¹ Moreover, the human resources recruitment challenge is more acute than these basic statistics suggest because the demographics problem is more pronounced for the mining industry than for other industries, as it traditionally attracts fewer females, youth and minorities.

Representatives from the mining industry also suggested that the Canadian mining industry is too fragmented:

The mining industry is quite fragmented ... We don't have a sense of national purpose. Control over resources is a state [provincial] matter as it is in this country. That's where I think our balkanization starts.

Jon Baird, Canadian Association of Mining Equipment
and Services for Export, 10: 11:50

I think a national mining strategy to the extent that incorporated R&D components and infrastructure components, incentives for more value added and for more modern processing facilities might be worth considering.

Paul Stothart, Mining Association of Canada, 10: 11:50

Despite these challenges, industry representatives are generally positive about the industry's long-term future. They mentioned that the market potential of China is staggering. Currently, there are about two cars per 100 persons in China, whereas there are about 95 cars per 100 persons in the United States and it is believed that this gap will narrow. Both China and India are moving towards more feed-intensive, protein-based diets which bodes well for Canadian potash sales. China is investing in nuclear power

61 Paul Stothart, Mining Association of Canada, *Committee Evidence* [10:10:55], May 14, 2009.

and this bodes well for Canadian uranium sales. As the middle-class grows throughout the world, it is believed that there will be more demand for gold, diamonds and other precious metals.⁶²

The industry is also experiencing a decline in its input costs since the global recession set in. Industry representatives further claim that the Canadian mining industry receives reasonably competitive tax treatment in Canada. Moreover, this treatment will improve further as the corporate income tax rate is scheduled to decline to 15% by 2012. However, an industry official suggested that the tax treatment accorded to investments in mineral exploration at depth within existing underground workings could be improved. The industry was also very favourable to the notion and policy of free trade, particularly encouraging has been the Government of Canada's focus on Foreign Investment Protection Agreements (FIPAs):

FIPAs ... are useful even if they're not used that much. They provide some guidance to foreign countries, and they provide some comfort to companies who are investing in these countries that if there is a dispute, they will have some independent arbitrator and some independent rules through which they can regulate that dispute.

Paul Stothart, Mining Association of Canada, 10: 12:05

To meet its ongoing structural challenges, witnesses from the industry asked for eight policy improvements of the federal government:

- 1) Create a policy environment that fosters exploration spending and a strong, dynamic mining industry;
- 2) Develop and carry out a modern geological mapping of Canada;
- 3) Improve the tax treatment accorded to investment in mineral exploration at depth within existing underground workings;
- 4) Establish targets for air pollutants and greenhouse gas emissions that are achievable and develop a regulatory system that is efficient and effective, without duplication between jurisdictions;
- 5) Defeat Bill C-300;
- 6) Need more national cooperation and collaboration;

62 Paul Stothart, Mining Association of Canada, *Committee Evidence* [10:11:00], May 14, 2009.

- 7) Create, in addition to the Centre for Excellence in Mining Innovation (CEMI) in Sudbury, three new centres of excellence, one in British Columbia, one in Saskatchewan and one in Quebec; and
- 8) Make the Mining Exploration Tax Credit (METC) permanent.

Railway Equipment Suppliers

Railroad rolling stock manufacturing make up part of the transportation equipment manufacturing subsector (Canada's largest manufacturing subsector). Railroad rolling stock companies design and manufacture equipment such as: ballast distributors (railway track equipment); self-propelled railroad cars; diesel-electric locomotives; railway track equipment (e.g., rail layers, ballast distributors); mining locomotives and parts; railway rapid transit cars; rail laying and tamping equipment; subway cars; and trolley buses.

The rail equipment manufacturing sector is highly specialized and export-oriented, with more than 70% of urban transit and locomotive shipments destined for foreign countries, principally the United States. Virtually all Canadian urban transit and rail systems and vehicles are supplied by domestic sources, while major systems and components such as engines, computers and other equipment are usually imported from U.S. suppliers. The Canadian Association of Railway Suppliers (CARS) represents more than 400 of these companies with annual domestic sales of \$4 billion. In addition, more than 300 of these companies generate export sales totalling \$5 billion, making the total output of the industry more than \$9 billion per year. Railway supply companies employ more than 60,000 Canadians.

Railway equipment suppliers have committed themselves to long-term transformative change that would make significant reductions in harmful emissions through new and innovative emissions-reducing technologies. The industry believes it can help the Canadian government meet its environmental targets. With this goal in mind, CARS suggested that the time is right for upgrading Canada's railway sector:

There are 300 locomotives parked right now. They've been taken out of service. There are over 20,000 freight cars out of service right now. If we're ever to upgrade, this is an ideal time to do it.

Jay Nordenstrom, Canadian Association of Railway Suppliers, 7: 9:30

CARS further requested that the federal government:

- 1) Make SR&ED tax credits fully refundable; and
- 2) Provide tax incentives for railroads to invest in technologies to reduce harmful emissions.

RECOMMENDATIONS

1. That the Government of Canada focus on establishing conditions that make Canadian businesses competitive around the world. In particular, this means establishing regulatory consistency and predictability, and keeping down the taxes paid by both Canadian consumers and businesses, including payroll taxes.
2. That the Government of Canada, in order to preserve Canada's vital oil and gas, mining, and chemical production sectors, and to allow industries to better assess the resulting cost implications, establish a clear and predictable environmental regulatory framework that protects our natural environment, while ensuring a balanced approach for sectors that play a pivotal role in creating jobs and generating new economic opportunities for Canadians.
3. That the Government of Canada review its fiscal and regulatory measures and policies to ensure that they make a significant contribution to the development of clean and renewable energy sources, foster research and development (R&D) in this area and provide significant support to companies and provinces engaged in these activities.
4. That the Government of Canada introduce a tax credit for young graduates in resource regions to provide regional economies with a qualified workforce.
5. That the Government of Canada examine the issue of Scientific Research and Experimental Development (SR&ED) tax credits, including partial refundability, and consider making changes as a potential mechanism to increase greater private sector investment in R&D.
6. That the Government of Canada review its procurement policies and practices, especially those relating to National Defence acquisitions, and:
 - A. Review the government's approach to procurement and associated Industrial and Regional Benefits (IRBs) as a way of increasing Canadian industrial capability; and
 - B. Review the approach to In-Service Support (ISS) in the case of government aerospace sector procurements as a way of increasing Canadian industrial capability.

7. That the Government of Canada examine the flow-through share regime with a view to stimulating greater access to capital for exploration activities in the junior oil and gas and mining sectors.
8. That the Government of Canada explore measures to increase foreign venture capital investment in Canada.
9. That the Government of Canada maintain and expand the Strategic Aerospace Defence Initiative, while continuing to require loans to be refunded in order to ensure taxpayers are getting value for money.
10. That the Government of Canada identify, as soon as possible, a replacement program or alternative funding mechanism for Technology Partnerships Canada in order to support strategic R&D and demonstration projects by industry that are intended to produce social, economic and environmental benefits for Canadians.
11. That the Government of Canada develop a long-term space plan.
12. That the Government of Canada review Canadian anti-dumping and countervailing policies and practices and their application to ensure that Canada's trade remedy laws and practices remain current and effective. This review would also include comparisons with other World Trade Organization members such as the European Union and the United States.
13. That the Government of Canada expand Canadian manufacturers' access to export markets and proactively address trade irritants, such as the U.S. "black liquor" subsidy to the pulp and paper sector; the International Trade in Arms (ITAR) regulations; and "Buy American" legislation, which hurt Canada's manufacturing sector.
14. That the Government of Canada examine the removal of barriers to competition in the rail industry in order to stimulate competition for the transport of goods.
15. That the Government of Canada continue to support Canada's forest economy by developing policies that support innovation in the forestry sector, including R&D investments in greener technologies such as the development and production of cellulosic ethanol and forest biomass, by investing in retraining, and by supporting communities which have historically depended on sub-sectors that are in structural decline. In particular, the government should continue to use Export Development Canada (EDC) and the Business Development Bank of Canada (BDC) to

support new investment in this area, and ensure that EDC has the flexibility to provide financing to any domestic company. While supporting the forest economy, the government must remain mindful of its obligations under the Softwood Lumber Agreement, North American Free Trade Agreement and other trade agreements.

16. That the Government of Canada adopt a policy to encourage the use of lumber in the construction and renovation of federal buildings.
17. That the Government of Canada review all of the recommendations made by witnesses, which are laid out in earlier sections of the report.

APPENDIX A

LIST OF WITNESSES WHO APPEARED BEFORE THE SUBCOMMITTEE ON CANADIAN INDUSTRIAL SECTORS

Organizations and Individuals	Date	Meeting
<p>Communications, Energy and Paperworkers Union of Canada</p> <p>Renaud Gagné, Vice-President, Quebec</p>	2009/03/12	2
<p>Fédération des producteurs de bois du Québec</p> <p>André Roy, Second Vice-President</p> <p>Daniel Roy, Assistant Director</p>		
<p>Forest Products Association of Canada</p> <p>Avrim Lazar, President and Chief Executive Officer</p>		
<p>Quebec Forest Industry Council</p> <p>Guy Chevette, President and Chief Executive Officer</p> <p>Michel Vincent, Director, Economics Markets and International Trade Branch</p>		
<p>Department of Industry</p> <p>François Delorme, Chief Economist and Director General, Micro-Economic Policy Analysis Branch, Strategic Policy Sector</p> <p>Billy Hewett, Director General, Policy and Sector Services Branch, Industry Sector</p> <p>Emilee Pedruchny, Director, Sector Intelligence and Analysis, Information and Communications Technologies Branch, Spectrum, Information Technologies and Telecommunications Sector</p>	2009/03/24	3
<p>Business Development Bank of Canada</p> <p>Edmée Métivier, Executive Vice President, Financing and Consulting</p>	2009/03/31	4
<p>Export Development Canada</p> <p>Benoit Daignault, Senior Vice-President, Business Development</p>		
<p>Association des propriétaires de machinerie forestière du Québec Inc.</p> <p>Éric Dionne, Member</p> <p>Jacques Dionne, Member</p>	2009/04/02	5
<p>Coast Forest Products Association</p> <p>R.M. Jeffery, President and Chief Executive Officer</p>		

Organizations and Individuals	Date	Meeting
New Brunswick Forest Products Association Mark Arsenault, President and Chief Executive Officer		
Canadian Manufacturers & Exporters Jayson Myers, President	2009/04/21	6
Conference Board of Canada Michael Burt, Associate Director, Industrial Outlook, Trade and Investment Valerie Poulin, Economist, Industrial Outlook, Trade and Investment		
Canadian Association of Railway Suppliers Jay Nordenstrom, Executive Director	2009/04/23	7
Canadian Chemical Producers' Association Fiona Cook, Director, Business and Economics Richard Paton, President and Chief Executive Officer		
Aerospace Industries Association of Canada Claude Lajeunesse, President and Chief Executive Officer	2009/04/28	8
Bombardier Inc. George Haynal, Vice-President, Government Relations		
CAE Inc. Nathalie Bourque, Vice-President, Public Affairs and Global Communications		
Pratt & Whitney Canada J. Richard Bertrand, Vice-President, Government Affairs		
Canadian Association of Oilwell Drilling Contractors Don Herring, President	2009/05/05	9
Canadian Association of Petroleum Producers David Daly, Manager, Fiscal Policy		
Small Explorers and Producers Association of Canada Gary Leach, Executive Director		
BIOTECanada Peter Brenders, President and Chief Executive Officer Rainer Engelhardt, Chief Executive Officer, Eulytica Biologics	2009/05/14	10
Canadian Association of Mining Equipment and Services for Export Jon Baird, Managing Director		

Organizations and Individuals

Date

Meeting

Information Technology Association of Canada

Hicham Adra, Member of the Executive Committee, Public Sector Business Committee

Terry Ansari, Vice-President, Business Solutions Group, Cisco Systems Canada Co.

Bernard Courtois, President and Chief Executive Officer

Mining Association of Canada

Paul Stothart, Vice-President, Economic Affairs

APPENDIX B LIST OF BRIEFS SUBMITTED TO THE SUBCOMMITTEE ON CANADIAN INDUSTRIAL SECTORS

Organizations and Individuals

Association des propriétaires de machinerie forestière du Québec Inc.

BIOTECanada

Canadian Association of Petroleum Producers

Canadian Association of Railway Suppliers

Canadian Society for Senior Engineers

Department of Industry

Forest Products Association of Canada

Mining Association of Canada

REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant Minutes of Proceedings of the Standing Committee on Industry, Science and Technology ([Meetings Nos. 5, 21, 22 and 23](#)) is tabled and a copy of the relevant Minutes of Proceedings of the Subcommittee on Canadian Industrial Sectors ([Meetings Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12](#)) is tabled.

Respectfully submitted,

Hon. Michael D. Chong, MP

Chair

Dissenting Opinion

Of the Conservative Party

**To the Standing Committee on Industry, Science and Technology
REPORT OF THE SUBCOMMITTEE ON CANADIAN INDUSTRIAL SECTORS**

**Respectfully submitted by:
Mike Lake, MP**

INTRODUCTION

The Conservative Party of Canada (CPC) wishes to submit a dissenting opinion concerning the report to the Standing Committee on Industry, Science and Technology from the Subcommittee on Canadian Industrial Sectors.

The CPC would like to thank those witnesses, many of whom travelled from across the country, who appeared before the committee for their on-going interest in ensuring the strength and success of Canada's industrial sectors. Much of the report deals directly with the testimony witnesses presented and offers a thorough and balanced explanation of the challenges facing Canada's industrial sectors.

In particular, discussions concerning the effect of the current state of the global economy on the Canadian context were fruitful. The extent of these effects in spite of Canada's relative strength put our current economic challenges in the proper context.

The report suggests that the government is well positioned to recover from the current economic crisis faster than other countries. This affirms what is being said about Canada by experts from around the world, many of whom also recognize the role that *Canada's Economic Action Plan* is playing in shielding Canada from the worst effects of the global economic crisis. For example, the IMF said the following about Canada on May 22 of this year:

"Building on the permanent tax relief measures announced in October 2007, the authorities tabled further fiscal stimulus of around 2.8 percent of GDP in January 2009. Taking into account supplementary provincial actions announced following the federal budget, the measures are among the largest across G-20 countries. The stimulus relies mainly on infrastructure spending, support to the vulnerable sectors, enhanced social safety nets and retraining programs for job reallocation, and tax reductions and incentives... The authorities have taken proactive steps to safeguard financial stability."

Although the report contains many such positive aspects, opposition parties have unfortunately put forward and supported a few recommendations driven by partisanship rather than the stated interests of the industrial sectors who testified. It is because of this unfortunate partisanship on the part of the opposition parties, and the factual inaccuracies that their recommendations contain, that we cannot support the report in its entirety and must submit this dissenting opinion.

DISSENT ON CERTAIN RECOMMENDATIONS

Support for the Forest Economy

The CPC acknowledges the importance of supporting the forest economy across Canada, especially in BC, Alberta, Quebec, and New Brunswick where it is most important. The committee heard many witnesses from this sector. Witnesses who appeared said very clearly that the government should not try to freeze the forest economy in its present situation; rather, the government should support innovation and ensure access to financing through the EDC and the BDC while not taking action which would undermine our trading relationship with the United States.

Regrettably, opposition members on the committee supported a recommendation that was not supported or even mentioned by the expert testimony of witnesses. This recommendation states:

“That the Government of Canada adopt a policy to encourage the use of lumber in the construction and renovation of federal buildings.”

This recommendation is troubling for the following reasons:

- Canada’s steel producers, or indeed other producers of products for the construction industry, would reasonably object to a policy that favoured another industry over theirs.
- Canadians expect their government to always ensure value for money in the construction of federal buildings. Governments should always aim to pursue the best value-for-money proposition to taxpayers rather than risk higher cost to the taxpayer for purely partisan reasons.

This recommendation was simply not well thought out. If implemented, it would have a negative impact on taxpayers while pitting Canadian industry against Canadian industry at a time when all industries are facing the negative effects of the global economic crisis. The recommendations put forward by witnesses - for example, supporting innovation and ensuring BDC and EDC continue to support the forest economy - offer a better way forward.

The committee, to its credit, generally steered clear of recommendations for expansive direct subsidies to the forestry sector, which would violate Canada’s trade commitments. Instead, the committee accepted a recommendation which affirms the measures currently being taken by this government to support innovation in the forest economy and prepare it to play a vital role creating the jobs of tomorrow.

Young Graduates

Another unacceptable recommendation contained in the committee report states:

“That the Government of Canada introduce a tax credit for young graduates in resource regions to provide regional economies with a qualified workforce, a guarantee of innovation.”

The CPC must object to this recommendation on a variety of counts:

- First, this recommendation is poorly worded and unclear. It fails to define which regions would be affected, leaving the door open for regions which are already doing very well economically to enjoy the benefit of an indirect subsidy.
- Second, the recommendation fails to show how moving young graduates to resource regions would guarantee innovation in cases where there are not positions available; it makes more sense to create job opportunities for recent graduates, rather than trying to encourage them to move to regions where they may have a hard time finding employment. Essentially, the recommendation would either create an unnecessary additional incentive for young graduates to move to areas which are already very prosperous; or, it would encourage young graduates to move to areas where there is already unemployment and local residents are searching for work. In the latter case the government would be subsidising increased competition for already scarce jobs.
- Lastly, this recommendation is worded to favour exclusively younger graduates and might adversely affect older workers.

Technology Partnerships Canada and SADI

In addition to the two particularly flawed recommendations above, there are two further cases where recommendations are poorly worded and could leave the reader with an inaccurate or incomplete sense of the challenges facing Canada’s industrial sectors or of what the government is doing in response.

The first such recommendation calls on the government to identify a replacement program for Technology Partnerships Canada (TPC). In fact, this program has already been replaced by the Strategic Aerospace and Defence Initiative (SADI). SADI is a more effective and accountable vehicle for delivering funding to the primary users of TPC. It is somewhat unclear if this recommendation calls on the government to create an additional, distinct, and parallel program to support the aerospace sector (as opposed to simply putting additional money in SADI), or if it calls on the government to ‘identify’ in the formal sense of ‘pointing out’ the replacement program to TPC. In any event, the Conservative members of the committee would be happy to identify the replacement program for TPC: it’s SADI.

Since its creation, we have invested almost \$400 million into the aerospace sector through SADI, which has leveraged private investments to provide a total of almost \$1.2 billion in new research and development.

Incidentally, none of the witnesses suggested the creation of a parallel program to SADI; instead, they applauded the government for its investments in SADI.

Canadian Space Agency

The second such recommendation calls on the government to develop a long-term space plan. This recommendation, while theoretically of some merit, lacks any specific direction. It seems particularly out of place, given that the committee did not even hear from the Canadian Space Agency (CSA).

It must be noted that the government has already taken strong action to ensure Canada is a leader on the final frontier. Just recently the government, through *Canada's Economic Action Plan* invested \$110 million into the CSA's space robotics program. In addition, on May 13th, 2009 the Minister of Industry and the CSA were proud to announce Canada's two newest astronauts: David St. Jacques and Jeremy Hanson.

CONCLUSION

Notwithstanding the concerns outlined above, the committee was able to find consensus on a number of very positive recommendations.

A re-occurring theme in the testimony of many witnesses was the importance of competitiveness. Canada needs a competitive workforce, a business climate conducive to research and development, and a competitive tax environment. In particular, the committee agreed to support a recommendation which specifically emphasizes the importance of keeping all taxes, including payroll taxes, low.

In general, the CPC applauds the work of committee staff, fellow committee members and witnesses who came to testify. While we feel it is unfortunate that some of the recommendations are politically-motivated or unclear, the main body of the report and other recommendations provide some helpful information to the government and to the Canadian public. This report shows that, by investing in the long-term future of Canada's industrial sectors, Canada's government is on the right track to ensuring that Canada's manufacturing, forestry, high-tech, biotech, aerospace, mining, and oil and gas sectors continue to play a vital role in Canada's economy well into the future.

Liberal Party dissenting opinion on the recommendations to the Report of the Subcommittee on Canadian Industrial Sectors.

1. Concerning recommendation 3 which was adopted: The Liberal Party supports this recommendation as written but with the words "and provinces" removed from the last sentence.

2. In relation to a recommendation on the forestry industry, the Liberal Party of Canada supports a recommendation as follows: "That the government of Canada establish a credit facility specifically for the forestry industry"

3. In relation to a recommendation on copy rights and antipiracy of intellectual property, the Liberal Party of Canada supports the recommendation as follows: "That the Government of Canada immediately introduce legislation to amend the Copyright Act, ratify the World Intellectual Property Organization (WIPO) Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), amend related acts and ensure appropriate enforcement resources are allocated to combat the scourge and considerable economic and competitive damage to Canada's manufacturing and services sectors and to Canada's international reputation by the proliferation of counterfeiting and piracy of intellectual property."

Bloc Québécois Supplementary Opinion

The government must immediately adopt an industrial policy that meets Quebec's needs.

The Bloc Québécois would like to thank the many witnesses who expressed their concerns throughout the Committee's hearings.

In view of the gravity of the crisis in the manufacturing sector and in the Quebec and Canadian economy as a whole, the Bloc Québécois believes the Committee should have gone much further in its recommendations. The BQ wants to see immediate and realistic solutions being implemented to resolve the many challenges facing Quebec's manufacturing sector. We feel it is necessary to present this supplementary opinion in order to show the government the various avenues that it must explore promptly in order to provide strong support for the manufacturing sector.

The Standing Committee on Industry, Science and Technology has not managed to reach a consensus on the measures to be taken

During the previous study conducted by the Standing Committee on Industry, Science and Technology into industrial sectors, entitled "Manufacturing: Moving Forward — Rising to the Challenge", the Committee managed to reach a consensus on various facets of Canadian industrial policy. Unfortunately, the Committee was not able to repeat that accomplishment and the measures recommended in this report are much less direct.

The Committee is recommending some measures that are good for Quebec

The Bloc Québécois presented two recovery plans to stimulate the economy. Although most of the measures put forward by the Bloc Québécois were not taken up in the Committee's recommendations, the Committee did in fact support some of the BQ's proposals.

The Bloc Québécois notes, for instance, that the Committee is recommending that the government introduce a tax credit for young graduates in resource regions. This measure will help more young people return to their regions while providing regional economies with a qualified workforce, which will make it possible for these economies to innovate and diversify.

The Industry Committee also recommended that the government introduce various tax measures to encourage the development of renewable energy. These measures could encourage the production of cellulosic ethanol from forest residues, which would offer

new opportunities for the forest industry, as would the Committee's recommendation that the government establish a policy on lumber use in federal buildings.

The Committee agreed with the Bloc Québécois's recommendation regarding military procurement. The Committee recommended that the government review its defence procurement policy so that government procurement stimulates the development of Quebec's aeronautics industry. Such a policy would of course have to bear in mind the relative size of the aeronautics industry in each region of Canada to ensure that Quebec benefits equitably. In addition, by establishing a long-term space strategy, the government would provide a framework for the further development of this industry in Quebec. Finally, expanding the Strategic Aerospace and Defence Initiative would serve to better balance risk-sharing by the government and industry. Such a move would of course have to reflect the \$200 million the Conservatives promised in the last election campaign.

The Bloc Québécois has long called for the replacement and enhancement of the Technology Partnerships Canada (TPC) program. The Committee recommended that the government reinstate or replace this program. Other key sectors such as the pharmaceutical, production technologies, environmental technologies and new materials sectors could also benefit.

The Committee acted on the Bloc Québécois's longstanding request by recommending the government of Canada conduct an internal review of Canada's antidumping and countervailing policies and practices and their application to ensure that Canadian trade remedy laws and practices remain current and effective. This review should also include comparisons with other World Trade Organization members such as the European Union and the United States.

Finally, together with the Bloc Québécois, the Committee recommended that the government propose proactive measures to eliminate trade irritants. Specifically, the Committee recommended that the government fight initiatives such as the "black liquor" tax credit, which hurts the pulp and paper industry in Quebec greatly, as well "Buy American" legislation, which blocks access to markets in the United States and prevents US municipalities from buying from our companies.

The Committee should have gone further and presented an actual industrial development policy based on measures that the Bloc Québécois proposed in its two recovery plans:

Although the Committee recommended that research and development tax credits be reviewed and that consideration be given to making them partially refundable, the Bloc Québécois would have preferred that the Committee recommend that the government of Canada improve the Scientific Research and Experimental Development (SR&ED)

Tax Incentive Program to make it more accessible and relevant to Canadian businesses by considering the following changes:

1. make the investment tax credits fully refundable on a quarterly basis;
2. provide an allowance for international collaborative research and development; and
3. expand the investment tax credits to cover the costs of patenting, prototyping, product testing, and other pre-commercialization activities.

With regard to the immediate assistance urgently requested by the forestry sector, the Committee merely recommended that the government expand financing opportunities through Export Development Canada (EDC) and the Business Development Bank of Canada (BDC). The Bloc Québécois regrets that the Committee could not recommend that the government create an actual loan and loan guarantee program for the forestry industry, with a budget similar to that given to the automobile industry, and provide the industry with single-window access to this financing.

In these times of economic crisis, the Bloc Québécois would have preferred that the Committee recommend that the government offer refundable tax credits to businesses that finance employee training. In that way, employees could remain employed while taking provincially recognized training. This move would have given participating businesses the necessary liquidity, improved workforce productivity and helped targeted workers from becoming unemployed.

To encourage investment, the Committee could also have recommended that the government immediately introduce a temporary refundable tax credit equal to 20% of investment in production equipment so that manufacturers could increase their productivity. Furthermore, the government could have set up a credit facility to help fund these investments. Unfortunately, the Committee chose not to explore this avenue.

To promote the development of Quebec's private woodlots, the Committee could have recommended that the government create a registered silviculture savings plan so that forest owners could shelter their savings from tax for future investment in forestry development. However, the Committee did not endorse this recommendation.

Because Canada's trade policy is inextricably linked to its industrial policy, the Committee should have recommended that the Government of Canada, through the Department of Foreign Affairs and International Trade, complete and disclose to the public, in a timely manner, all important impact analyses of all free trade agreements signed by the government or ratified by the House on specifically vulnerable industries and on employment in these same industries.

The Committee could also have developed specific measures for industrial sectors facing special challenges, for example:

- For traditional industries rocked by the explosion in Chinese imports, such as textile, apparel, furniture and consumer goods manufacturers, introduce a series of measures to support rapid adaptation and modernization, paired with an aggressive use of safeguards to give them the few years they need to make this shift.
- For the aerospace industry, increase government support to equal that of our competitors, which requires significant investment in researching and developing new products, ad hoc programs to allow aerospace SMEs to carve a niche in the supplier market and considerably better financing for sales contracts. In the main, this means investment, not subsidies.
- This same approach, albeit with sometimes different measures, applies to all cutting-edge industries in Quebec.

Lastly, the Committee could have taken advantage of this report to present, on the initiative of the Bloc Québécois, a plan to help the fisheries industry. Unfortunately, the recommendations do not address this issue.

Beyond support to industrial sectors, the crisis also affects people and communities:

Even though the various measures put forward by the Bloc Québécois contribute to the prosperity and development of Quebec industries, the fact remains that the current crisis will result in job losses in all sectors of the economy. Moreover, some businesses in transition that were already in dire straits will have to close. Therefore, supporting the workers and communities affected by the crisis is imperative.

This is why the Bloc Québécois recommends that the government *restore a regional economic diversification and support program for the regions that have been hit by the forestry crisis, a program similar to the one cut by the Conservatives in the fall of 2006.*

To support older workers affected by the crisis, the Bloc Québécois recommends the immediate implementation of a support program for older workers.

Lastly, the Bloc Québécois continues to call for a complete reform of employment insurance, including:

- Adopting a new approach that assumes that claimants are acting in good faith;
- Eliminating the two-week waiting period;
- Creating a 360-hour eligibility threshold for all claimants;

- Increasing benefits from 55% to 60% of earnings;
- Increasing insurable earnings to \$42,500;
- Using the 12 best weeks;
- Implementing a support program for older workers;
- Expanding the right of a claimant to receive benefits while taking training.

For a real industrial development policy that takes Quebec's interests into account:

Once again, the Committee's work has shown the extent to which Quebec's interests differ from Canada's. While the implementation of stringent regulations on greenhouse gas emissions, through a carbon exchange, based on Kyoto targets and as presented by the Bloc Québécois, would be advantageous for industries in Quebec, the Committee recommended that the government take an environmental approach that is tailor-made for the oil industry in western Canada. The Committee did not recommend that the government offer substantial loan guarantees to Quebec's forest industry, even though the government is giving assistance totalling more than \$10 billion to Ontario's automobile industry.

In short, the federal framework will never allow Quebec to adopt an industrial policy that suits its needs. In fact, whether we are talking about policies that are custom-made for the western oil industry, that are detrimental to Quebec's environmental activities; the federal government's attempts to reroute funding from Quebec to Ontario, through the establishment of a single securities commission; the amendments to the equalization formula, which will take billions of dollars away from Quebec; the federal government's military procurement policies that are trying to compete with rather than stimulate development in Quebec's aeronautics industry; or the enormous assistance package given to Ontario's auto industry while Quebec's forestry sector receives nothing but crumbs - Canada's industrial development policy will never correspond to Quebec's needs. The only way that Quebec will have what it requires in order to reach its full potential is for Quebec to achieve sovereignty.

INTRODUCTION

The New Democratic Party wishes to submit a dissenting opinion concerning the appended recommendations to the report to the Standing Committee on Industry, Science and Technology from the Subcommittee on the Canadian Industrial Sectors (SSIS).

The New Democrats would like to thank the many witnesses who appeared before the subcommittee who shared their time and their passion and interest in the survival and future success of Canada's varied industrial sectors. It is with this very same passion and interest that members of the New Democratic Party participated in these committee meetings, and the core of why this dissenting opinion is being submitted.

While the committee made significant progress in identifying and understanding the various crises in industrial sectors across Canada in its report; the recommendations appended to it fall short. The motivation behind the creation of this subcommittee was to address the *urgent* crisis faced by certain industrial sectors in Canada. For this reason, it is disappointing that none of the recommendations put forth by the New Democratic Party members received consensus; as their inclusion would have had measurable positive impacts on communities across the country. I will now explore these recommendations within the industries they sought to help.

Minerals and Metals

Canada is one of the largest mining nations in the world. The mining sector is a key contributor to Canada's GDP, totally \$42 billion in 2007 alone. The industry employs over 360,000 Canadians across the country. Despite the industry's impressive numbers, mining and miners have fallen on harsh times with this economic recession. With the volatility of the nickel market, attention has focused on the impressive technologies and expertise developed at the Centre for Mining Excellence and Innovation (CEMI) in order to better position the country through this economic recession. The New Democrats put forward the following two motions:

1. *Create, in addition to the Centre for Excellence in Mining Innovation (CEMI) in Sudbury, three new centres of excellence, one in British Columbia, one in Saskatchewan and one in Quebec.*

Throughout the committee's study of the sector, witnesses continually raised the fragmented nature of the industry as a stumbling block towards more value added and more modern processing facilities. Through the creation of three new Mining Excellence Centres; strategies can be streamlined, and one of the structural challenges facing the mining sector could be alleviated.

2. *Commit the necessary funding for the Centre for Excellence in Mining Innovation (CEMI) in Sudbury, and the previously mentioned centres of excellence.*

Dissenting Opinion of the New Democratic Party to the Standing Committee on Industry, Science and Technology
Recommendations of the Subcommittee on the Canadian Industrial Sectors
Submitted by Glenn Thibeault, M.P.

CEMI has sought \$9.5 million over 5 years from FedNor — a request which was denied last year by the Conservative government. This funding rejection from the Industry Ministry is contrary to the positive recommendations from the mining industry, and FedNor staff.

Forestry

Canada's forestry industry generates \$29.3 billion in GDP and provides over 250,000 jobs in communities across the country. The industry produces primarily wood products (i.e., lumber) while in other parts of the country forestry output is divided between softwood lumber and pulp and paper production. The vast majority of the industry is located in rural and remote areas. Over 300 communities in Canada are dependent on the forestry sector, whereby dependence is defined as having at least 50% of wages earned in the community coming from forestry jobs.

Despite the dependence several Canadian communities have on the forestry sector, the Canadian government has been slow to take any action to prevent devastating job losses. Unfortunately none of the recommendations put forward by the New Democrats reached consensus. The recommendations put forward by the New Democrats would have addressed a key crisis area.

- 3. That the government of Canada negotiate an end to the U.S. "Black Liquor" subsidy for the Pulp and Paper sector, or match, or exceed those provisions for companies operating in Canada prior to the summer parliamentary break.*

The Conservative government has been alarmingly passive about the harmful subsidy for the U.S. pulp and paper sector. Under a 2005 devised renewable energy initiatives, U.S. pulp and paper mills are eligible for substantial tax credits for burning "black liquor" along with diesel fuel in their boilers. U.S. pulp and paper companies are eligible for a 50¢ per gallon excise tax credit on the use of concentrated pulping liquors, the residual waste that is created from the pulping process. Estimates put the value of that credit at \$125 to \$150 per tonne for unbleached mills, and \$175 to \$225 per tonne for bleached mills.

To put it in context, in November of 2008, the largest American pulp and paper received over \$70 million dollars for using black liquor as a renewable fuel source.

In the committee's report, it highlights the fact that a number of industry representatives and organizations identified a role for the government in levelling the playing field for Canadian pulp and paper supplies by resolving and/or responding to this tax subsidy provided by the U.S. government for its own pulp and paper industry.

The time for the government to act is now — waiting any longer will result in tens of thousands of additional job losses. A commitment to examine the issue is not enough for the thousands of forestry workers who will lose their jobs as a result of the government's slow uptake on this issue.

Dissenting Opinion of the New Democratic Party to the Standing Committee on Industry, Science and Technology
Recommendations of the Subcommittee on the Canadian Industrial Sectors
Submitted by Glenn Thibeault, M.P.

These credits put Canada at a serious disadvantage. I believe if it's unaddressed, this may be catastrophic to our pulp mills on the Canadian side of the border. ... if a bleached hardwood market kraft mill can actually realize a benefit of \$175 per tonne, it will put the cost structure of our Canadian mills at a huge disadvantage.

Mark Arsenault, New Brunswick Forest Products Association, 5: 9:30

Canadian pulp mills are at risk since they cannot compete without a similar subsidy. Canada can either provide the same subsidy to its own pulp mills, or coordinate an end to the subsidy in the U.S.

- 4. Immediately offer forestry specific loan guarantees to large and small forestry companies such as AbitibiBowater and its suppliers who are unable to collect during bankruptcy protection.*

If this recommendation had obtained consensus among committee members, it would save 12,000 jobs at AbitibiBowater.

- 5. Establish a forestry sector specific Adjustment Fund to build and maintain sector specific projects and job training programs.*

This recommendation would ensure that the forestry sector would not need to jockey with the other industries for crucial funding programs.

Conclusion:

Once again, thank you to all the witnesses and committee members who worked on this committee.

