Seventh Annual Report on Canada's State of Trade

Trade Update
June 2006

This publication is available online at http://www.international.gc.ca/eet/trade/state-of-trade-en.asp

About This Document

This seventh Annual Report on Canada's State of Trade has been prepared by The Office of the Chief Economist of Foreign Affairs and International Trade Canada under the general supervision of John M. Curtis, Chief Economist. This year's report was prepared under the direction of Jean-Bosco Sabuhoro, A/ Deputy Director, Current and Structural Analysis Division (CEA). The report was written by Jean-Bosco Sabuhoro, with statistical assistance from Suzanne Desjardins and page-setting, both the English and French versions, by Samad Uddin. Aaron Sydor, A/Director, Current and Structural Analysis, read the entire Report and provided very relevant comments which improved this Report. Special highlighted features were written by staff with The Office of the Chief Economist: "The impact of higher commodity prices on Canada's trade balance" by Samad Uddin, "The extent and significance of intra-industry trade in Canada-US merchandise trade" by Jean-Bosco Sabuhoro; "China-Canada competition in the U.S. market" by David Boileau, and "Canadian direct investment abroad: what role do differences in technology play in vertical and horizontal direct investment?" by Erica Pohjola.

Your comments concerning this year's report are welcome. Please direct them to Jean-Bosco Sabuhoro at:
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ISBN 0-662-43438-2

Catalogue no. IT1-3/2006E-PDF

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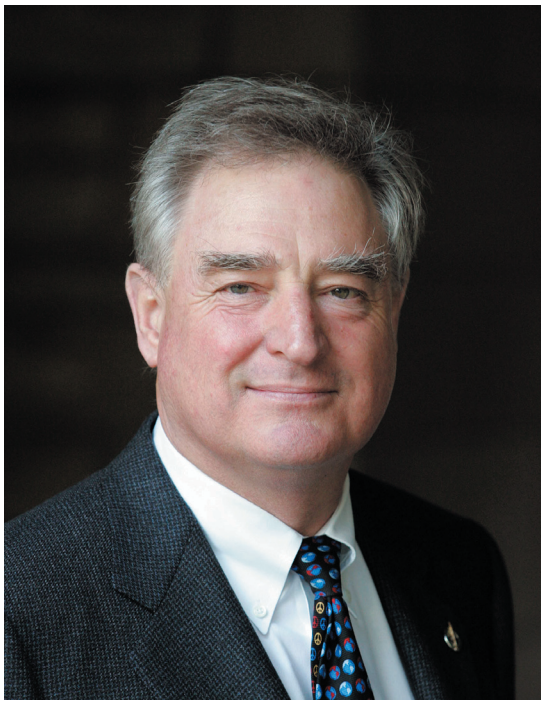


A Message From the Honourable David Emerson, Minister of International Trade and Minister for the Pacific Gateway and the Vancouver-Whistler Olympics

As Canada's Minister of International Trade, I am pleased to present the *Annual Report on Canada's State of Trade for 2006*. This document provides an overview of developments in the global economy that have influenced Canada's economic performance over the past year, and provides a snapshot of Canadian trade and investment flows by sector and by region.

Statistically, the *State of Trade* shows that 2005 was an impressive year for Canada's international commerce. Driven by high commodity prices and our unparalleled access to the American market, our economy demonstrated great resilience in the face of global challenges. We exported a record-breaking $516 billion in goods and services — a 5.2 per cent increase from 2004 — and foreign direct investment in Canada increased by more than nine per cent.

But we cannot afford to be complacent. Our economy is being challenged on a number of fronts.

As markets continue to globalize, all sectors — primary, manufacturing and services — are certain to face increasing pressure from new and traditional economies alike.

We remain under-represented in key Asian and European markets, and are falling behind in negotiating free-trade agreements with our trade partners.

Even our privileged access to the U.S. market is at risk. It is likely that China will soon overtake Canada as the top supplier of goods to the American market. We also face a productivity gap with the U.S. — a gap that puts the living standards and prosperity of Canadians at risk.

Finally, we have to recognize that for all of our efforts to diversify our economy over the last hundred years, Canada solidly remains a resource-based economy. The driving factor behind our current commercial success – the hot commodity cycle – will not last forever. We need to take aggressive steps to become more competitive in other areas, and demonstrate to the world that the Canadian economy is about far more than our natural resources.

We need to position Canada as a magnet for investment – and support investment by Canadian companies in key markets – thereby developing the supply chains that enable the free flow of trade.

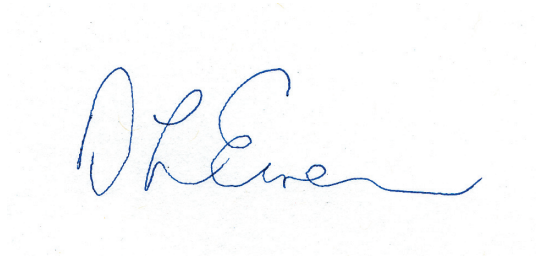
And the best time to tackle these challenges is now, while the economy remains strong.

First and foremost, building a competitive economy means having good domestic fundamentals in place: lower taxes, good labour policies, and a commitment to innovation.

But it also requires pursuing the right international priorities: bringing the Canada-U.S. trade relationship to new heights, making North America more competitive, and reaching out to the most promising global markets, particularly in Asia. China, India, Korea and Japan are all markets of extraordinary importance and strength, and Canada is extremely well-placed to capture opportunities in these and other markets.

The *State of Trade* tells a positive story about Canada's economy in 2005. Our task is to use this success as a springboard to build a more diverse, competitive and resilient economy — one that can withstand economic shocks, meet the long-term challenges we face, and continue bringing wealth, prosperity and jobs to Canadians for generations to come.

I look forward to working with all Canadians to meet this goal, and to write the next chapter in our proud history as one of the world's foremost trading nations.



HIGHLIGHTS

GLOBAL ECONOMIC PERFORMANCE

- Global economic growth was solid at 3.5 per cent in 2005 but weaker than the 4.2 per cent witnessed in 2004.
- High oil prices clearly played a large role in moderating growth in 2005 but did not inflict more serious economic damage on the world economy.
- In spite of a number of natural disasters, the U.S. real GDP growth was solid at 3.5 per cent, fuelled by domestic demand and private domestic investment.
- The turnaround in Japan continued as it posted solid real GDP growth of 2.7 per cent in 2005.
- Growth in the major EU economies was rather weak, even for the United Kingdom.
- Economic activity was buoyant in the major emerging economies. China, India and Russia recorded real GDP growth rates of 9.9, 8.3 and 6.4 per cent, respectively.

OVERVIEW OF WORLD TRADE DEVELOPMENTS

- World merchandise exports rose by 13 per cent in 2005. For the first time, world merchandise exports exceeded the US$10 trillion mark.
- Commercial services exports are estimated to have increased by 11 per cent at current prices to US$2.4 trillion in 2005.
- Benefiting from rising oil prices, regions such as Africa, the Middle East and Russia recorded a strong merchandise export growth in 2005, ranging from 29 per cent to 36 per cent.
- Europe's trade performance was sluggish in 2005, reflecting their overall economic performance.
- The share of fuels and other mining products in world merchandise trade rose to 16 per cent, the highest level since 1985. On the other hand, the share of agricultural products in world merchandise exports decreased to a historic low of less than 9 per cent.
- Within the manufacturing sector, iron and steel products and chemicals registered the highest export growth rates.

CANADIAN ECONOMIC PERFORMANCE

- Canadian economic performance has been solid with real GDP growth of 2.9 per cent in 2005. This growth has been primarily driven by strong personal expenditure on goods and services, investment in residential and non-residential structures, investment in machinery and equipment, and by net exports.

- Real growth in personal expenditure on goods and services jumped 4 per cent in 2005, the largest annual increase since 2000, when rising labour income drove up personal expenditures.
- There was a regional divide in GDP growth for 2005, with provinces west of Ontario registering the highest growth and all performing above the Canadian average of 2.9 percent, with the exception of Manitoba.
- In 2005, high energy prices helped boost economy-wide incomes including corporate profits and personal income.
- Canadian labour market conditions continued to improve in 2005. Employment grew 1.4 per cent with 227,600 net new jobs created. The services-producing sector outperformed the goods-producing sector in 2005, with an increase of 1.7 per cent (+204,500) compared to 0.6 per cent (+23,100). The unemployment rate in Canada reached historic lows, closing the year at 6.7 per cent, down from 7.2 per cent in 2004. The unemployment rate decreased in all provinces.
- The year 2005 was marked by a continued appreciation of the Canadian dollar against the main currencies (the US dollar, the Euro and the UK pound). Despite the appreciation in the dollar, Canadian exports have been strong over this period and remain a major source of overall economic growth.
- The year was also characterized by rising short-term interest rates. The Bank of Canada raised its key policy interest rate on three separate occasions, bringing it to 3.25 per cent on 06 December 2005. It now stands at 4.25 per cent.
- For the entire year 2005, consumers paid an average of 2.2 per cent more than they did in 2004 (1.9 per cent) for the goods and services included in the Consumer Price Index (CPI). The 1.6 per cent annual average rise in Core CPI was slightly higher than the 1.5 per cent increase of 2004.

Overview of Canada's Trade Performance

- Exports of goods and services were equivalent to 37.7 per cent of Canadian gross domestic product.
- Despite the appreciation in the Canadian dollar against the major currencies, exports of goods and services increased 5.2 per cent to $516.4 billion in 2005, surpassing the previous record reached in 2000 ($489.0 billion). Imports also rose; 5.8 per cent to $463.1 billion. The annual surplus on goods remained more or less stable at $66.7 billion, as both exports and imports rose by around $24 billion.
- Exports of goods to and imports of goods from all principal trading areas (the US, the EU, Japan and other countries) were up in 2005 compared to 2004. Of the principal trading areas, the United States posted the largest gains for goods exports in absolute terms, up nearly $20 billion to $369.3 billion. Canada's goods trade surplus with the U.S. increased to $110.6 billion and was responsible for the entire surplus. Canada's goods trade deficit with the non-U.S. partners widened to $43.9 billion.

- Energy products led Canada's exports growth in 2005, increasing 27.9 per cent. The Canadian energy products sector has been booming, thanks to historically high commodity prices and increased global demand, particularly in the U.S., China and India.
- At an annual total of almost $63 billion, services exports were surpassed by services imports of $76.4 billion. This resulted in an increase in the services deficit to $13.4 billion from $12.7 billion in 2004.
- The travel deficit increased by $1.3 billion and the deficit in transportation services increased by $1.0 billion in 2005.
- Higher receipts, notably for financial services, combined with lower payments for management and communication services, accounted for most of the $1.4 billion reduction in the commercial services deficit for 2005.
- By geographical area, 83.9 per cent of merchandise exports were destined for the U.S. in 2005, followed by the EU (5.7 per cent), Japan (2.1 per cent), the UK (1.9 per cent) and China (1.6 per cent).
- Canada's top-five merchandise exports to the world in 2005 were mineral fuel and oil ($88 billion), motor vehicles and parts ($78.2 billion), machinery ($33.7 billion), electrical machinery and equipment ($20.5 billion), and wood ($20.3 billion). The top-five merchandise imports were motor vehicles and parts ($65.7 billion), machinery ($62.2 billion), electrical machinery and equipment ($37.6 billion), mineral fuel and oil ($35.6 billion), and plastics ($13.7 billion).
- Of the major destinations, the growth of Canada's merchandise exports was the strongest with respect to Korea (23.7 per cent), Germany (21.0 per cent), the Netherlands (13.6 per cent), and Mexico (8.7 per cent). Canada's exports to China rose only by 6.0 per cent in 2005.

OVERVIEW OF CANADA'S INVESTMENT PERFORMANCE

- New UNCTAD estimates suggest that global foreign direct investment inflows climbed by a robust 29.0 per cent to reach US$896.7 billion in 2005. FDI flows to developed economies jumped 38.2 per cent to US$573.2 billion in 2005. The United Kingdom led the world for FDI inflows at US$219.1 billion. FDI inflows to the developing world reached an estimated record of US$274 billion, with increases in all regions. Notwithstanding the spectacular growth in inflows to the developing economies in recent years, 70 per cent of all FDI flows are still bound for the developed economies.
- Canada's inward FDI stock grew 9.1 per cent to $415.6 billion in 2005, up from $381.0 the year before. The bulk of the increase came from acquisitions and injection of funds from the parents into the working capital of their Canadian affiliates.
- With respect to sectors; finance and insurance captured 21 per cent of all foreign direct investment in Canada at the end of 2005, followed by energy at 20 per cent, machinery and transportation equipment at 12 per cent, and services and retailing at 10 per cent.

- FDI from the U.S. rose by 7.3 per cent to $266.5 billion in 2005, up from $248.5 billion the year before. More than one third of FDI from the U.S. went to the energy and metallic minerals sector, and 21 per cent to the finance and insurance sector. The U.S. accounted for 64.1 per cent of the total FDI in Canada, followed by the U.K. (7.2 per cent), and France (6.8 per cent).
- Canadian direct investment abroad (CDIA) grew by a moderate 3 per cent to $465.1 billion in 2005, up from $451.4 billion the year before. The primary reason for this relatively slow growth was the appreciation of the Canadian dollar which lowered the value of CDIA denominated in foreign currencies. As of the end of 2005, Canadian foreign direct investment assets were mainly in the finance and insurance industry (44 per cent), in the energy industry (12 per cent), in the services and retailing (12 per cent), and in the metallic minerals industry (11 per cent).
- Direct investment assets in the United States increased by 8.9 per cent to $213.7 billion in 2005. The U.S. accounted for 46 per cent of total Canadian direct investment abroad at the end of 2005, followed by the U.K. (9.2 per cent), and Barbados (7.5 per cent).
- Brazil made it to the list of both top-ten origins of FDI in Canada and top-ten destinations for CDIA for the first time in 2005.
- Canada's share in both North American FDI inflows and inward stock had declined the last two decades. However, this has reversed since 2000.

Special Features

The Impact of Rising Commodity Prices on Canada's Trade Performance

- Canada enjoyed a healthy trade surplus in 2005 with the commodity sector contributing to the largest share in this surplus.
- Price levels in key net-exporting commodities will have a huge impact on the trade surplus and are therefore the drivers of future surpluses.
- Three price scenarios were used to calculate the outcome on trade surplus by the twelve major net-exporting commodities. The energy sector accounted for the largest share in the trade surplus followed by industrial metals and forestry products.
- Even with a 20 per cent drop in prices, commodities would continue to account for the largest share in the trade surplus.

The Extent and Significance of Intra-Industry Trade in Canada-U.S. Merchandise Trade

- The bulk of Canada-U.S. merchandise trade is of the intra-industry type.
- Intra-industry has been growing since the 1970's, accounting for 60 per cent in the 1970's; increasing to over 70 per cent after 2000. In contrast, inter-industry trade has declined over time.

- Both horizontal intra-industry trade (differentiated products with similar attributes) and vertical intra-industry trade (products differentiated by quality) have increased since the eighties although vertical intra-industry trade has always been bigger than horizontal intra-industry trade.
- The dispersion in shares of trade types has decreased after the implementation of the Canada-U.S. FTA, suggesting that the trade patterns in Canada and in the U.S. have converged during the integration process

CHINA – CANADA COMPETITION IN THE U.S. MARKET

- Over the past decade-and-a-half, China's share of U.S. merchandise imports has increased from 3 per cent in 1990 to 14.6 per cent in 2005, while over the same period Canada's share has decreased from 18.5 per cent to 17.2 per cent.
- An analysis of Canada's and China's revealed comparative advantage (RCA), which focuses on the current situation in the U.S. import market, shows that these two countries do not share the same RCAs and therefore in theory do not generally compete.
- Another method of analysis, known as constant market share analysis, which focuses on changes in market share, shows however that Canada is increasingly facing competition from China in the majority of sectors in which it exports to the U.S.
- Therefore, although China may not currently offer competition in many sectors where Canada enjoys large amounts of exports to the U.S., China is quickly increasing its share in these sectors, making China a growing competitive threat to Canadian exports.

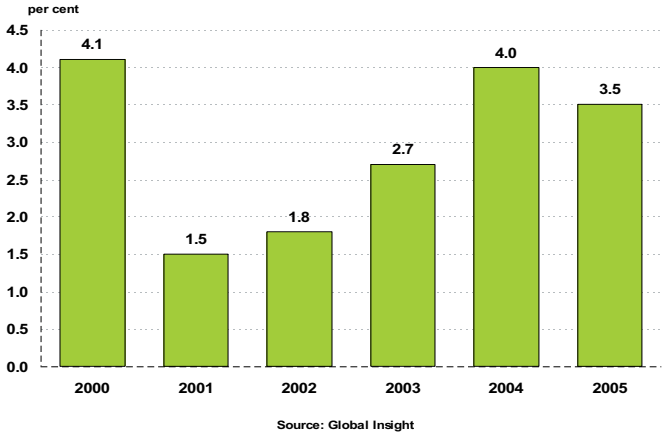
CANADIAN DIRECT INVESTMENT ABROAD: WHAT ROLE DO DIFFERENCES IN TECHNOLOGY PLAY IN VERTICAL AND HORIZONTAL DIRECT INVESTMENT?

- The results of the investigation suggest that Canadian Direct Investment Abroad (CDIA) is primarily vertically motivated, with firms fragmenting their production processes internationally and locating different components based on where it is most efficient for each to be.
- Moreover, this vertically motivated CDIA is dampened by larger technology differences, relative to the world average. That is, recipient countries that have technology levels farther from the world average receive, on average, less CDIA, and those that are closer receive more.
- Interestingly, this result also holds if only CDIA in advanced economies is analysed.

I GLOBAL ECONOMIC PERFORMANCE

The global economy grew by almost 4 per cent in 2004, recording its best performance since 2000. Global growth continued into 2005 but at a slower pace to finish the year around 3.5 per cent. High oil prices clearly played a large role in this moderation of growth in 2005.[1] Nevertheless, the real surprise has been that the highest real oil prices in more than 25 years did not inflict more serious economic damage on the world economy. Within this broad picture, growth divergences remained wide in 2005 (see Table 1-1).

Figure 1-1
World Real GDP Growth, 2000-2005



Source: Global Insight

The United States

In the United States, high oil prices, rising short-term interest rates, cooling housing markets and disruptive hurricanes Katrina and Rita contributed to growth slowing to 3.5 per cent in 2005 from 4.2 per cent in 2004. As in 2004, domestic demand was the main driving force of growth in the United States in 2005, with personal consumption expenditure and gross private domestic investment contributing 2.48 per cent and 1 per cent, respectively, to the real GDP growth.[2] However, imports grew faster than exports and, as a consequence, the contribution of trade to GDP growth continued to be negative (-0.29 per cent).[2] Other contributors included soaring profits, job creation and business investment in non-defence capital.

The outlook in early 2006 is however brighter for the U.S. as monthly indicators for unemployment claims, new job creation, manufacturing orders and production have all been strong. Private sector payrolls expanded by over 200,000 jobs in both January and February. Corporate survey data suggest that business investment spending in particular should be a prominent driver for U.S. growth this year, supported by high corporate profits, still relatively low longer-term interest rates, and rising capacity utilization.[3]

Table 1-1: Real GDP Growth in Selected Economies

North America	2000	2001	2002	2003	2004	2005
Canada	5.2	1.8	3.1	2	2.9	2.9
United States	3.7	0.8	1.6	2.7	4.2	3.5
Japan	2.9	0.4	0.1	1.8	2.3	2.7
EU-members						
France	4.1	2.1	1.3	0.9	2.1	1.4
Germany	3.1	1.2	0.1	-0.2	1.6	0.9
Italy	3	1.8	0.3	0.1	0.9	0.1
Spain	5.0	3.5	2.7	3.0	3.1	3.4
UK	4	2.2	2	2.5	3.1	1.8
Emerging Economies						
China	8.4	8.3	9.1	10.0	10.1	9.9
India	5.3	4.1	4.2	7.2	8.1	8.3
Russia	10	5.1	4.7	7.3	7.2	6.4
Brazil	4.4	1.3	1.9	0.5	4.9	2.3
Mexico	6.6	- 0.2	0.8	1.4	4.4	3.0
NIEs						
Hong Kong	10	0.6	1.8	3.2	8.6	7.3
South Korea	8.5	3.8	7.0	3.1	4.6	4.0
Singapore	10	-2.3	4	2.9	8.7	6.4
Taiwan	5.8	-2.2	4.2	3.4	6.1	4.1
ASEAN-4						
Indonesia	5.4	3.8	4.4	4.7	5.1	5.6
Malaysia	8.9	0.3	4.4	5.4	7.1	5.3
Philippines	6	1.8	4.4	4.5	6	5.1
Thailand	4.8	2.2	5.3	7	6.2	4.4

Source: IMF, World Economic Outlook, April 2006

[1] Estimates for global GDP growth exist from other organizations, including the IMF, Oxford Economic Forecasting and different banks. The estimates used in this report appear to be the consensus.
[2] U.S. Bureau of Economic Analysis
[3] World Bank, East Asia Update, March 2006.

Japan

Real GDP growth in Japan increased from 2.3 per cent in 2004 to 2.7 per cent in 2005, confirming assessments that the Japanese economy has finally emerged from its more than decade long stagnation.[4] Growth has been broad based. Consumer confidence, rising employment[5], improving wages and bonuses, and an ending of consumer price deflation are key factors that have underpinned a sustained recovery in private consumption and hence in the wider economy. Rising consumer confidence and income have also boosted residential investment. Business investment has been notably strong, supported by high corporate profits and low borrowing costs. Robust export growth (7.4 per cent) rounds out the list of factors contributing to Japanese expansion last year.

Euro Zone

Growth in the euro zone decelerated from 2.1 per cent in 2004 to only 1.3 per cent in 2005.[6] Consumer spending has been particularly weak, reflecting poor labour market performance. For example, total employment growth was only 0.7 per cent in 2004 for the euro zone. Among the larger economies (Germany, France, Italy and Spain), only Spain registered employment growth greater than 1 per cent at 2.6 per cent.[7] In addition, in recent years the economic slowdown in the euro zone was mainly attributed to a fall in export growth induced by an appreciation of the euro and to weaker domestic demand in some countries.[8]

Economic performance across the euro zone remains uneven. Domestic demand has been strong in Spain and France, while net exports have subtracted from growth. In contrast, domestic demand has been much weaker in Germany and Italy, although German GDP growth has been boosted by net exports.

The UK

GDP growth in the UK in 2005 was weaker than expected, falling to 1.8 per cent, after posting a strong 3.1 per cent in 2004. The slowing in GDP last year reflected higher interest rates, a slowdown in consumption, oil price increases, and cooling of the housing market.

The Emerging Economies

In spite of higher crude oil and other commodity prices, the economic fundamentals faced by most emerging economies were largely favourable in 2005. Demand for their exports remained reasonably strong, with the U.S. still growing solidly and China continuing to be a second growth engine for the rest of the world. The fact that the Chinese economy is estimated to have been 16 per cent larger (e.g. in terms of GDP) in 2004 than previously thought merely emphasises its importance to countries of the region and to those further away. Growth performance in India was also robust. As a result of China's and India's robust expansion and their voracious appetite for raw materials, resource exporters in both the developed and developing worlds have experienced windfall revenues from rising commodity prices and demand for intermediate products.

An important reason why most emerging economies have performed well in recent years is that most have pushed through significant domestic reforms in at least one area of economic policy. For example, Brazil has imposed a disciplined monetary and fiscal policy framework to achieve and maintain low inflation despite the surge in oil prices. Others have allowed their economies to become more integrated with the world economy, thereby reaping the benefits of heightened trade (China, India and Brazil). Even Russia has seen a sharp reversal of its external and fiscal situation, owing to higher energy prices. The combination of all these factors has helped to reassure global investors and allowed the largest emerging economies to easily access international capital markets and at lower cost than previously.

[4] Growth decelerated in the G-7 countries, except for Japan.
[5] After reaching a high of 5.4 per cent in 2002, unemployment fell to a low of 4.4 per cent in 2005.
[6] Members of the euro zone: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.
[7] Eurostat
[8] For example, the euro went from US$0.89 in 2001, peaked at US$1.24 in 2004, and reached US$1.23 in 2005.

China

China's economy grew 9.9 per cent in 2005, down slightly from 10.1 per cent in 2004.[9] The composition of growth also changed over the course of the year, shifting from net exports to strengthening domestic demand. Net exports nevertheless made a strong contribution to growth in the first half of the year (exports grew by 30 per cent) and were reflected in the country's trade surplus of over $102 billion for the entire year. The second half saw the contribution of net exports shrink as export growth slowed (14 per cent) and imports revived, fuelled in part by stronger domestic investment and consumption.

India

The Indian economy exhibited strong performance in 2005 (8.3 per cent), led by sustained growth in the industry and the services sectors. Growth in industry was propelled by manufacturing activity which more than offset the deceleration in mining and quarrying. The services sector, which recorded double-digit growth for the second successive year, continued to be the major driver of economic activity, contributing almost three-fourth of India's overall real GDP growth.[10]

Brazil

Economic growth slowed to 3.0 per cent in 2005, due to weak domestic demand, particularly investment, following the earlier tightening of monetary policy; however private consumption remained robust, boosted by rising employment and real incomes.

Mexico

Economic growth in 2005 decelerated to 2.3 per cent in the case of Mexico, a result of the weaker performance of the agricultural and manufacturing sectors. The decline in inflation over the past year has allowed the loosening of earlier monetary tightening, which augurs well for investment and consumer spending in the years ahead.

Russia

Real GDP growth slowed to 6.4 per cent in 2005 from 7.2 per cent in 2004. The Russian economy over this period exhibited conflicting signals with an expansion of domestic consumption and lower output in the energy sector. Nevertheless, higher oil prices underpinned a further increase in Russia's current account surplus in 2005, a dramatic turn-about from the situation in the late 1990's and the early years of this decade.

NIEs

Growth in the Newly Industrialised Economies (NIEs) accelerated in the second half of the year 2005 supported by a rebound in exports, reflecting renewed strength in global demand for IT-related products (in Korea and Singapore) and for pharmaceuticals in Singapore. A pick-up in private demand boosted by stronger job growth in Korea was another contributor to growth. Growth rates were robust, but smaller compared to those in 2004.

ASEAN-4

Turning to the ASEAN-4, their economies varied; Indonesia's grew 5.6 per cent, the highest rate in nine years. The Malaysian economy expanded by 5.3 per cent, supported mainly by the recovery in the IT-sector and by sustained activity in the services sector. GDP grew by 5.1 per cent in the Philippines, helped by strong remittances inflows that amounted to 13 per cent of GNP. Economic growth in Thailand decelerated to 4.4 per cent in 2005, reflecting the effects of the Boxing Day 2004 tsunami, drought, and the rise in oil prices.

[9] These figures reflect the Chinese authorities' revisions to the GDP numbers in recent years.
[10] Reserve Bank of India

The Road Ahead

In spite of solid growth in 2005 affecting most parts of the world, and a robust start to 2006, there are important risks that could damage global economy growth in the months ahead.

The strength of U.S. consumer spending has been one of the drivers of global growth. But, with short-term interest rates rising[11], the housing market cooling and real wages falling, it is not clear for how long this can be sustained. A slowdown in the U.S. spending would put a dent in both U.S. and global growth.

Tightening monetary policy by an over-zealous European Central Bank could also jeopardise the nascent recovery in Europe before it has gathered momentum.

Further outbreak of the avian flu pandemic could knock 4-5 per cent off global growth, plunging the world economy into recession, but the probability of this is very low.

A continued rise in oil prices clearly would also curb future growth, allthough less so than in previous decades as fossil-based fuel is less of a factor in production than it was in earlier decades.

Finally, large and rising global macroeconomic imbalances continue to loom as a potential source of instability and a risk to future growth. The U.S. current account deficit now represents 6.4 per cent of the U.S. GDP. A further depreciation of the U.S. dollar might make markets focus again on the size of the U.S. current account deficit, putting more downward pressure on the dollar. Nevertheless, in the short run, growth in the U.S. remains robust, while it is burgeoning in Europe and has rebounded quite strongly in Japan.

[11] The Federal Reserve Bank has raised short-term rates 16 times since 2003.

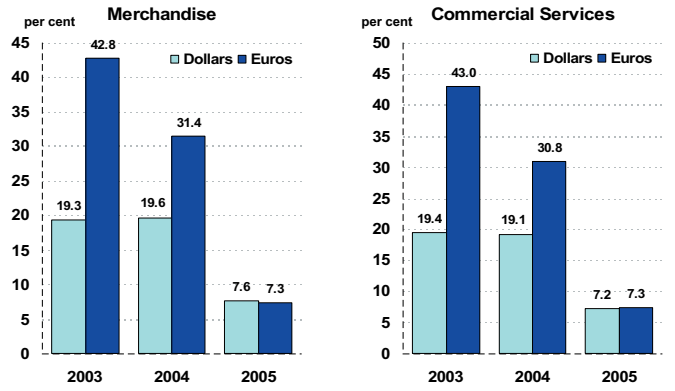
II OVERVIEW OF WORLD TRADE DEVELOPMENTS

World trade gained momentum towards the end of 2005, with the value of world merchandise exports rising by 13 per cent in 2005, compared to 21 per cent in 2004. For the first time, world merchandise exports exceeded the $10 trillion mark.[1] Commercial services exports are estimated to have increased by 11 per cent at current prices to $2.4 trillion in 2005 (19 per cent in 2004). It is worth noting this is the third consecutive year that commercial services exports expanded less rapidly than world merchandise exports.

Among the major geographic regions, Europe's trade performance was sluggish in 2005, reflecting the overall mediocre economic performance in that region. Export and import growth were the weakest of any region for both merchandises and services. Europe's growth in trade was also affected by exchange rate developments. Measured in euro terms, Europe's merchandise and commercial services exports expanded by 7.5 per cent in 2005, which is similar to that measured in dollar terms. However, annual percentage changes were higher in euro terms than in dollar terms for 2003 and 2004 (see Figure 2-1).[2]

Figure 2-1

Europe's Merchandise & Commercial Services Export Growth, 2003-2005



Source: WTO

At rates, respectively, of 12.0 and 10.0 per cent, the rise in North America's (Canada, Mexico and the U.S.) merchandise and services exports remained slightly below the global expansion rate. Over the last five years, the growth of North America's merchandise and commercial services exports represented about 50 per cent of the average annual growth rate observed globally (10 per cent). North America's merchandise imports expanded by 6 per cent in 2005.

Benefiting from rising oil prices, regions such as Africa, the Middle East and Russia recorded strong merchandise export growth in 2005, ranging from 29 per cent to 36 per cent. Africa and the Middle East recorded their highest shares in world merchandise exports in two decades, owing to vibrant oil markets over the last two years.

Trade developments vary across sectors as well as amongst countries and regions. Weak and stagnating prices for food, agricultural raw materials and manufactured goods contrasted with sharply rising prices for metals and fuels. As a result, the share of fuels and other mining products in world merchandise trade rose to 16 per cent last year, the highest level since 1985. On the other hand, the share of agricultural products in world merchandise exports in 2005 decreased to a historic low of less than 9 per cent.

Within the manufacturing sector, iron and steel products and chemicals registered the largest export growth rates. Export growth rates in computers and other electronic products were comparable to those of manufactured goods in general. In other words, electronic products have not regained the dynamic role that they played in the expansion of trade in manufactures throughout the 1990s.[3]

As for commercial services categories (transportation, travel and other commercial services), expansion rates were rather similar in 2005, ranging from nearly 10 per cent for travel to 12 per cent for transportation services. It is noteworthy that India, China and Brazil registered the highest growth in commercial services exports in 2005, 76.0, 31.0 per cent and 28.0 per cent, respectively. India and Brazil recorded the highest growths (73.0 and 38.0 per cent) in commercial services imports as well.

[1] Numbers in this chapter are in U.S. dollars.
[2] The annual average of daily rates (noon), U.S. Federal Reserve Bank, was used to convert exports in dollars into exports in euros.
[3] In the 1990s, the export value of electronic goods rose on average by 12 per cent or twice as fast as all other manufactured goods.

Table 2-1: World Merchandise Trade by Region and by Selected Countries, 2005 (US$ billions & %)

	Exports				Imports			
	Value	Annual percentage change			Value	Annual percentage change		
	2005	2000-05	2004	2005	2005	2000-05	2004	2005
World	**10,121**	**10**	**21**	**13**	**10,481**	**10**	**22**	**13**
United States	904	3	13	10	1733	7	17	14
Canada	360	5	16	14	320	6	14	14
Mexico	214	5	14	14	232	5	15	12
Brazil	118	17	32	23	78	6	31	17
Europe	**4,353**	**11**	**20**	**8**	**4,521**	**10**	**20**	**9**
EU-25	**3,988**	**10**	**19**	**7**	**4,120**	**10**	**20**	**8**
Germany	971	12	21	7	774	9	18	8
France	459	7	15	2	496	8	18	5
UK	378	6	14	9	501	8	20	6
Italy	367	9	18	4	380	10	19	7
Russia	245	18	35	34	125	23	28	28
Asia	**2,773**	**11**	**25**	**15**	**2,599**	**12**	**27**	**16**
Japan	596	4	20	5	516	6	19	14
China	762	25	35	28	660	24	36	18
NIEsa	731	9	25	12	676	8	27	14
India	90	16	33	19	132	21	37	35
Africa	**296**	**15**	**30**	**29**	**248**	**14**	**29**	**16**
Middle East	**529**	**15**	**30**	**36**	**318**	**15**	**26**	**19**
Oil exporters	**166**	**18**	**41**	**45**	**63**	**17**	**34**	**17**
Non oil exporters	**78**	**11**	**18**	**12**	**118**	**11**	**22**	**16**

Table 2-2: World Trade in Commercial Services by Region and by Selected Countries, 2005 (US$ billion & %)

	Exports				Imports			
	Value	Annual percentage change			Value	Annual percentage change		
	2005	2000-05	2004	2005	2005	2000-05	2004	2005
World	**2,415**	**10**	**19**	**11**	**2,361**	**10**	**18**	**11**
United States	353	5	11	10	289	7	15	10
Canada	51	5	11	9	62	7	13	10
Mexico	16	3	12	12	22	5	10	12
Brazil	15	11	21	28	22	7	12	38
Europe	**1,233**	**7**	**19**	**7**	**1,119**	**10**	**16**	**8**
EU-25	**1,104**	**11**	**19**	**7**	**1,034**	**10**	**16**	**7**
Germany	143	12	15	7	199	8	13	4
UK	183	9	23	-1	150	9	20	4
France	114	7	12	4	103	11	18	7
Italy	93	11	17	13	92	11	10	15
Russia	24	20	25	20	38	18	23	15
Asia	**543**	**12**	**26**	**19**	**595**	**10**	**25**	**15**
Japan	107	8	25	12	136	3	22	1
China	81	22	34	31	85	19	31	19
NIEs	175	8	18	9	165	8	21	10
India	68	33	66	76	67	29	53	73
Africa	**57**	**13**	**20**	**12**	**66**	**12**	**19**	**15**

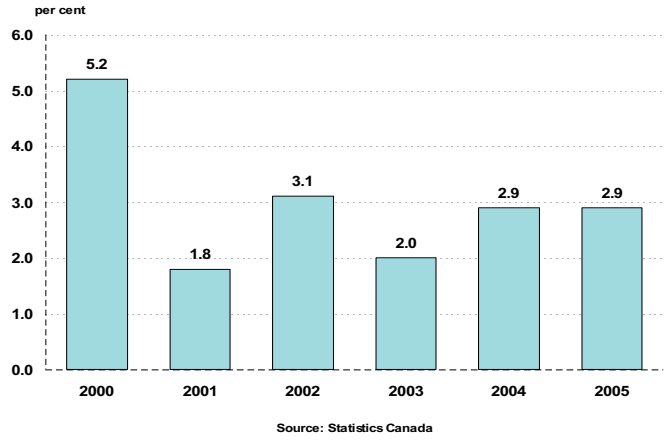
Adapted from WTO, April 2006. NIEs = Hong Kong, Korea, Singapore and Taiwan.

III CANADIAN ECONOMIC PERFORMANCE

Gross Domestic Product (GDP)

Canadian economic performance has been solid with a real GDP growth rate of 2.9 per cent in 2005, the same as in 2004. This growth was primarily driven by strong personal expenditure on goods and services, investment in residential and non-residential structures, investment in machinery and equipment, and by net exports.

Figure 3-1
Canadian Real GDP Growth, 2000-2005



Source: Statistics Canada

Figure 3-2 shows how the main categories (in dollar values) in GDP have evolved since 2000. However, real growth in these categories is even more telling. For example, personal expenditure on goods and services jumped 4 per cent in 2005. This was the largest annual increase since 2000, when rising labour income drove up personal expenditures. Similarly, in 2005 high energy prices helped boost economy-wide incomes including corporate profits and personal income. As a result, wages, salaries and supplementary labour income increased 5.4 per cent, the strongest annual increase since 2000. It is no surprise that personal expenditure on goods and services was the main contributor (2.21 per cent) to overall growth in real GDP, followed by business gross fixed capital formation (1.19 per cent).

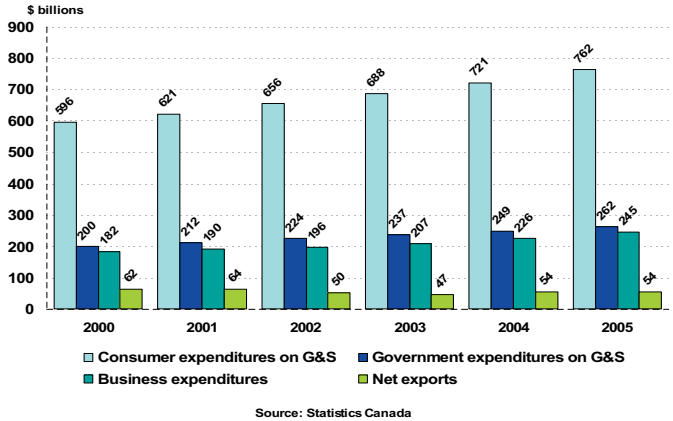
While growth in overall investment was unchanged from 2004 (at 6.9 per cent), there was a significant change in its composition. In 2004, much of the growth was attributable to continued strength in the housing market as investment in residential structures climbed 8.3 per cent. In 2005, residential growth decelerated to 3.3 per cent while growth in investment in non-residential structures climbed strongly to 6.8 per cent from a meagre 0.8 per cent increase in 2004. In 2005 investment in machinery and equipment jumped 10.7 per cent, recording its best annual performance since 1997.

Although the growth in Canadian exports was moderate in the first half of the year 2005, exports rebounded in the second half, fuelled by exports of automotive products which grew 3.7 per cent for the year as a whole.

Turning to particular sectors and industries, the growth in the service sector (3.3 per cent) surpassed that of the goods producing industries (2.5 per cent), which contrasts with the situation seen in 2004. Wholesale and retail trade, finance, as well as construction were among the key contributing sectors to Canadian growth. Weakness was noted in the mining and oil and gas extraction sector while manufacturing sector performance was rather moderate compared to 2004.

The wholesale trade industry posted the strongest increase (8.1 per cent) amongst the major sectors of the economy, with notable increases in motor vehicles, machinery and electronic equipment, and building materials. In addition, strength in imports of goods from other countries (7.7 per cent) contributed to strong overall wholesaling activities. Retail trade increased 4.5 per cent in the year, with particular strength in automotive retail stores. Activity in the financial sector, including insurance, real estate and rental and leasing, increased 3.4 per cent.

Figure 3-2
Gross Domestic Product, Expenditure-Based, 2000-2005

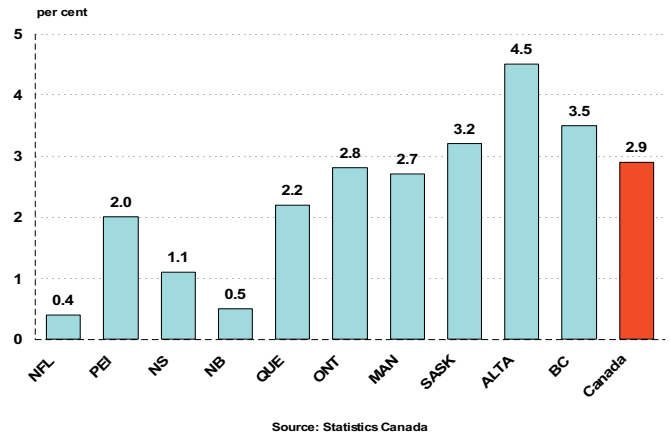


Source: Statistics Canada

GDP by Province

There was a regional divide with respect to GDP growth for 2005, with provinces west of Ontario registering the highest growth and all, with the exception of Manitoba, performing above the Canadian average of 2.9 percent.

Figure 3-3
Real GDP Growth by Province, 2005



Source: Statistics Canada

Oil price increases throughout 2004 and 2005 propelled Alberta's expansion, with GDP rising by 4.5 per cent, the highest of any province. Surging oil prices also boosted corporate profits, business investment, and personal expenditure on goods and services. Manufacturing advanced 8.9 per cent, supplying machinery, steel pipe and tube and temporary buildings to burgeoning oil-producing northern Alberta.

British Columbia followed with a 3.5 per cent gain, supported by a marked drop in the unemployment rate, strong growth in labour incomes, and a boom in residential construction. All these elements contributed to an increase in expenditures on durable goods and on infrastructure by all levels of government. Forestry output increased moderately, but exports of lumber were hampered by the appreciation of the Canadian dollar and the continuing trade dispute with respect to this sector with the United States.

GDP growth in Saskatchewan also outpaced the Canadian average at 3.2 per cent in 2005, powered by strong energy prices, increased activity in the wood and metal products, as well as exports of potash and uranium.

Manitoba's economy grew by 2.7 per cent in 2005, somewhat faster than the 2.3 per cent increase obtained in 2004, but slightly below the Canadian average. Electricity exports, coupled with the second lowest unemployment rate in the country, stimulated residential construction and personal expenditure.

Economic activity in Ontario rose by 2.8 per cent in 2005, marginally below the Canadian average for a third consecutive year. Export performance was affected by the appreciation of the Canadian dollar and by increased foreign competition; however, the auto sector remained strong and employment gains in various service industries compensated for job losses in manufacturing. Strength in labour incomes, resulting from another drop in the unemployment rate, and low interest rates further boosted personal expenditure.

Quebec's economy grew 2.2 per cent in 2005, with services production outperforming goods production. Within the manufacturing sector, aerospace production and aluminium production were standout performers.

In general, economic growth was sluggish in the Atlantic provinces, except in Prince Edward Island where the economy increased by 2.0 per cent, just above the 1.8 per cent gain in 2004. Labour income strength and low interest rates contributed to increased personal expenditure and investment in machinery and equipment.

Employment

Overall, Canadian labour market conditions continued to improve in 2005. Employment grew 1.4 per cent with 227,600 net new jobs created; this increase, however, was still less than that in the previous year (1.8 per cent or 284,500), with most of the increase in full time jobs (1.7 per cent) compared to part-time jobs (0.4 per cent).

The employment generated in services-producing sectors outperformed that in the goods-producing sector in 2005, with an increase of 1.7 per cent (+204,500) compared to 0.6 per cent (+23,100). Within the goods-producing sector, manufacturing turned in a lacklustre performance with employment down 3.6 per cent (-81,700). The decline was experienced in most provinces, but was especially strong in Quebec and Ontario. The strength in construction employment observed over the past few years continued in 2005 with an increase of 7.4 per cent (+70,400). Added employment in the industry coincided with more non-residential building construction.

Employment in mining and oil and gas extraction rose by 12.8 per cent (+23,900). Within the services-producing sector, educational services had the strongest employment growth in 2005, up 6.2 per cent (+64,600). Wholesale trade also had a strong year, growing by 4.4 per cent (+25,600). Finally, finance, insurance, real state and leasing had a robust performance with an increase of 4.1 per cent (+39,200).

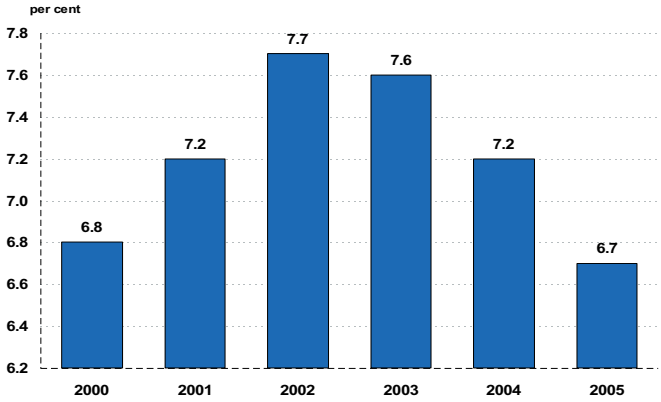
Although both the employment and the participation rates stayed almost the same as in 2004, the unemployment rate in Canada reached historic lows, closing the year 2005 at 6.7 per cent, down from 7.2 per cent in 2004. On a monthly basis, the unemployment rate reached a thirty-year low in November 2005 at 6.4 per cent.

This historically low unemployment rate decreased in all provinces. However, there was a great deal of variation in performance. All provinces east of Ontario experienced higher unemployment rates relative to the national average, all provinces west of Ontario experienced lower unemployment rates relative to the national average. Alberta and Manitoba registered the lowest unemployment rates in 2005, at 3.9 per cent and 4.8 per cent, respectively, whereas British Columbia and Alberta experienced the fastest drop in their unemployment rates.

The Dollar

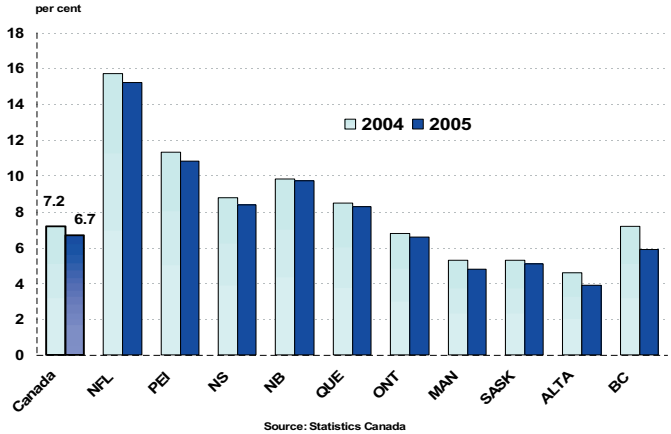
As displayed in Figure 3-6, the year 2005 was marked by further appreciation of the Canadian dollar against several of the world's major currencies (the U.S. dollar, the euro and the UK pound). For example, the Canadian dollar appreciated a further 7 per cent from the 11 per cent and 7 per cent gains posted in 2003 and 2004, respectively against the U.S. dollar. Despite the marked appreciation in the dollar, Canadian exports remained strong over this period as noted earlier (see Figure 3-7).

Figure 3-4
Unemployment Rate in Canada, 2000-2005



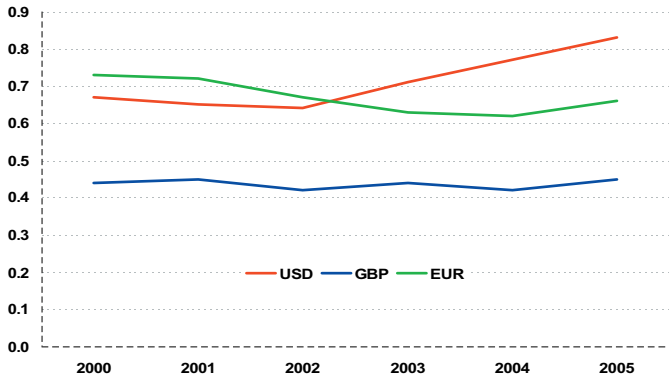
Source: Statistics Canada

Figure 3-5
Unemployment Rates in Canada and Provinces, 2004-2005



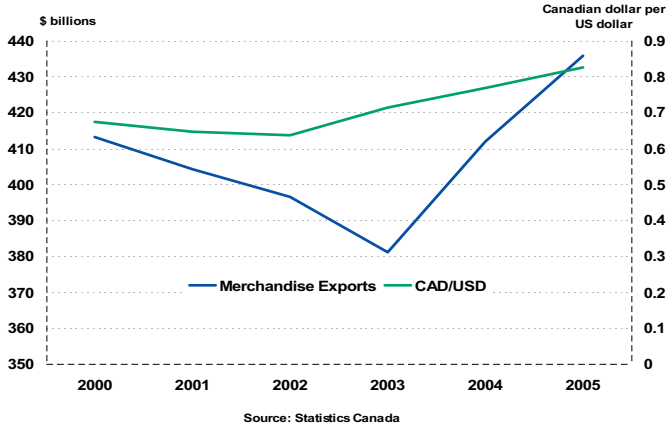
Source: Statistics Canada

Figure 3-6
Canadian Dollar Against the USD, the Euro and the UK Pound



Source: Statistics Canada

Figure 3-7
Canada's Exports and Exchange Rate

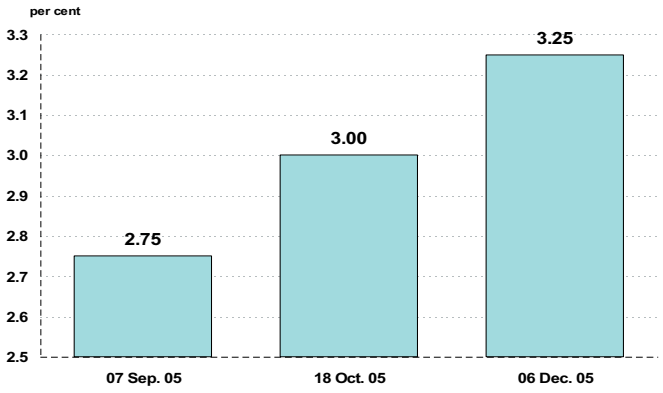


Source: Statistics Canada

Interest Rates

The year 2005 was also characterized by continuously rising short-term interest rates. As shown in Figure 3-8, the Bank of Canada raised its key policy interest rate by 25 basis points on September 7, 2005, on October 18, 2005 and again on December 6, 2005, bringing it to 3.25 per cent.[1] This gradual upward trend continued in 2006. It now stands at 4.25 per cent.

Figure 3-8
The Bank of Canada Key Policy Rate



Source: Bank of Canada

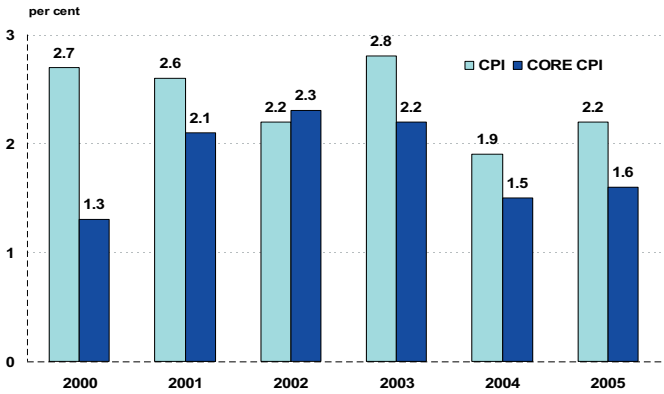
Prices

For the entire year 2005, consumers paid an average of 2.2 per cent more than they did in 2004 for the goods and services included in the Consumer Price Index (CPI) basket, up from the 1.9 per cent annual average rise in 2004. The main contributors to this increase were gasoline (12.8 per cent), homeowner's replacement cost (5.2 per cent), restaurant meals (2.9 per cent), property taxes (4.1 per cent), as well as fuel oil (25.5 per cent). On the other hand, some factors had a moderating effect on this increase such as computer equipment and supplies (-20.7 per cent) and traveller accommodation (-4.8 per cent).

The Core CPI, which excludes volatile items such energy and food, rose much less, at 1.6 per cent in 2005 and was only slightly higher than the 1.5 per cent increase witnessed in 2004.

Therefore, not only did higher energy prices boost incomes (corporate profits and labour incomes), but also they had a major impact on consumer price index.

Figure 3-9
CPI and Core CPI Annual Increases

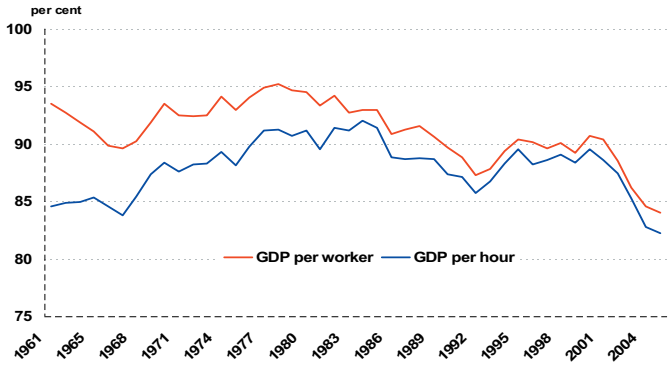


Source: Bank of Canada

Productivity Gap

In spite of solid economic growth in 2005 and sound macroeconomic fundamentals, there remain weaknesses in the Canadian economy that could be seen as risks to medium and long-term growth. Poor productivity performance is perhaps Canada's most significant weakness. Figure 3-10 displays the relative labour productivity levels in the total economy in Canada, as a percentage of the U.S. In 2005, labour productivity levels in the Canadian economy as a whole as proxied by the GDP per worker, represented 84 per cent of that the United States. Canadian performance was even worse (82.2 per cent) when productivity was measured by GDP per hour. This

Figure 3-10
Relative Labour Productivity Levels in the Total Economy in Canada, 1961-2005 (Canada as % of the Unites States)



Source: Center for the Study of Living Standards

[1] The key policy rate is the overnight rate at which major financial institutions borrow and lend one-day funds among themselves; the Bank sets a target level for that rate. Changes in the target for the overnight rate influence other interest rates, such as those for consumer loans and mortgages. They can also affect the exchange rate.

translates into an annual income gap with the United States of US$13,297 (on a purchasing power parity basis) and $8.64 per hour, respectively.

While Canada compares itself to the U.S. as its largest trading partner, biggest competitor, its neighbour and also the best performing economy in the world, there are an increasing number of countries outperforming Canada in terms of productivity performance. In terms of GDP per hour, not only do Norway, Germany, Ireland, Italy, Luxembourg, the UK, Sweden, Netherlands, France, Denmark, Belgium, and Austria surpass Canada, but also France, Luxembourg and Norway outperform the U.S. as well.[2]

[2] Groningen Growth and Development Centre Database, February 2006.

IV OVERVIEW OF CANADA'S TRADE PERFORMANCE

Solid growth in the global economy and in Canada, robust growth in the main emerging economies of China and India, and increased demand for natural resources including energy products, all contributed to Canada's record trade performance in 2005.

Exports of goods and services were equivalent to 37.7 per cent of Canadian gross domestic product in 2005. This is down somewhat from 2004 as a result of strong growth in the domestic economy, but was sufficient to place Canada second in the G-8 countries. As shown in Table 4-1, Germany was the most open economy in the G-8, followed by Canada, Italy, France and the UK.

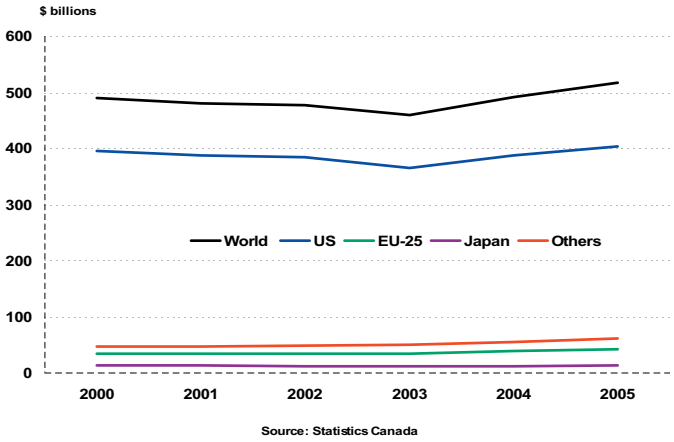
Despite the continued appreciation in the Canadian dollar against the U.S. dollar, exports of Canadian goods and services increased 5.2 per cent to $516.4 billion in 2005, surpassing the previous record reached in 2000 ($489.0 billion). As with exports, imports also rose, increasing 5.8 per cent to $463.1 billion. These developments resulted in the trade surplus widening to $53.3 billion, with a goods surplus at $66.7 billion and a service trade deficit at $13.4 billion. The annual surplus on goods remained more or less stable at $66.7 billion, as both exports and imports rose by around $24 billion. The balance of the current account which covers net transactions on goods, services, investment income and current transfers reached a record high at $30.2 billion.

Exports of goods and services to and imports of goods and services from all principal trading areas (the U.S., the EU, Japan and other countries) were up in 2005 compared to 2004. Of the principal trading areas, the United States posted the largest gain for Canadian goods exports in absolute terms, up by $18.3 billion to $369.3 billion, whereas Canadian goods imports from the U.S. increased by $8.3 billion to $258.4 billion. The goods trade surplus with the U.S., which thus increased to $110.6 billion, was responsible for Canada's entire trade surplus.

Exports of goods to the EU grew by 7.4 per cent in 2005 to nearly $29 billion outpacing the growth in imports from Canada (5.0 per cent). However, imports from the EU were bigger than exports to that trading partner, which resulted in a goods deficit with the European Union of $9.4 billion.

Exports of goods to Japan advanced by 5.3 per cent to $10.5 billion while imports of goods from Japan increased by 11.6 per cent to $11.2 billion. As a consequence, the goods deficit with Japan reached $0.7 billion.

Figure 4-1
Exports of Goods and Services by Major Area, 2000-2005



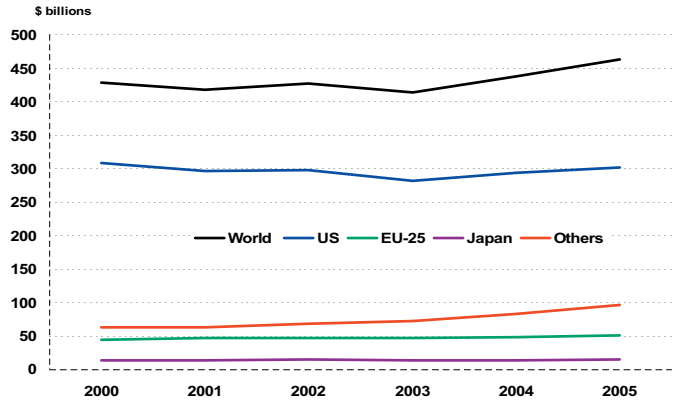
Source: Statistics Canada

Table 4-1: Exports of Goods and Services as a Proportion of GDP, 2000-2005

	2000	2001	2002	2003	2004	2005
Canada	45.4	43.4	41.3	37.8	38.1	37.7
France	28.6	28.1	27.1	25.7	26.0	26.1
Germany	33.4	34.8	35.7	35.7	38.0	40.2
Italy	27.1	28.4	27.0	25.8	26.6	27.2
Japan	9.9	9.4	10.1	10.6	11.8	12.5
UK	28.0	27.4	26.2	25.5	25.2	26.1
U.S.	10.9	9.9	9.3	9.3	9.8	10.2
G7 Total	17.4	16.9	16.8	17.1	18.2	n.a.
Russia	44.1	36.9	35.2	35.2	35.0	n.a.

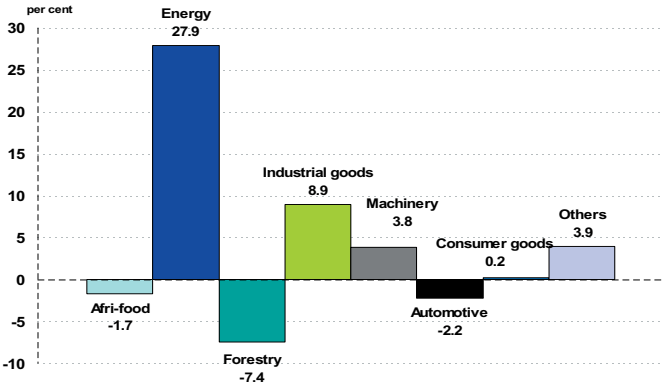
n.a: not available

Figure 4-2
Imports of Goods and Services by Major Area, 2000-2005



Source: Statistics Canada

Figure 4-3
Growth in Goods Exports by Major Groups, 2004-2005



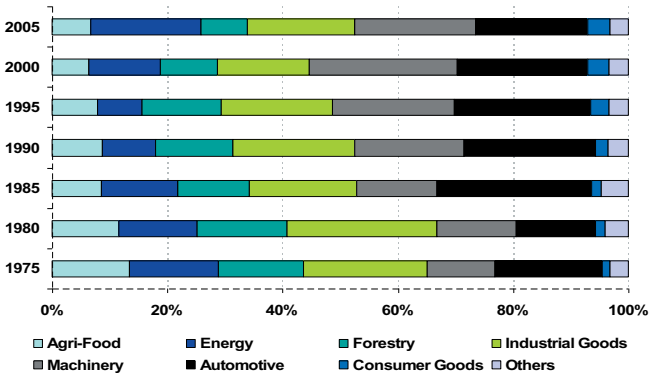
Source: Statistics Canada

Canada's exports to Others[1] expanded by 9.5 per cent to $29.7 billion while imports of goods from Others accelerated 23.1 per cent to $54.5 billion. Canada's goods trade deficit with non-US partners thus widened to $43.9 billion, offsetting the enormous Canadian surplus with the U.S. Among these in the "Others" countries category is China which is accounting for an increasingly large share of Canada's goods deficit with non-US partners.

As shown in Figure 4-3, all major categories of goods exports increased, led by energy products (27.9 per cent). The exceptions were forestry products, automotive products and agricultural and fishing products, which declined by 7.4 per cent, 2.2 per cent and 1.7 per cent, respectively.

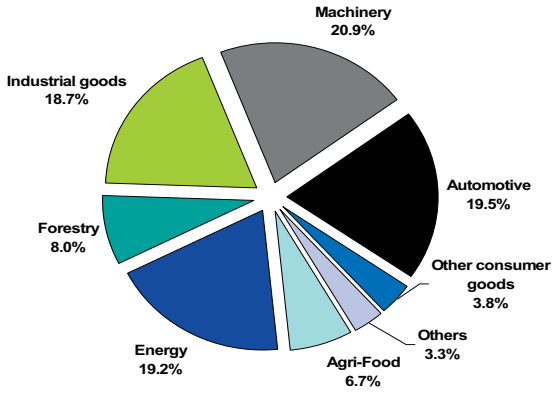
The Canadian energy products sector in particular has been booming, thanks to historically high commodity prices and to increased global demand, particularly in the U.S., China and India. However, the rise of energy products in Canadian exports is not a one year surge as illustrated in Figure 4-4.[2] This graph reveals that the share of energy products has climbed from a low of 7.7 per cent in 1995 to 19.2 per cent in 2005. Figure 4-4 also shows the downward trend of agricultural and fishing as well as forestry products in Canadian goods exports. As displayed in Figure 4-5, machinery and equipment, automotive products, energy products and industrial products accounted for almost 80 per cent of exports in 2005.

Figure 4-4
Composition of Goods Exports, 1975-2005



Source: Statistics Canada

Figure 4-5
Composition of Goods Exports in 2005



Data: Statistics Canada

[1] Meaning "not the U.S., the EU-25, or Japan."
[2] Figures 4-1 to 4-7 are on a balance of payments basis.

On the import side, the higher import levels in 2005 reflected the dependence of Eastern Canada (Atlantic Provinces, Quebec and Ontario) on imported oil, with energy products jumping by 35.8 per cent in 2005, as well as strong business investment in industrial goods and materials (up by 6.8 per cent), and in machinery and equipment (up by 6.2 per cent).

Also, the annual average growth (15.4 percent) in goods imports from Others (which includes China) outpaced the growth in goods imports from the U.S., the EU and Japan, reflecting rising imports from China.

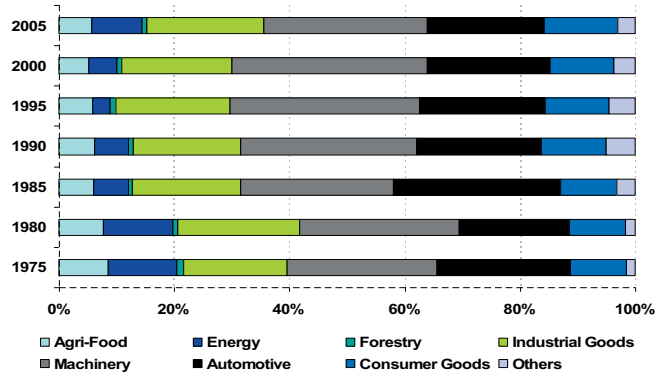
Figures 4-6 and 4-7 represent the composition of Canadian imports by major product groups in the last three decades and in 2005, respectively. Over time, machinery and equipment, automotive products and industrial goods accounted for the largest share of imports. Energy products were the most volatile category in the last 30 years. Imports of machinery and equipment comprised the largest share in 2000 while imports of automotive products were the highest in 1985.

At an annual total of almost $63 billion, Canada's services exports were surpassed by services imports of $76.4 billion. This resulted in an increase in the services deficit to $13.4 billion from $12.7 billion in 2004. The travel deficit increased $1.3 billion as fewer Americans visited Canada while Canadians spent more visiting both U.S. and non-US destinations than in the previous year. The deficit in transportation services increased by $1.0 billion in 2005, as the deficit on passenger fares widened in line with travel activity. Higher receipts, notably for financial services, combined with lower payments for management and communication services, accounted for most of the $1.4 billion reduction in the commercial services deficit for 2005.

In terms of growth, total service exports and imports were sluggish, increasing by 1.6 per cent and 1.8 per cent, respectively. By major category, transportation service exports posted a solid growth (2.8 per cent) while government services registered a robust growth (10.6 per cent). The growth rate for commercial services was rather weak at 1.8 per cent. Within commercial services, the top performers were other financial services and construction services, advancing by 33.5 per cent and 21.3 per cent, respectively. On the downside, advertising and related services (-75.2 per cent), non-financial commissions (-72.7 per cent) and equipment rentals (-72.3 per cent) experienced the steepest declines. On the import side, travel and transportation services grew by 4.4 per cent and 7.3 per cent, respectively, during 2005. Commercial services imports declined by 1.9 per cent in 2005, pushed down by communications services (-21.8 per cent), management services (-9.0 per cent), and audio-visual services (-6.0 per cent).

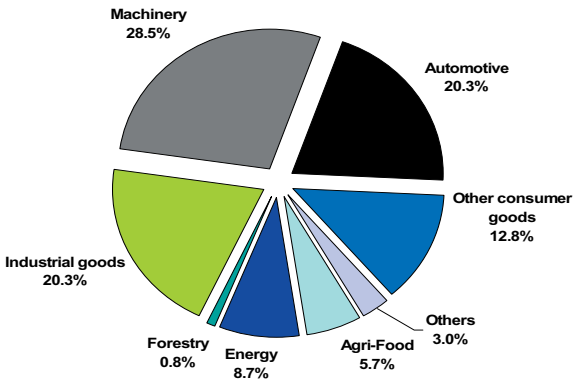
By geographical destination, the service trade deficit with the U.S. widened from $6.8 billion to $9.2 billion in 2005. This deficit was more than double the deficit with all other destinations combined ($4.1 billion).

Figure 4-6
Composition of Goods Imports, 1975-2005



Source: Statistics Canada

Figure 4-7
Composition of Goods Imports in 2005



Data: Statistics Canada

Merchandise Trade[3]

In 2005, 83.9 per cent of merchandise exports were destined for or through the U.S. Only 5.7, 2.1, 1.9 and 1.6 per cent of merchandise exports were bound for the EU, Japan, the UK and China, respectively. As shown in Table 4-2, the growth of Canada's merchandise exports was the strongest with respect to Korea (23.7 per cent), Germany (21.0 per cent), the Netherlands (13.6 per cent), and Mexico (8.7 per cent), respectively; Canada's exports to China rose by only 6.1 per cent in 2005. However, the share of major export markets has changed somewhat in the last six years. Figure 4-8 reveals that, among the top-five destinations, market share has increased for all markets, except for the U.S. and Japan. While the U.S. share decreased, Japan's share remained stable.

Table 4-2: Canada's merchandise exports and imports by area

Canada's Merchandise Export by Area ($ in billions)

Country	2004	2005	Share in 2005	% Change 2005/2004
World	411.8	435.8	100.0	5.8
U.S.	348.1	365.7	83.9	5.1
Japan	8.6	9.1	2.1	6.6
UK	7.7	8.2	1.9	6.7
China	6.7	7.1	1.6	6.1
Mexico	3.0	3.3	0.8	8.7
Germany	2.7	3.2	0.7	21.0
Korea	2.3	2.8	0.6	23.7
France	2.4	2.5	0.6	6.5
Belgium	2.3	2.3	0.5	0.7
Netherlands	1.9	2.2	0.5	13.6
EU 25-	22.8	24.7	5.7*	8.2

Canada's Merchandise Imports by Area ($ in billions)

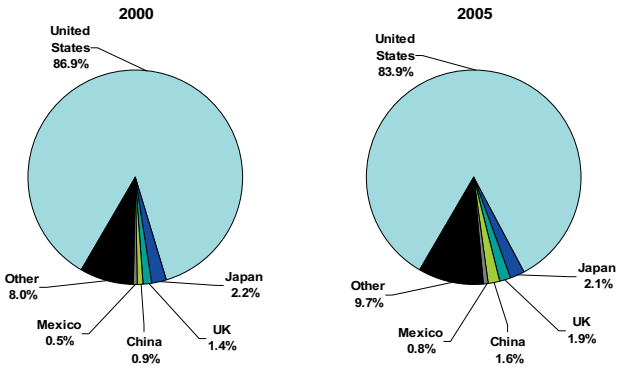
Country	2004	2005	Share in 2005	% Change 2005/2004
World	356.1	380.7	100.0	6.9
U.S.	209.0	215.1	56.5	2.9
China	24.1	29.5	7.8	22.4
Japan	13.5	14.8	3.9	9.4
Mexico	13.4	14.6	3.8	8.6
UK	9.7	10.4	2.7	7.7
Germany	9.4	10.3	2.7	9.0
Norway	5.0	6.1	1.6	22.3
Korea	5.8	5.4	1.4	-7.7
France	5.3	5.0	1.3	-6.4
Italy	4.6	4.6	1.2	0.1
EU-25	42.0	45.6	12.0*	8.5

*Includes Germany, France, Belgium and Netherlands

Source: Statistics Canada

[3] The term "merchandise trade" is used to refer to commodity trade on a Customs basis in contrast with "goods trade" that references trade on a Balance of Payments basis. The Customs data is produced on an internationally harmonized commodity classification system (HS) that is broken down into chapters numbered from 1 to 99. Chapters 98 and 99 of the HS system represent special transactions and are excluded from the following analysis.

Figure 4-8
Major Merchandise Market Exports in 2000 and 2005



Data: Statistics Canada

The picture for imports is somewhat different from that of exports. The U.S., although still dominant, accounts for a much smaller share of Canadian merchandise imports at 56.5 per cent in 2005 than it does for exports. The combined Canadian merchandise imports from China, Mexico and Korea are about the same as Canadian imports from the EU-25.

Merchandise Trade by Sector with Selected Major Trading Partners

The United States

Canada's total merchandise exports to the United States grew by 5.1 per cent to $365.7 billion in 2005. Despite this increase, the U.S. share in total merchandise exports fell 0.6 per cent to 83.9 per cent. Canadian merchandise exports to the U.S. are dominated by mineral fuel and oil, motor vehicles and machinery which together accounted for about 51 per cent of all merchandise exports to the U.S. The share of Canada's top 10 exports amounted to 73.4 per cent of all exports to the U.S., or $268.3 billion.

As mentioned earlier, rising commodity prices have been driving the increasing value of Canadian exports and imports up over the past few years. For example, the export value of mineral fuel and oil increased by 26.5 per cent in 2005, the highest growth of all exports.

On the import side, Canadian merchandise imports from the U.S. expanded by 2.9 per cent to $215.1 billion in 2005. At this level, the U.S. accounted for 56.5 per cent of all merchandise imports, down 2.2 per cent from a year earlier. Motor vehicles and machinery

Figure 4-9a
Top-10 Merchandise Exports to the US, 2005

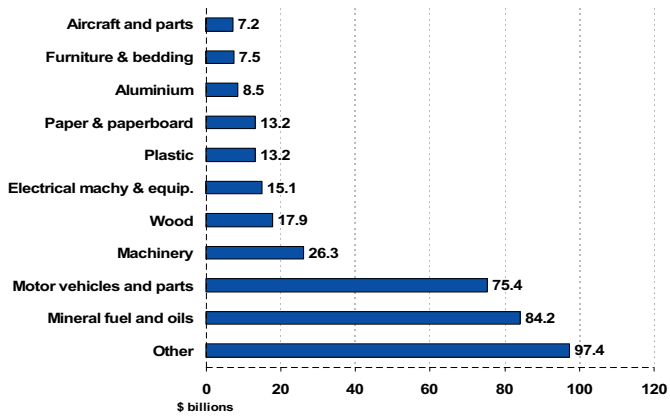
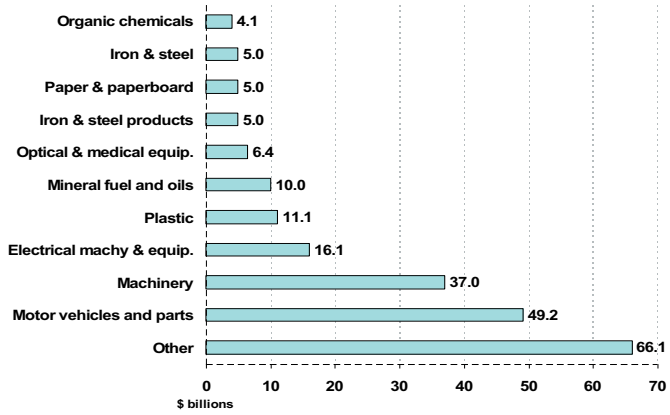


Figure 4-9b
Top-10 Merchandise Imports from the US, 2005



and equipment — both mechanical and electrical — accounted for 47.6 per cent of all merchandise imports from the U.S. in 2005. The combined top 10 merchandise imports at the HS-2 digit level accounted for about 69.3 per cent of total merchandise imports from the U.S. or $149.0 billion of the $215.1 billion total.

Once again, commodity imports exhibited the fastest increases in 2005, with mineral fuel and oil, iron and steel, and iron/steel products rising by 37.2, 16.9 and 11.2 per cent, respectively.

The European Union

Canadian merchandise exports in 2005 to the EU-25 were up by 8.2 per cent to $24.7 billion, from $ 22.8 billion in 2004. The top 10 products accounted for 68.4 per cent, led by precious stones and metals (16.4 per cent), mechanical machinery (12.1 per cent), and electrical machinery

(9.2 per cent). Inorganic chemicals (85.8 per cent), mineral fuel and oil (56.3 per cent), ores (39.5 per cent) and optical and medical instruments (16.4) displayed the fastest growth, while sectors like wood pulp (-17.2 per cent), aircraft and spacecraft (-10.7 per cent) and nickel (-9.7 per cent) showed the steepest declines in 2005.

Canadian merchandise imports from the EU outpaced exports, rising by 8.5 per cent to $45.6 billion in 2005, from $42 billion in 2004. Mechanical machinery and equipment, mineral fuel and oil, and pharmaceutical products accounted for more than 50 per cent of imports from the EU. Increases in mineral fuel and oil as well as in iron and steel accelerated with annual percentage changes equal to 46.0 and 14.4 per cent, respectively. Aircraft and spacecraft imports experienced the steepest decline during 2005 (-29.3 per cent).

Japan

During 2005, Canadian merchandise exports to Japan increased 6.6 per cent to $9.1 billion. The ten most important products exported to Japan accounted for slightly more than three-quarters of total merchandise exports to that country. Five products alone – wood, meat, grain seeds, mineral fuel and oil, and ores – accounted for about 55 per cent of all exports.

Merchandise imports from Japan climbed by 9.4 per cent to $14.8 billion in 2005, up from $13.5 billion the year before. Imports from Japan were highly concentrated in only a few sectors, with the top 10 accounting for over 92 per cent of total merchandise imports from Japan. The largest sectors included motor vehicles (38.9 per cent), machinery and equipment (21.0 per cent), and electrical machinery (15.7 per cent). Toys and sports equipment (118.7 per cent), aircraft and spacecraft (35.7 per cent) as well as iron and steel products (26.5 per cent) experienced the fastest increases in 2005.

Figure 4-10a
Top-10 Merchandise Exports to the EU, 2005

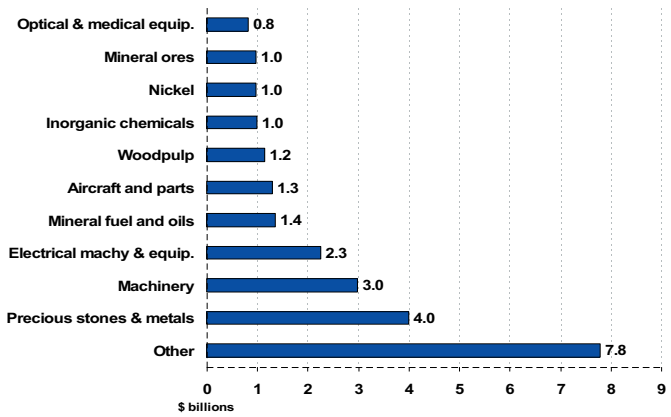


Figure 4-11a
Top-10 Merchandise Exports to Japan, 2005

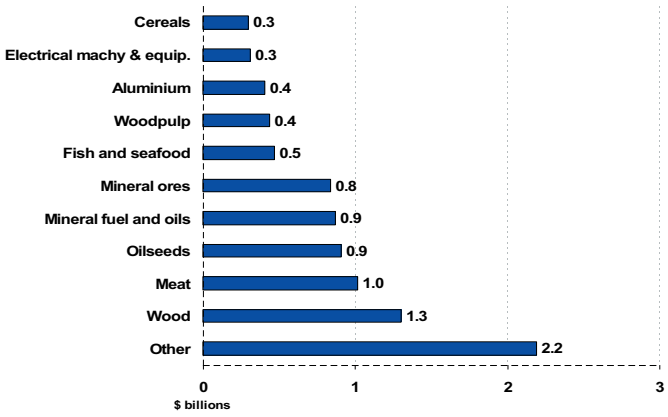


Figure 4-10b
Top-10 Merchandise Imports from the EU, 2005

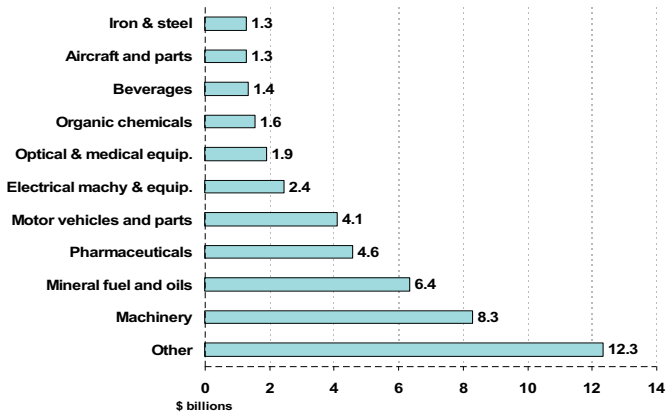
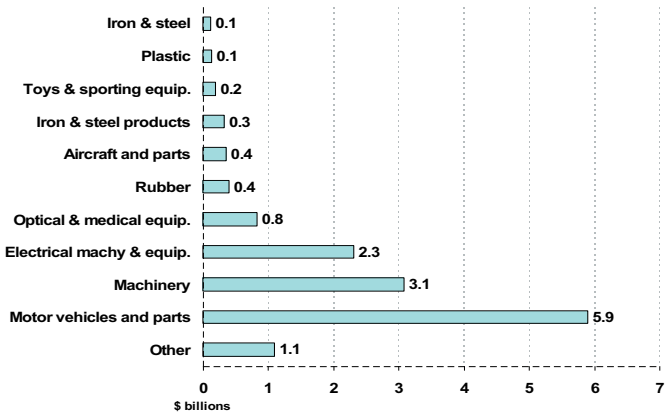


Figure 4-11b
Top-10 Merchandise Imports from Japan, 2005



China

China is Canada's fourth-largest export market and second-largest source for Canadian imports. Canadian merchandise exports to China increased 6.1 per cent to $7.1 billion in 2005, up from $6.7 billion the year before. The top 10 products accounted for 68 per cent in 2005. Organic chemicals and wood pulp exports were the only categories to approach one billion dollars of exports. Ores (168.5 per cent), salt and sulphur (117.7), fertilizers (58.7 per cent) and machinery (24.3) experienced the highest growth in 2005, whereas cereals, motor vehicles and wood pulp declined steeply by 51, 35.8 and 16 per cent, respectively.

Figure 4-12a
Top-10 Merchandise Exports to China, 2005

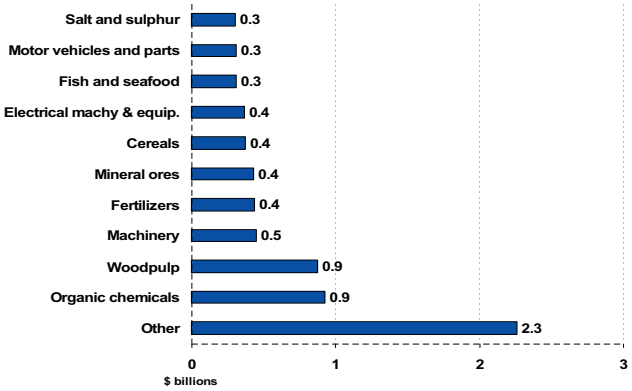
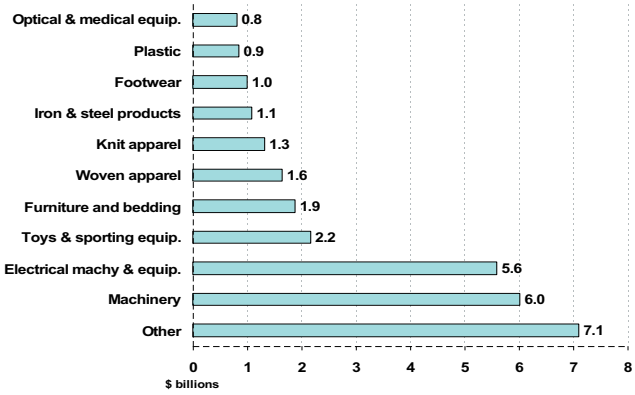


Figure 4-12b
Top-10 Merchandise Imports from China, 2005

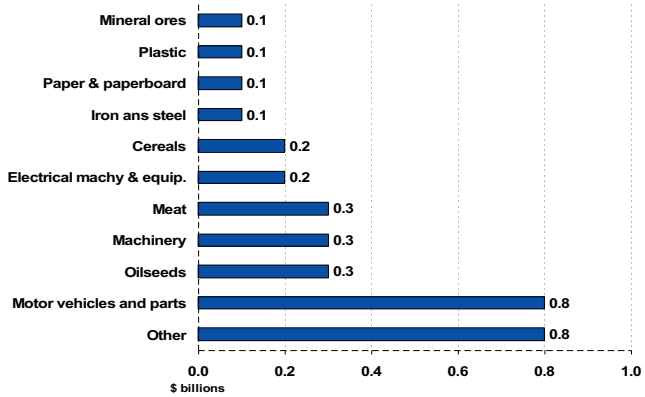


Canadian merchandise imports from China outpaced exports by a wide margin, increasing by 22.4 per cent to $29.5 billion in 2005. The major imports from China were comprised of mechanical machinery, electrical machinery and equipment, and toys and sports equipment. In terms of growth, apparel, iron and steel surpassed 45 per cent while both mechanical and electrical machinery were over 25 per cent. No top 10 category grew less than 5 per cent.

Mexico

Mexico is the Canada's fifth largest merchandise export market and fourth largest import market.[4] Merchandise exports to Mexico grew 8.7 per cent to $3.3 billion, from $3.0 billion in 2005. The top 10 exports to Mexico accounted for over three-quarters of all exports to that country, led by motor vehicles (23.1 per cent), oilseeds (10.5 per cent) and machinery (9.3 per cent). Among the major exports to Mexico, motor vehicles, iron and steel and electrical machinery recorded the highest growth in 2005, at 122.4, 69.6 and 62.4 per cent increases, respectively.

Figure 4-13a
Top-10 Merchandise Exports to Mexico, 2005

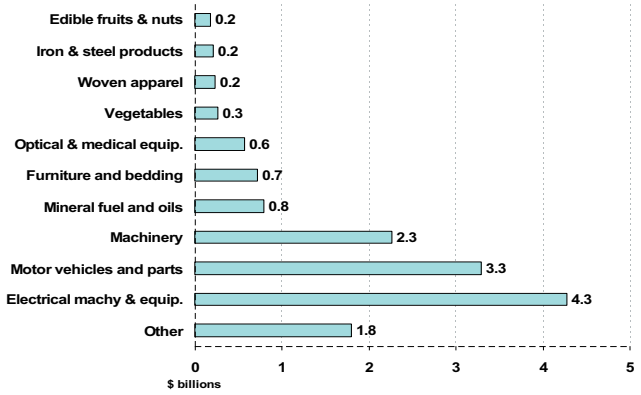


Merchandise imports from Mexico increased by 8.6 per cent to $ 14.6 billion in 2004. Overall, merchandise imports were highly concentrated with the top-three imports accounting for 67.6 percent of

[4] Discrepancies between Canadian and Mexican statistics were significant in 2005. Mexico's imports from Canada exceeded Canada's exports by $4.2 billion. Similarly, Canadian imports from Mexico were greater than Mexican exports by $9.5 billion. Reconciliation studies between Canada and Mexico identified misallocation and export undercoverage as the major causes for discrepancies. Country misallocation is the attribution of trade to a country that is not the final destination of goods, resulting in the situation where the two countries credit trade to different countries. For example, Canada might ship goods through the United States to the final destination of Mexico. Undercoverage is the situation in which trade is not reported to the compiling country and is therefore missing entirely from its officially published statistics.

the total, whereas the top 10 imports captured about 88 per cent of all imports. In terms of growth, the top performers were once again related to commodities – mineral fuel and oil, and iron and steel – at 119.7 and 34.2 per cent, respectively. In addition, edible fruits deserve mention at 23.8 per cent increase.

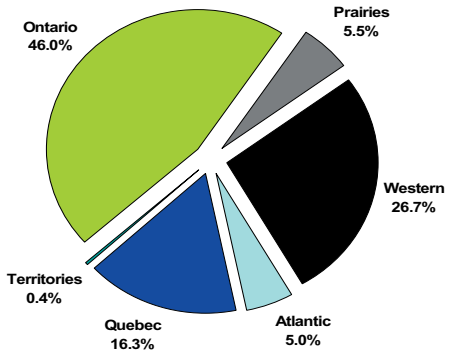
Figure 4-13b
Top-10 Merchandise Imports from Mexico, 2005



Provincial Trade Performance

All provinces and territories witnessed an increase in their merchandise exports to the world in 2005, except for the Northwest Territories. Among provinces, Prince Edward Island, Alberta, Saskatchewan and New Brunswick experienced the fastest growth in merchandise exports in 2005. The main exports from these provinces were prepared vegetables and fish for Prince Edward Island, and mineral fuels and oils for Alberta, Saskatchewan and New Brunswick. Also noteworthy is the fact that the weakest growth in merchandise exports were experienced by the two largest provinces -Ontario and Quebec – due in part to the relatively weak performance in the manufacturing sector in both provinces.

Figure 4-14
Share of Merchandise Exports by Canadian Region



Data: Statistics Canada

Of the Canadian regions, Ontario accounted for 46 per cent of all Canadian exports to the world in 2005, followed by the western provinces (Alberta and British Columbia) at a combined 26.7 per cent, Quebec at 16.3 per cent, the Prairies at 5.5 per cent, and the Atlantic provinces at 5 per cent.

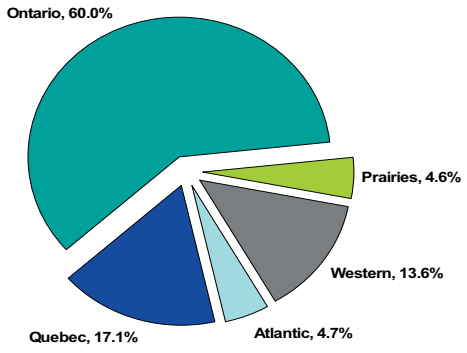
Imports from the world were also up for all provinces and territories in 2005, with the exception of Newfoundland, Yukon, and Northwest Territories. Prince Edward Island (47.6 per cent), Alberta (21 per cent), Saskatchewan (19.9 per cent), New Brunswick (16.3 per cent) and Quebec

Table 4-3: Merchandise Exports by Province ($ millions and percentage change)

	2000	2001	2002	2003	2004	2005	2005/2004 Change
Newfoundland	3,914	3,529	5,602	4,799	4,563	4,598	0.8
Prince Edward Island	697	677	694	648	667	810	21.5
Nova Scotia	5,219	5,807	5,344	5,477	5,859	5,819	-0.7
New Brunswick	7,476	8,351	8,269	8,574	9,480	10,722	13.1
Quebec	74,200	71,113	68,454	64,191	68,476	70,935	3.6
Ontario	207,079	201,720	206,496	189,099	198,871	200,692	0.9
Manitoba	9,705	9,694	9,567	9,329	9,679	10,038	3.7
Saskatchewan	12,603	11,732	11,282	10,389	12,341	13,997	13.4
Alberta	55,880	57,536	49,549	57,640	67,687	80,835	19.4
British Columbia	35,484	32,923	30,067	29,259	32,234	35,687	10.7
Northwest Territories	665	771	897	1,588	1,975	1,686	-14.6
Yukon	20	12	6	5	5	11	139.8
Nunavut	274	221	152	3	3	4	12.6

Source: Statistics Canada

Figure 4-15
Share of Merchandise Imports by Canadian Region



Data: Statistics Canada

(13.6 per cent) experienced the fastest growth in imports for 2005. The products driving this growth were mechanical and electrical machinery, and toys and sports equipment for Prince Edward Island, mineral fuel and oil, vehicles, aircraft and spacecraft, and iron and steel for Alberta, mechanical and electrical machinery, vehicles, and iron and steel for Saskatchewan. For New Brunswick, the products behind the growth in imports were mineral fuel and oil, organic chemicals, machinery and vehicles while mineral fuel and oil and aircraft and spacecraft were the main import growth drivers for Quebec.

By region, Ontario accounted for a bigger share (60 per cent) of merchandise imports than it did for exports, followed by Quebec (17.1 per cent) and the western provinces (13.6 per cent).

World Merchandise Trade Performance

How does Canada fare with respect to world merchandise trade relative to its main partners and competitors? As shown in Table 4-4, the U.S. was the world's largest economy in 2005 accounting for about one third (28.1 per cent) of the world's GDP, followed by Japan (10.3 per cent), Germany (6.3 per cent), China (5.0 cent) and the UK (5.0 per cent). Germany was world's largest exporter accounting for 9.3 per cent of world exports, followed by the U.S. (8.7 per cent), and by China (7.3 per cent). As the smallest economy of the G-7 countries, Canada also had the smallest share in world merchandise exports. However, its share of exports was bigger than its share of world's GDP, in contrast with all other G-7 countries with the exception of Germany. Canada's average growth rate in merchandise exports was the highest of all G-7 countries over the period 1995-2005. Emerging markets recorded the highest growth rates in merchandise exports over the same period, led by China (17.7 per cent), and followed by India (11.4 per cent) and Mexico (10.4 per cent). The U.S. was the world's largest importer of goods followed by Germany and China. Once again, Canada's share in world merchandise imports was higher than its share in GDP. As for exports, China, India and Mexico witnessed the highest import growth over the period 1995-2005, which highlights the export opportunities that these emerging economies represent for Canada and other countries.

Table 4-4: Economic Size and Merchandise Trade for Selected Countries

Country	Share of World GDP in 2005	Share of World Merchandise Exports in 2005	Export average growth rate over 1995-2005	Share of World Merchandise Imports in 2005	Import Average Growth Rate Over 1995-2005
Australia	1.6	1.0	7.1	1.2	7.4
Brazil	1.8	1.1	9.8	0.7	3.7
Canada	2.5	3.5	6.5	3.0	6.6
China	5.0	7.3	17.7	6.1	17.5
France	4.7	4.4	4.3	4.6	5.5
Germany	6.3	9.3	6.4	7.2	5.3
India	1.7	0.9	11.4	1.2	14.3
Italy	4.0	3.5	4.6	3.5	6.3
Japan	10.3	5.7	3.0	4.8	4.4
Korea	1.8	2.7	8.6	2.4	6.8
Mexico	1.7	2.1	10.4	2.2	11.8
United Kingdom	5.0	3.6	4.7	4.7	6.5
United States	28.1	8.7	4.5	16.1	8.4

Source: WTO and IMF

V OVERVIEW OF CANADA'S INVESTMENT PERFORMANCE

Global Foreign Direct Investment Inflows

Foreign Direct Investment (FDI) flows are usually preferred over other forms of external finance because they are non-debt creating, relatively non-volatile and their returns depend on the performance of the projects financed. FDI also facilitates international trade and importantly, the transfer of knowledge, skills and technology.

FDI has been the main engine of globalization over the last two decades.[1] Worldwide FDI inflows surged from about US$161 billion in 1991 to US$1.4 trillion in 2000, almost a nine-fold increase. Thereafter, FDI inflows posted a sharp drop over 2001-2003, declining by 54 per cent to US$638 billion. New UNCTAD estimates suggest that global foreign direct investment inflows climbed by a robust 29.0 per cent to reach US$896.7 billion in 2005.

FDI flows to developed economies dominated global growth in inward FDI ending a four-year slump; they rose from US$414.7 billion in 2004 to US$573.2 billion in 2005 or 38.2 per cent. The United Kingdom led all developed economies with inflows of US$219.1 billion,

Table 5-1: Global FDI Inflows for Selected Regions and Economies, 2003-2005 (US$ in billion)

Host Region/Economy	2003	2004	2005	Growth Rate 2004-2005
World	637.8	695.0	896.7	29.0
Developed World	441.7	414.7	573.2	38.2
Europe	358.9	258.2	449.2	74.0
EU-25	340.1	259.1	445.3	71.9
France	42.5	24.3	48.5	99.6
Germany	27.3	-38.6	4.9	-112.7
Italy	16.4	16.8	13.0	-22.6
Luxembourg	83.8	67.2	13.4	-80.1
UK	27.4	77.6	219.1	182.3
Czech Republic	2.1	4.5	12.5	177.8
United States	56.8	95.6	106.0	10.9
Japan	6.3	7.8	9.4	20.5
Developing Economies	172.1	243.1	273.5	12.5
Africa	17.2	18.7	28.9	54.5
Latin America and the Caribbean	48.0	68.9	72.0	4.5
Brazil	10.1	18.2	15.5	-14.8
Chile	4.4	7.6	7.0	-7.9
Mexico	12.8	17.9	17.2	-3.9
Asia and Oceania	106.9	155.5	172.2	10.7
China	53.5	60.6	60.3	-0.5
Hong Kong	13.6	34.0	39.7	16.8
India	4.3	5.3	6.0	13.2
Korea	3.8	7.7	4.5	-41.6
Singapore	9.3	16.1	15.9	-1.2
Russia	8.0	12.5	26.1	108.8

Source: UNCTAD

[1] For example, between 1980 and 2004, both world outward and inward FDI stocks grew at an annual average growth of 12.5%, whereas world merchandise trade expanded by 6.9 per cent.

more than the double of the United States (US$106 billion). This was the first time since 1977 that the U.K. led the world with respect to FDI inflows. However, the increase was largely accounted for by the merger of Shell Transport and Trading Company Plc and Royal Dutch Petroleum Company into Royal Dutch Shell. Other reasons for the significant increase in FDI in developed countries included the virtual end of large loan repayments from affiliated firms to their parent firms abroad. In Germany, for example, such repayments had pushed 2004 FDI inflows into negative territory, at -US$38.6 billion. The increase in FDI flows to the new ten EU members was spectacular. For example, FDI flows to the Czech Republic jumped last year by 177.8 per cent to US$12.5 billion, up from US$4.5 billion in 2004.

FDI into developing countries also increased in 2005, climbing a further 12.5 per cent compared with the 41 per cent recorded in 2004. FDI inflows to the developing world reached an estimated record of US$274 billion, with increases in all regions.

Africa attracted a historic high of US$29 billion in FDI inflows in 2005. This record FDI was mainly directed to the oil sector and to other natural resources industries.

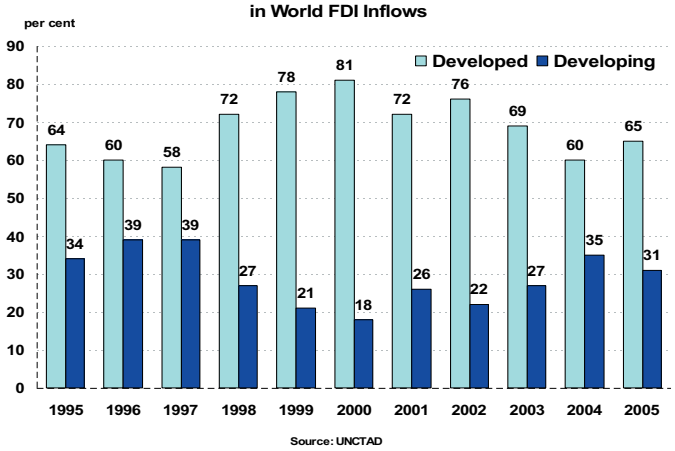
FDI flows to Asia and Oceania continued their upward trend in 2005, rising about 11 per cent to an estimated US$172.2 billion. Since 1999, FDI flows to China - the largest recipient in Asia as well as amongst all developing countries - did not increase, standing at about US$60 billion. Increased investment in Hong Kong and in ASEAN countries more than compensated for the steep decline witnessed in Korea. India saw its inflows jump from US$5.3 billion to an estimated US$6.0 billion.

Latin America and the Caribbean FDI inflows also increased during 2005, growing at about 5.0 per cent to US$72.0 billion. Data suggest that Brazil experienced a decline of 14.8 per cent to US$15.5 billion, and yielded the position of the top recipient in the region to Mexico (US$17.2 billion). Chile maintained a high level of inflows, due in part to rising prices for copper.

FDI inflows in Russia more than doubled to US$26.1 billion, attracted by high oil prices in particular.

Notwithstanding the seemingly spectacular growth in inflows to the developing economies in recent years, their share of world FDI inflows was some 31 per cent in 2005, roughly the same 30 per cent they averaged over the entire 1995-2005 period, meaning that 70 per cent of all FDI flows were still bound for the developed economies.

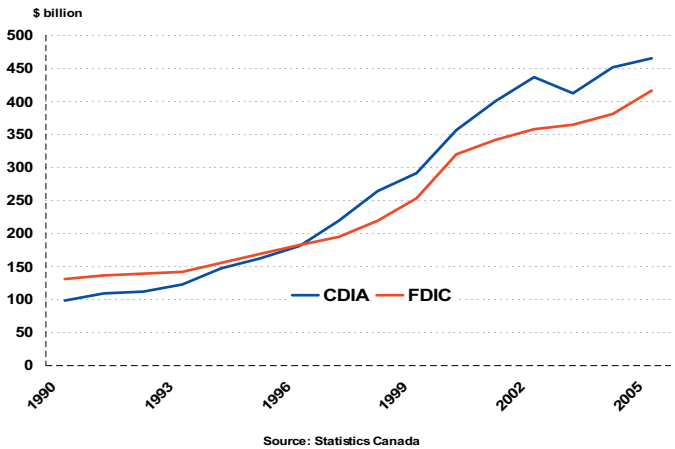
Figure 5-1
Share of the Developed and Developing Economies in World FDI Inflows



Foreign Direct Investment in Canada

Over the last 25 five years, Canada witnessed a substantial growth in both inward and outward FDI stock. Canada's inward FDI stock grew 9.1 per cent to $415.6 billion in 2005, up from $381.0 the year before. The bulk of the increase came from acquisitions and an injection of funds from the parents into the working capital of their Canadian affiliates. The stock of FDI in Canada more than doubled between 1995 and 2005, growing at an annual rate of 9.5 per cent.

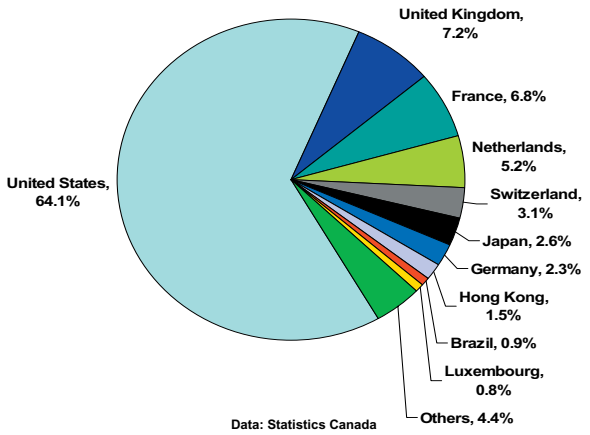
Figure 5-2
Canada's Inward and Outward FDI Stock



FDI from the U.S. rose by 7.3 per cent to $266.5 billion, up from $248.5 billion the year before. More than one third (35 per cent) of FDI from the U.S. went to the energy and metallic minerals sector, 21 per cent to the finance and insurance sector

whereas 18 per cent went to the machinery and transportation equipment sector. As can be seen in Figure 5-3 and Table 5-2, FDI from the U.S accounted for 64.1 per cent of total FDI in Canada, followed by the U.K. (7.2 per cent), France (6.8 per cent), the Netherlands (5.2 per cent) and Switzerland (3.1 per cent). While the U.S. and the U.K. shares in total inward FDI declined over the period 1995-2005, that of the other major European investors increased over the same period.

Figure 5-3
FDI Stock in Canada by Country (2005)



Among the 10 largest investor countries, developed economies accounted for over 92 per cent of total inward FDI in Canada. Brazil was the only exception as well as newest country to join the top 10 list of Canada's major sources for direct investment.

Turning to the expansion of inward FDI over the 1995-2005 period, Luxembourg (37.9 per cent), Brazil (30.7 per cent), France (17.4 per cent), Switzerland (14.4 per cent) and the Netherlands (13.2 per cent) witnessed the highest average annual growth rates among the top ten investors in Canada.

With respect to sectors, finance and insurance captured 21 per cent of all foreign direct investment in Canada at the end of 2005, followed by energy at 20 per cent, machinery and transportation equipment at 12 per cent, and services and retailing at 10 per cent. Of these sectors, energy and finance and insurance experienced the highest growth rates in FDI over the 1995-2005 period, at 15.4 per cent and 11.8 per cent, respectively.

Table 5-2: Foreign Direct Investment in Canada by Region and by Top 10 Sources ($ in billion)

Region	1995	2004	2005	Share in 1995	Share in 2005	Percentage Change 2005/2004	Compound average annual growth 1995-2005
World	168.2	381.0	415.6	100.0	100.0	9.1	9.5
North America	115.3	252.8	270.8	68.5	65.2	7.1	8.9
South and Central America	0.4	2.8	n.a.	0.2	n.a.	n.a.	n.a
Europe	40.1	106.1	119.4	23.9	28.7	12.5	11.5
EU	35.9	96.6	104.4	21.3	25.1	8.1	11.3
Africa	0.0	0.5	n.a.	0.0	n.a.	n.a.	n.a.
Asia/Oceania	12.4	18.7	21.5	7.4	5.2	15.1	5.7
World	168.2	381.0	415.6	100.0	100.0	9.1	9.5
United States	112.9	248.5	266.5	67.2	64.1	7.3	9.0
United Kingdom	14.1	27.5	29.9	8.4	7.2	8.8	7.8
France	5.7	27.8	28.4	3.4	6.8	2.4	17.4
Netherlands	6.3	19.4	21.7	3.7	5.2	11.8	13.2
Switzerland	3.4	7.7	13.0	2.0	3.1	68.7	14.4
Japan	7.0	10.2	10.8	4.2	2.6	5.4	4.5
Germany	5.0	7.6	9.4	3.0	2.3	22.9	6.4
Hong Kong	2.8	5.2	6.3	1.7	1.5	20.9	8.4
Brazil	0.3	2.7	3.7	0.2	0.9	34.3	30.7
Luxembourg	0.1	2.9	3.4	0.1	0.8	17.4	37.9

Source: statistics Canada

Canadian Direct Investment Abroad

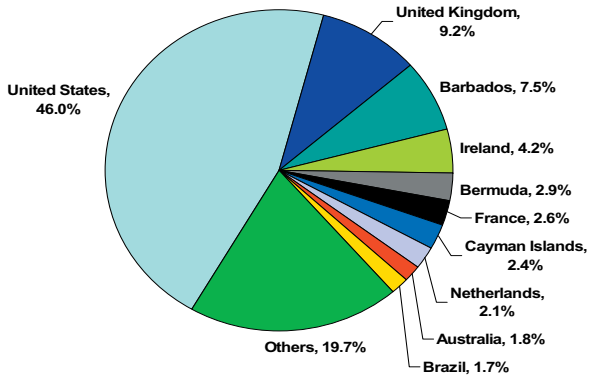
Canadian direct investment abroad (CDIA) grew at only one-third the pace of inward FDI, increasing at a moderate 3 per cent to $465.1 billion, up from $451.4 billion the year before. The primary reason for this development was the appreciation of the Canadian dollar which lowered the value of CDIA denominated in foreign currencies by $30.0 billion.

From 1997 onwards, the stock of CDIA has exceeded that of FDI in Canada, thus positioning Canada as a net exporter of investment since that year. However, because of increasing FDI into Canada last year, the net direct investment position decreased to $49.5 billion at the end of 2005, down from $70.4 billion a year earlier.

While CDIA to North America (8.8 per cent) and to South and Central America (7 per cent) increased, all other regions saw a decrease in CDIA.

Direct investment assets in the United States increased by 8.9 per cent to $213.7 billion in 2005, mostly as a result of capital outflows to existing operations located south of the border. As can be seen in Figure 5-4, the U.S. accounted for 46 per cent of total Canadian direct investment abroad at the end of 2005, well below 52.6 per cent attained in 1995.

Figure 5-4
CDIA Stock by Country (2005)



Data: Statistics Canada

The appreciation of the Canadian dollar against the euro and the British pound had a negative impact on CDIA in European countries. CDIA in the U.K. fell 3.7 per cent to $42.7 billion, although the U.K. remained the second

Table 5-3: Canadian Foreign Direct Investment Abroad by Region and by Top 10 Destinations ($ in billion)

Region	1995	2004	2005	Share in 1995	Share in 2005	Percentage Change 2005/2004	Compound average annual growth 1995-2005
World	161.2	451.4	465.1	100.0	100.0	3.0	11.2
North America	98.8	263.4	286.7	61.3	61.6	8.8	11.2
South and Central America	7.9	21.2	22.7	4.9	4.9	7.0	11.2
Europe	37.2	129.9	118.9	23.0	25.6	-8.5	12.3
EU	34.5	121.2	110.3	21.4	23.7	-9.1	12.3
Africa	0.6	3.3	3.0	0.4	0.7	-6.7	16.9
Asia/Oceania	16.8	33.7	33.8	10.4	7.3	0.3	7.2
World	161.2	451.4	465.1	100.0	100.0	3.0	11.2
United States	84.6	196.3	213.7	52.5	46.0	8.9	9.7
United Kingdom	16.4	44.4	42.7	10.2	9.2	-3.7	10.0
Barbados	5.8	30.8	34.7	3.6	7.5	12.8	19.6
Ireland	5.9	19.6	19.5	3.7	4.2	-0.6	12.6
Bermuda	3.0	12.6	13.6	1.9	2.9	7.3	16.3
France	2.5	14.3	12.3	1.6	2.6	-14.5	17.2
Cayman Islands	0.7	11.2	11.0	0.4	2.4	-1.5	31.5
Netherlands	2.3	12.2	9.9	1.4	2.1	-18.6	16.0
Australia	3.1	8.3	8.2	1.9	1.8	-1.0	10.3
Brazil	2.5	7.0	8.0	1.5	1.7	14.8	12.6

Source: Statistics Canada

most popular destination for Canadian direct investment abroad. The Netherlands and France experienced the steepest declines in CDIA, falling by 19 per cent and 14 per cent, respectively. However, these countries are still popular for Canadian direct investors abroad. France, Ireland, the Netherlands and United Kingdom were the only European nations to make it to top 10 destinations for Canadian direct investment abroad at the end of 2005.

Canadians continued to invest in the tax-friendly jurisdictions of Barbados ($34.7 billion), Bermuda ($13.6 billion) and the Cayman Islands ($11 billion). These three small countries witnessed the highest average growth in CDIA over the period 1995-2005.

Brazil was the newcomer among the top 10 destinations, with CDIA in that country increasing by 14.8 per cent to $8.0 billion, while Japan dropped from the 10 most popular destinations for CDIA.

Among industries, as of the end of 2005, Canadian foreign direct investment assets were mainly in the finance and insurance industry (44 per cent), in the energy industry (12 per cent), in the services and retailing (12 per cent), and in the metallic minerals industry (11 per cent). The share of Canadian direct investment in finance and insurance sector has doubled in the past two decades while the share of the metallic minerals sector decreased from 17 per cent to 11 per cent.

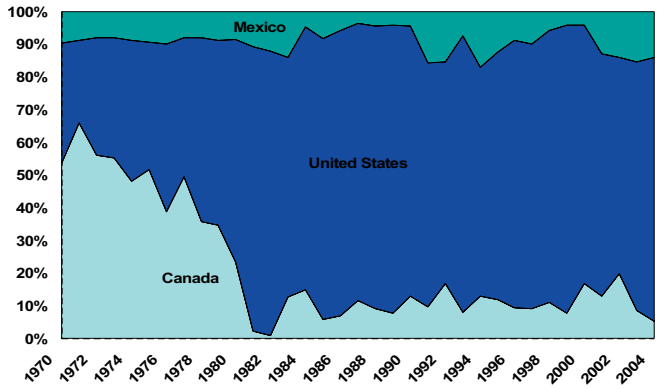
Canada's Performance in the North American Context

Despite an increase in absolute levels of direct investment, Canada's share of North American inward FDI declined over the last decade, raising concerns about Canada's attractiveness as an investment location.

Between 1982 and 2004, Canada accounted for 10.5 per cent of North American inflows (including intra North American FDI flows). This share was down from an astonishing 46.6 per cent over the period 1970-1980.

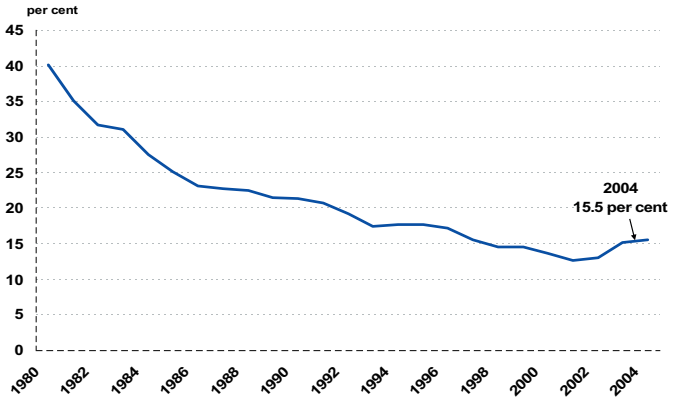
As a result of lower inflows, Canada's share of North American FDI stock also declined. Between 1980 and 2004, Canada's share of North American inward FDI stock declined by 24.5 percentage points, from 40 per cent in 1980 to 15.5 per cent in 2004. Canada's

Figure 5-5
Distribution of Inward FDI Flows to North America



Source: Statistics Canada

Figure 5-6
Canada's Share of North American FDI Stock



Source: UNCTAD

declining share of North American FDI stock is mostly the result of its very high level of inflows in the 1960s and 1970s, not its recent performance. Indeed, Canada's share has been rising since 2000. Canada's share of North American inflows has, in fact been quite constant over the last two decades.

The ratio of inward FDI stock-to-GDP, an indicator of Canada's "openness" or orientation toward foreign investment, was 30.5 per cent in 2004. This ranks Canada as the second highest in the G-7 after the U.K. (36.3 per cent). That ratio stood at only 12.6 per cent for the U.S. and at 2.1 per cent for Japan (the lowest among the G-7 countries).

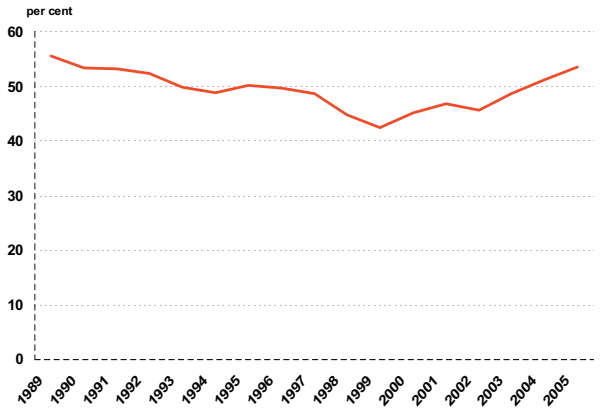
VI SPECIAL FEATURES

BOX A: THE IMPACT OF HIGHER COMMODITY PRICES ON CANADA'S TRADE BALANCE

Introduction

Canada has historically been a net exporter of commodities, particularly energy, industrial goods and forestry products. The commodity sector has always played an important role for Canada's economic prosperity. In 2005, the commodity sector accounted for 12 per cent of GDP and over 50 per cent of exports (see Figure A1).[1] Recently, robust economic growth in economies such as China and India, along with other geopolitical and supply/demand factors, have been creating upward pressure on global commodity prices. The objective of this short section is two-fold; firstly, to analyze the impact of recent price booms in energy and industrial commodities on Canada's trade balance and secondly to provide an estimate of the impact of commodity price changes on Canada's trade balance going forward.

Figure A1
Commodities Share in Canada's Exports, 1989-2005



Source: Statistics Canada

Background and Assumptions

Commodity prices have been rising sharply in recent years. Since 2002, when the prolonged price increases began, the commodity price index had risen 78 per cent by the end of 2005, while the energy index rose 137 per cent over the same period.[2] Crude oil prices hit an all time monthly high of US$65.6 per barrel[3] in September, 2005, while natural gas prices also reached a high of US$10.97 per thousand cubic feet in October, 2005. The peaks recorded during these two months were due to the disruptions caused by hurricane Katrina; however, crude oil and natural gas prices since then have not dropped to their pre-Katrina levels. The industrial material index also increased by 43 per cent since 2002. All major industrial metal prices have been increasing since 2002, especially copper, iron ore and nickel, which have each more than doubled in price. Aluminium, gold, silver and zinc have also appreciated in value by more than 40 per cent during this period.

According to forecasts from the IMF, industrial commodity prices are expected to increase further, up 12.3 per cent in 2006 followed by a slight decrease in 2007.[4] The U.S. Energy Information Administration (EIA) estimates that oil prices will remain high, averaging US$65 per barrel in 2006 and $61 in 2007 under the assumption that the current demand for oil will be sustained and that there will be a modest increase in oil production capacity while geopolitical risks continue.

Canada's top net exports[5] have been dominated by resource-based commodities for some time; this is more apparent in recent years—10 of the top 12 net export of goods[6] in 2005 were energy and industrial goods and materials as can be seen in the Table A1.

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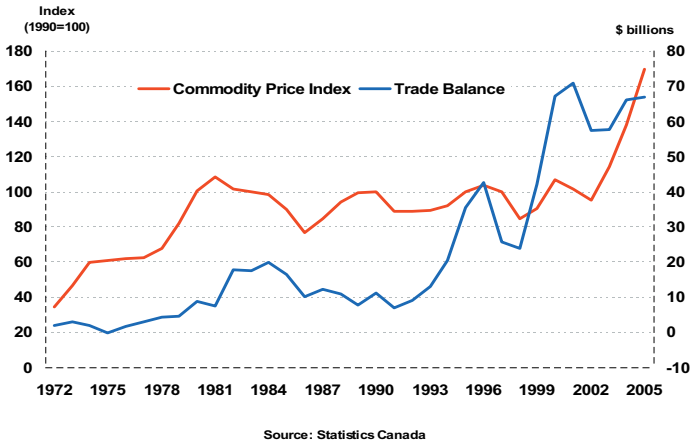
[1] Sectors included for computations are: agriculture, forestry, fishing and hunting, mining and oil and gas extraction, wood product manufacturing, paper manufacturing, petroleum and coal products, chemical manufacturing, non-metallic mineral product and primary metal manufacturing.
[2] Bank of Canada's commodity price index.
[3] Cushing, OK WTI Spot Price FOB (USD per barrel).
[4] IMF World economic outlook database, April 2006
[5] Net exports are computed by subtracting imports from exports.
[6] The data is at the HS6 level.

Table A1: Canada's Top 12 Net Exports in 2005 ($ in millions, customs basis)

	2002	2003	2004	2005	% Change 2005/2002
Natural gas	17,661	24,262	24,474	32,281	82.8%
Passenger vehicles	32,302	27,901	31,504	29,583	-8.4%
Coniferous wood	10,201	8,306	10,866	9,776	-4.2%
Crude oil	6,009	6,629	9,052	7,990	33.0%
Newsprint	6,293	5,597	5,265	5,212	-17.2%
Vehicle transmission	7,941	5,975	4,624	4,223	-46.8%
Wood pulp	4,180	4,115	4,567	3,995	-4.4%
Paper	2,720	2,350	2,831	3,074	13.0%
Light oils (not crude)	3,298	3,408	2,891	3,021	-8.4%
Oil (not crude)	1,880	2,057	2,470	2,823	50.1%
Potassium chloride	2,375	1,922	2,169	2,758	16.2%
Aluminum alloys	2,375	2,265	2,541	2,614	10.1%

Source: Statistics Canada

Figure A2
Commodity Price Index
& Merchandise Trade Balance, 1972-2005



Source: Statistics Canada

The recent commodity price increases have had a positive impact on Canada's trade surpluses as can be seen from the Figure A2. In 2005, the surplus reached $67 billion (balance of payments basis), the third consecutive annual increase. The industrial material sector, which includes metals and forestry products, contributed to the lion's share of the surplus, recording $82 billion in net exports in 2005, while net exports in energy reached $54 billion that year—both record highs. Industrial metals exports recorded increases both in quantity and prices in 2005 while energy sector increases in net exports were strictly a price effect. Excluding the impact of higher energy prices, the trade surplus in energy would have been much lower at an estimated $38 billion[7] in 2005. Although the trade surplus in commodities is enormous (over $95 billion in 2005), the overall merchandise trade surplus (at $67 billion in 2005), was reduced by other sectors that saw imports increase faster than exports.

This highlighted section will analyze the medium-term (2006-2010) impact of higher commodity prices on Canada's trade surplus. The following three scenarios are used to estimate the impact on the trade balance:

- Low-index scenario: The commodity price index will fall 20 per cent from its 2005 level over the next five years.
- Baseline scenario: The commodity price index will increase at the same rate as the forecasted increase in the wholesale price index (WPI). There will be a net increase of 11.5 per cent by 2010.
- High-index scenario: The commodity price index will increase by 20 per cent above the WPI forecasted by Global Insight. At this rate, the commodity index will increase by 33.8 per cent by 2010 in nominal terms.

[7] Figures are based on 2004 energy prices.

The above price scenarios are used to generate estimated impacts on Canada's merchandise trade balance. It is important to note that for all of these scenarios, we assume no impact on the volume of the commodity traded.

Methodology

The methodology consists of two parts. First, we will estimate the impact on net exports for the twelve major net exporting commodities[8] based on the three prices scenarios as previously mentioned. These results will be computed using the three commodity price levels as the primary variable, while leaving all other factors such as volume constant. For the purpose of this report, a simplified accounting method was used.

Summary of the Impact

The three price scenarios indicate a positive contribution to the trade surplus ranging from $89 billion to $133 billion by 2010 with the energy sector contribution being the largest share. This is not surprising since Canada has historically depended on its exports of commodities for its trade surpluses. As prices of commodities increase, so does the overall impact on the merchandise trade surplus.

Table A2: Impact on Canada's Trade Balance by Year 2010 in $ millions

	2005	Low (-20%)	Baseline	High (+20%)
Energy	47,763	43,619	54,523	65,428
Coal	2,640	2,554	3,192	3,830
Crude Oil	8,491	7,388	9,235	11,081
Natural Gas	36,631	33,678	42,097	50,516
Industrial Metals	25,100	23,766	29,708	35,649
Aluminium	7,669	7,782	9,727	11,672
Copper	3,815	3,518	4,398	5,278
Nickel	4,135	3,705	4,632	5,558
Zinc	1,134	1,043	1,303	1,564
Precious Metals	5,624	5,223	6,529	7,835
Iron Ores	2,725	2,495	3,119	3,742
Forestry Products	22,381	21,381	26,726	32,071
Lumber	10,402	10,257	12,822	15,386
Pulp	5,707	5,441	6,801	8,161
Newsprint	6,271	5,683	7,103	8,524
Overall Projected Impact on the Trade Balance	**95,244**	**88,766**	**110,957**	**133,149**

[8] Coal, crude oil, natural gas, zinc, precious metals (gold & silver), iron ores, lumber, pulp and newsprint.

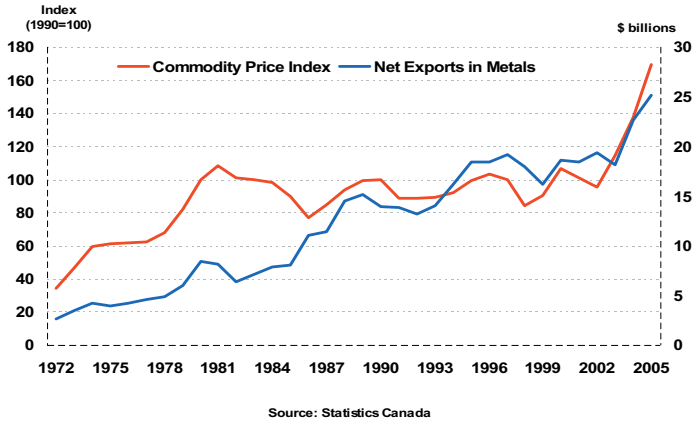
Energy

In all three scenarios, natural gas is the largest contributor to the trade surplus, adding as much as $50.5 billion by 2010 in the high price scenario. Close proximity to the largest energy consumer, the U.S., combined with an existing extensive network of pipelines makes Canada the ideal place from which Americans get their natural gas. Despite the large increase in the value of natural gas exports, which was pushed up by natural gas prices, the volume of exports was up only marginally, by 1.3 per cent. Crude oil, to a lesser degree, will also continue to contribute to the trade surplus, ranging from $7.4 billion to $11.1 billion in the low and high scenarios respectively. The impact of higher oil prices on Canada's trade balance is somewhat offset by imports of crude oil for domestic consumption (namely the Atlantic Provinces, Quebec and Ontario). Canadian coal export prices and quantities increased by 72 per cent and 8 per cent, respectively, pushing net export levels up by $1.3 billion to $2.3 billion in 2005. If coal prices were to increase further, as in the case of the high prices scenario, coal will add $3.8 billion to the surplus by 2010. Thus, the energy sector overall will contribute between $43.6 and $65.4 billion as shown in the Table A2.

Industrial Metals

Growth in the volume of exports in the metal sector during 2005 was mixed. Aluminium, copper, gold, silver and iron had positive growth (see Table A3), while the volume of zinc (-13 per cent) and of nickel (-8.7 per cent) fell despite the increase in their prices. The quantity of aluminium exports grew by 12 per cent while recording $7.7 billion in net exports in 2005. Aluminium was by far the largest contributor to the trade surplus in the industrial metal sector. Gold and silver prices boosted growth in precious metal net exports as their prices increased by 8.7 per cent and 9.7 per cent, respectively. These price developments pushed net exports in precious metals up by 12.8 per cent to $5.6 billion in 2005. Metal demand continues to grow, pushed even higher by global economic expansion, particularly in China. The extent to which the metal sector will contribute to the trade surplus will primarily depend on price levels. More recent price forecasts are mixed amongst metals. For instance, gold prices are on the upswing while aluminium prices have subsided as global supply increases. However, the overall impact will continue be positive in all three scenarios.

Figure A3
Commodity Price Index and Net Exports in Metals (Aluminium, Copper, Nickel, Zinc, Precious Metals and Iron Ores) , 1972-2005



Source: Statistics Canada

Table A3: Quantity of Metal Exports

Millions of units	HS Code	2002	2003	2004	2005	% Change 2005/2004
Aluminium (KGM)	7601	2,133	2,233	1,999	2,240	12.0%
Copper (KGM)	7403	244	221	283	300	6.1%
Nickel (KGM)	7502	102	95	125	114	-8.7%
Zinc (KGM)	79	652	626	666	579	-13.0%
Gold (GRM)	7108	172	162	199	237	19.2%
Silver (GRM)	7106	1,854	1,772	1,489	1,549	4.0%
Iron and Steel (KGM)	7208	853	754	713	980	37.5%

Source: Statistics Canada

Forestry Products

Despite lower export volumes of newsprint and pulp and a minor increase (+0.5 per cent) in lumber exports, all three forestry products continue to be in the top 12 net exports for Canada. Export prices for newsprint were up 4.3 per cent, while prices for pulp and lumber fell by 5.9 per cent and 9.7 per cent, respectively. Overall, the forestry products sector contributed $22.4 billion to Canada's merchandise trade surplus in 2005. This was an 8.7 per cent drop from the previous year when prices for lumber and pulp were higher by 11 per cent and 6 per cent, respectively. Despite the lacklustre price performance of forestry products compared to other industrial products, they will continue to play an important role in contributing to the trade surplus in the future, adding to $26.7 billion to the trade surplus by 2010 in the base case scenario.

Conclusion

In all three scenarios examining the impact of changes in commodity prices on Canada's trade balance, commodities will account for a larger share of Canada's trade balance in 2010 than they do today. Even with prices declining in both nominal and real terms, sheer volume will lead to the result that Canada will increasingly be characterized by some once again as a 'hewer of wood and a drawer of water.'

BOX B: THE EXTENT AND SIGNIFICANCE OF INTRA-INDUSTRY TRADE IN CANADA-US MERCHANDISE TRADE

Background

International trade is traditionally thought to consist of each country exporting the goods most suited to its factor endowments, technology, and climate while importing the goods least suited to its national characteristics. Such trade is called inter-industry trade because countries export and import the products of different industries. However, as Table B1 shows, among the top 10 Canadian exports to and imports from the U.S., many are actually similar items, such as motor cars and vehicles for transporting persons, parts and accessories for motor vehicles, and motor vehicles for the transport of goods, and energy products. In fact, international trade is largely comprised of trade within broad industrial classifications. Intra-industry trade (IIT) occurs when a country exports and imports goods in the same industry.

Table B1: Canada-US Main Merchandise Exports and Imports in 2005 at the HS-04 Level

HS-04	Canadian Exports to the United States	Exports in 2005 ($ in billions)	Share of Total Exports in 2005
	Total	365.7	83.9
8703	Motor cars & vehicles for transporting persons	44.2	12.1
2711	Petroleum gases & other gaseous hydrocarbons	38.8	10.6
2709	Crude oil from petroleum and bituminous minerals	29.9	8.2
8708	Parts & accessories for motor vehicles	14.9	4.1
8704	Motor vehicles for transport of goods	11.7	3.2
2710	Oil (not crude)	11.0	3.0
4407	Wood sawn or chipped length, sliced	8.8	2.4
8802	Aircraft, powered; spacecraft & launch vehicles	5.7	1.6
7601	Aluminium, unwrought	4.6	1.3
9403	Furniture and parts	4.1	1.1

HS-04	Canadian Imports from the United States	Imports in 2005 ($ in billions)	Share of Total Exports in 2005
	Total	215.1	56.5
8708	Parts & accessories for motor vehicles	20.5	9.6
8703	Motor cars & vehicles for transporting persons	14.9	6.9
8704	Motor vehicles for transport of goods	8.0	3.7
8407	Spark-ignition & internal combustion piston engine	5.0	2.3
2711	Petroleum gases & other gaseous hydrocarbons	3.9	1.8
8471	Automatic data process machines; magnetic reader	3.5	1.6
3004	Medicaments, mixed or not, in dosage	2.5	1.2
8409	Parts for engines	2.4	1.1
2710	Oil (not crude)	2.4	1.1
8701	Tractors	2.4	1.1

Source: Statistics Canada

The significance of intra-industry trade arises from the characteristics of the product itself and need not be based on comparative advantage. To a large extent, IIT arises from the fact that products are differentiated and the production of any particular product requires some fixed costs. For example, the more cars a firm makes, the lower the unit cost. Differentiation means that the products of one firm are not identical to the products of other

firms in the same industry. This pattern contrasts with homogeneous products. Intra-industry trade can also be classified to be either horizontal or vertical. Horizontal intra-industry trade (HIIT) arises when exports and imports have similar attributes and are at the same stage of processing (e.g. trade of cars for cars of a certain cylinder capacity). Vertical intra-industry trade (VIIT) takes place when exports and imports are at different stages of processing or are differentiated by their quality (e.g. trade of passenger cars for motors).

Why Does Intra-Industry Trade Matter?

Whether trade is inter-industry or intra-industry affects the co-movement of outputs and prices. Inter-industry trade implies across-country specialization which lowers the co-movements of outputs and prices while intra-industry trade leads to more co-movements. Also, exchange rate variations cause different effects on different types of trade. For horizontally differentiated products, small variations in exchange rates have a large impact on trade. On the other hand, when comparative advantages are large enough, variations in exchange rates might not affect the demand dramatically, leaving inter-industry less vulnerable. IIT in products differentiated by their quality - vertical IIT - is an intermediate case between horizontal IIT and inter-industry trade.

The bulk of theoretical and empirical work on IIT has presumed that traded products will be mainly horizontally differentiated. Models of vertical IIT date from Falvey (1981)[1] and Shaked and Sutton (1984)[2]; vertical differentiation is explicitly modelled as differences in quality between similar products. Recent empirical work (Blanes and Martin (2000)[3], Greenaway et al. (1999)[4] on the nature of IIT has provided evidence challenging the hypothesis of IIT based on horizontally differentiated products (HIIT), since it shows that trade in vertically differentiated products (VIIT) is significant. Moreover, econometric studies on the determinants of IIT often do not support some predictions of monopolistic competition theory. The role of economies of scale as a positive determinant of IIT is a good example. This outcome might stem from mismeasurement of IIT, because the usual IIT index includes both horizontal and vertical IIT. The results might improve if pure vertical or pure horizontal measures are used rather than an amalgam of the two.

Another reason for paying attention to VIIT as a component of IIT concerns the welfare analysis of economic integration. Models of IIT based on horizontally differentiated products predict low adjustment costs in response to regional integration. However, if vertical integration prevails, adjustment costs might be significant. First, as in the case of inter-industry trade, the factor content of exports and imports is different. Second, lower quality varieties might be replaced by the higher-quality varieties. This could lead to firm closures and higher unemployment in areas producing lower quality varieties. The North-American auto industry is a good example.

Yet another benefit of intra-industry trade is that international trade need not cause the dislocations associated with inter-industry trade: there is no redistribution of income from scarce to abundant factors. If trade is not based on scarce and abundant factors of production, it does not result in reduced demand for the scarce factors and in increased demand for the abundant factors[5]; thus, trade expansion need not result in large changes in the distribution of income. For example, Ruffin (1999) has found that 80 per cent of U.S. trade with Mexico is intra-industry, and thus that concerns that trade with Mexico will harm unskilled workers is based on an erroneous view of the nature of that trade.

[1] Falvey, R.E. (1981). Commercial Policy and Intra-Industry Trade. Journal of International Economics, 11, 495-511.
[2] Shaked, A. and J. Sutton (1984). Natural Oligopolies and International Trade. In H. Kierzkowski (ed.), Monopolistic Competition and International Trade. Oxford: Oxford University Press.
[3] Blanes, J.V. and C. Martin (2000). The Nature and Causes of Intra-Industry Trade: Back to The Comparative Advantage Explanation? The Case of Spain. Weltwirtschaftliches, 136, 423-441.
[4] Greenaway, D., Milner, C. and R. J.R. Elliot (1999). UK Intra-Industry Trade With the EU North and South. Oxford Bulletin of Economics and Statistics, 61, 365-384.
[5] When Canada exports cars, the workers in the auto-industry and the owners of auto-plants benefit; but when Canada imports textiles, the unskilled workers in the textile industry are hurt. Unskilled workers are a scarce factor in Canada.

A further distinguishing characteristic of intra-industry trade is that it enhances the gains from trade through better exploitation of economies of scale - rather than through comparative advantage - as trade leads countries to concentrate on a limited number of products within any particular industry. This leads to an expansion of world output because of the saving of fixed costs.

Specialization within industrial categories may also stimulate innovation. Producing a greater variety and number of goods increases the general knowledge about technology, and greater knowledge implies smaller costs of knowledge accumulation. For example, U.S. importation of Japanese cars and trucks over the years has led to improvements in U.S. car and truck manufacturers.

Finally, intra-industry trade reduces the demands for protection because in any industry there are both exports and imports, making it difficult to achieve unanimity among those demanding protection.

Measurement of IIT[6]

Most empirical studies use the Grubel and Lloyd's index (GL) as a measure of the extent of intra-industry trade:

$$GL_{ijkt} = \frac{\left(X_{ijkt} + M_{ijkt}\right) - \left|X_{ijkt} - M_{ijkt}\right|}{\left(X_{ijkt} + M_{ijkt}\right)} \times 100 = 100 - \frac{\left|X_{ijkt} - M_{ijkt}\right|}{\left(X_{ijkt} + M_{ijkt}\right)} \times 100, \qquad (1)$$

where GL_{ijkt} is the intra-industry trade index of industry i with the partner k in the year t, and X_{ijkt} and M_{ijkt} are exports and imports of the category j pertaining to the industry i with the partner k in year t. Adjusted for the categorical aggregation, the intra-industry trade index becomes:

$$IIT_{ikt} = \sum_{j=1}^{n} GL_{ijkt} = \frac{\sum_{j=1}^{n}\left(X_{ijkt} + M_{ijkt}\right) - \sum_{j=1}^{n}\left|X_{ijkt} - M_{ijkt}\right|}{\sum_{j=1}^{n}\left(X_{ijkt} + M_{ijkt}\right)} \times 100 \qquad (2)$$

If trade is only in different goods, either $X_{ijkt} = 0$ or $M_{ijkt} = 0$ and IIT_{ikt} equals zero. On the other hand, if trade in only similar goods takes place e.g. $X_{ijkt} = M_{ijkt}$, then IIT_{ikt} equals 100. The closer the value of the index to 100 the greater is the degree of intra-industry trade. It is worth noting that the IIT index is influenced by the size of the trade imbalance. The greater trade imbalance (deficit or surplus), the smaller the value of the measured index.

It has been argued that IIT would not exist at the finest level of disaggregation and that it is a statistical illusion arising from an improper geographic or sectoral aggregation. Put differently, the lesser the detail of the disaggregation used, i.e., the more products are lumped together into a single industry, the more trade is measured as being an intra-industry type. While there may be some truth in this view, sufficient empirical evidence is now available to suggest that disaggregation does not cause IIT to disappear.[7] Moreover, at the finest level of disaggregation (e.g. HS-6), intra-industry trade might be underestimated because very similar goods that are produced using the same inputs are being classified as different commodities (Brown and Anderson (1999).[8] To some extent, trade data become less representative of an industry.

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[6] The reader might skip this part of the box without losing understanding of the results and conclusion.

[7] IIT persists even at the eight-digit United States Standard Industry classification.

[8] Brown, W.M. and W.P. Anderson (1999). The Influence of Industrial and Spatial Structure on Canada-US Regional Trade. Growth and Change, 30, 23-47.

IIT_{ikt} can be broken down into horizontal intra-industry trade ($HIIT_{ikt}$) and vertical intra-industry trade ($VIIT_{ikt}$) as $IIT_{ikt} = HIIT_{ikt} + VIIT_{ikt}$, using the degree of product differentiation and the overlap in trade, as defined in equations (3) and (4). $HIIT_{ikt}$ is defined as the simultaneous export and import of similar products if the unit value of exports (UV^x) measured f.o.b. relative to the unit value of imports (UV^m) measured c.i.f. is within a range of ±15 percent:

$$1-\alpha \leq \frac{UV^x_{ijkt}}{UV^m_{ijkt}} \leq 1+\alpha, \qquad (3)$$

where $\alpha = 0.15$. When the above condition does not hold, products are considered to be vertically differentiated ($VIIT_{ikt}$).[9] The rationale for using unit values is the presumption that prices will tend to reflect quality, even with imperfect competition (Stiglitz, 1987).[10]

With regard to the trade overlap, trade in a product is considered to be "two-way" when the value of the minority flow (for example imports) represents at least 10 per cent of the majority flow (exports in this case), i.e. they fulfil the following condition:

$$\frac{Min\left(X_{ijkt}, M_{ijkt}\right)}{Max\left(X_{ijkt}, M_{ijkt}\right)} \succ 10\%, \qquad (4)$$

where X and M stand for the value of exports and imports. Although arbitrary, below the 10 per cent threshold, the minority flow does not appear to represent a structural feature of trade.

If trade flows of a particular product with a partner country fulfill both criteria of similarity and trade overlap (yes-yes coordinate in Table B2), then exports as well as imports are considered as two-way trade in horizontally differentiated products. If trade flows meet the criterion of trade overlap but fail that of similarity, then it is a two-way trade in vertically differentiated products (yes-no coordinate in Table B2). Finally, if trade flows fail both criteria of similarity and trade overlap, then it is a one-way trade or inter-industry trade (no-no coordinate in Table B2).

Table B2: Bilateral Trade Types at the Product Level

	Similarity of export and import values: Do export and import unit values differ by less than 15%?	
Degree of overlap between export and import values: Does the minority flow represent at least 10% of the majority flow?	Yes	No
Yes	HIIT	VIIT
No		Inter-industry trade

Analysis of Results

The United Nations COMTRADE data, four-digit SITC rev1 is used to compute the shares of horizontal intra-industry trade, vertical intra-industry and inter-industry in Canada-US bilateral trade.

Before calculating the shares of HIIT, VIIT and inter-industry trade, the data is cleaned, dropping products for which import and export quantities are zero in order to compute the unit values. The shares of three types of trade are determined at the product level, and then aggregated to the whole economy by year. Figure B1 shows the evolution of the respective shares over the period 1973-2003. As can be seen in Figure B2, it appears that the inter-industry trade is trending downward. The average inter-industry trade share went from 39.8 per cent in the 1970's to 32.2 per cent in the 1990's and to 28.6 per cent since 2000.

[9] Other thresholds, 25 per cent and 30 per cent, have been used in the empirical studies like Greenaway et al. (1995).

[10] Stiglitz, Joseph E. (1987). The Causes and Consequences of the Dependence of Quality on Price. Journal of Economic Literature, 25, 1-48.

Vertical intra-industry accounts for the largest share in total Canada-US trade, averaging around 50 per cent from the 1980's onwards. VIIT has been slowly increasing in importance. As for HIIT, it decreased from the 1970's to the 1980's (from 15.9 per cent to 15 per cent), but has been increasing from the 1990's onwards. It is interesting to note that the increase in both HIIT and VIIT from the 1990's onwards coincides with the implementation of the FTA and the NAFTA which might have contributed to increased IIT within North-America.

An interesting question is whether the asymmetries between Canada and the U.S., as revealed by the dispersion in shares of three types of trade, have decreased or increased since the implementation of the Canada-US FTA? Have trade patterns converged? The standard deviation for the shares of the three types of trade before (1973-1988) and after the FTA implementation (1989-2003) is used as a proxy for dispersion. As displayed in Figure B3, the dispersion in shares of trade types has decreased notably, suggesting that the trade patterns have converged during the integration process.

Conclusion

The bulk of Canada-US merchandise trade is of the intra-industry type. Intra-industry has been growing since the 1970's, accounting at that time for 60 per cent; increasing to over 70 per cent after 2000. In contrast, inter-industry trade has declined over time. Both horizontal intra-industry trade (differentiated products with similar attributes) and vertical intra-industry trade (products differentiated by quality) have increased since the eighties although vertical intra-industry trade has always been bigger than horizontal intra-industry trade. The dispersion in shares of trade types has decreased after the implementation of the Canada-US FTA, suggesting that the trade patterns in Canada and in the U.S. have converged during the integration process.

Figure B1
Trends in Shares of HIIT, VIIT and INTER in Total Canada-US Trade

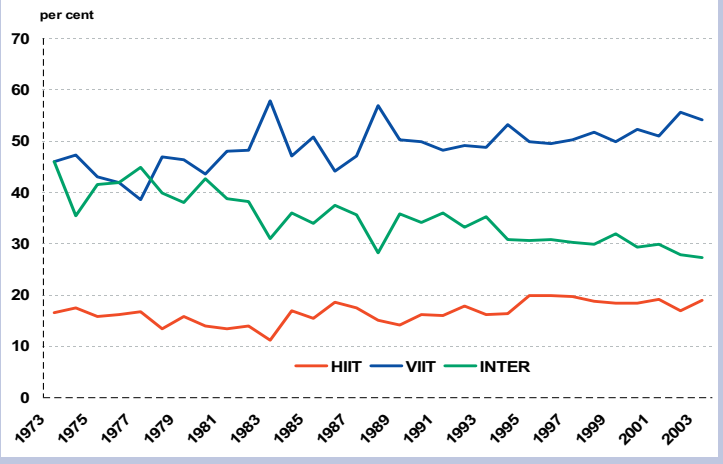


Figure B2
Average HIIT, VIIT and INTER Shares by Decade

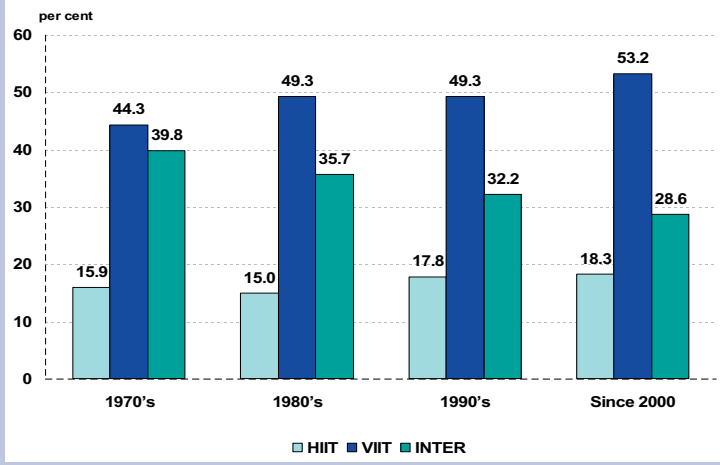
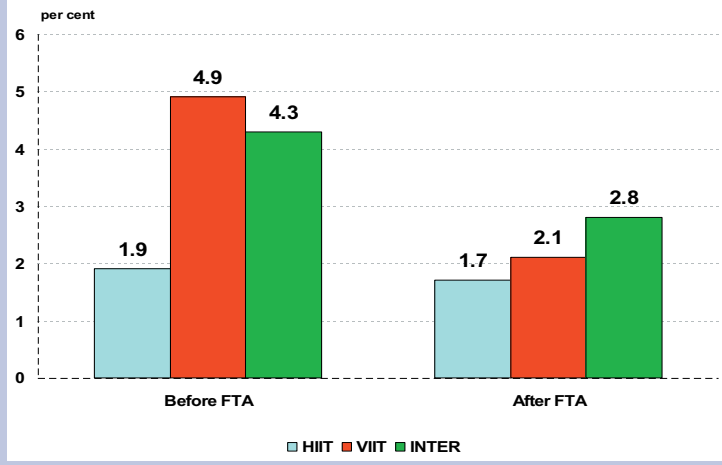


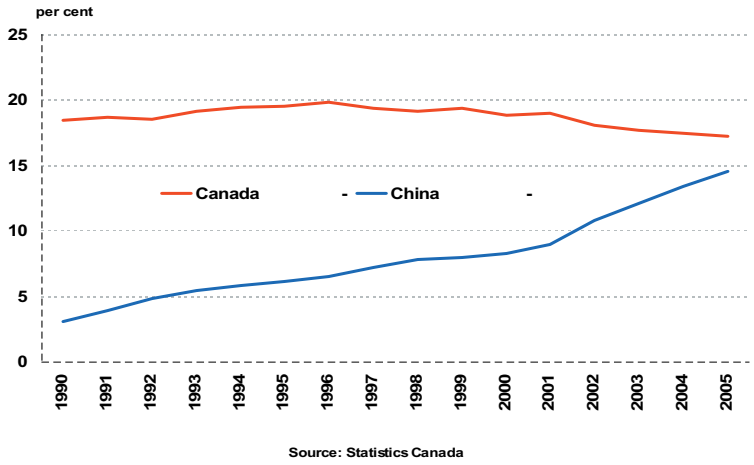
Figure B3
Dispersion In Shares of HIIT, VIIT and INTER Before and After FTA



BOX C: CHINA–CANADA COMPETITION IN THE U.S. MARKET

Over the past few years, China has been growing at a very impressive rate. Since 1990, GDP has grown at an average annual rate of 9.4 per cent.[1] China's exports have been growing even faster, at an annual average growth of 18.1 per cent, over the same period. The emergence of China clearly offers many opportunities for Canada; exports to China have more than doubled over the past decade, from $3.4 billion in 1995 to $7.1 billion in 2005. Nevertheless, in addition to the expanding opportunities that China might offer, it can also pose challenges for Canada. With its dramatic growth in exports, particularly to the U.S., the question arises: is China a threat to Canadian exports?

Figure C1
Share of U.S. Import Market



Source: Statistics Canada

Although China might offer competition to Canada in many of our export markets, of particular interest is the likely impact of the growth of China's exports to the United States. As most Canadians are aware, the U.S. consumes the majority of Canada's merchandise exports, just under 84 per cent in 2005. Canada has the great advantage of being next door to the largest consumer market in the world, and with NAFTA Canada has unparalleled access to this large dynamic and growing economy. Canada has been the largest trading partner of the U.S. for the past several decades, but this is likely to change. China's exports to the U.S. are surging, its share of the U.S. import market has sharply increased from 3.1 per cent in 1990 to 14.6 per cent in 2005, not far behind Canada's 17.2 per cent share (See Figure C1). Over the same period, Canada's share increased from 18.5 per cent in 1990 to 19.8 per cent in 1996, but then started a steady decline to 17.2 per cent in 2005. As a possible sign of things to come, for the first time ever in July of 2005 China surpassed Canada to be the largest supplier of U.S. imports for the month. Canada has since regained its lead, but this might not last.

Although China's market share in the U.S. has increased while Canada's has decreased, this does not necessarily mean China's gain came at Canada's expense. Trade is not a zero sum game; although Canada's share has been dropping, the total value of Canadian exports to the U.S. is continuing to increase, i.e. Canada has a smaller share of a larger pie. One question is whether Canada's exports would have increased at a greater rate without competition from China? In other words, the surge of Chinese exports to the U.S. squeezing out Canadian exports? A closer look needs to be taken to evaluate the threat of China's rising share of the U.S. market.

One of the basic economic theories explaining why countries trade is the theory of comparative advantage. Simply put, a country will export goods and services in which it has a lower opportunity cost in producing, or put another way, goods it is more efficient at producing than is the case for other countries. On the other hand, a country will import goods and services it has a relative disadvantage in, since it will cost less to import than to produce itself. Therefore China and Canada should export goods and services to the U.S. in

[1] There has been some debate over the accuracy of China's GDP figures. Critics have argued that over some periods the growth in China's GDP has been over or underestimated by official Chinese Statistics. See Rawski (2001), "What's Happening to China's GDP Statistics?" China Economic Review, Vol 12.4.

which they have a comparative advantage. If China and Canada have the same comparative advantages, they will export the same types of goods and compete for market share. On the other hand, if they have different comparative advantages, they will export different products and not be in direct competition. To see if China and Canada share the same comparative advantages, one can look at revealed comparative advantage (RCA). This method looks at the composition of trade between countries to reveal areas of specialization and hence their comparative advantage. One measure of this is the Balassa index which measures "the ratio of the share of a given product in a country's exports to another country or region to the share of the same product in that country or region's total exports".[2] More specifically:

$$BI(EX) = (x^k_{ij} / X_{ij}) / (x^k/X),$$

Where x^k_{ij} is exports of good k from country i to country j, X_{ij} is total exports of country i to country j, x^k is exports of good k by the reference region or country (in this case the U.S.) and X is total exports of the reference country. If the index BI(EX) is greater than one, the country is said to have a comparative advantage in exports of that good. This index can be calculated for Canada and China at the 2HS level[3] to reveal which sectors each country has a comparative advantage in regards to exporting to the U.S. market.

Tables C1, C2 and C3 show the sectors in which Canada and China have a RCA with respect to the U.S. (average BI(EX) for the past five years). Of the 96 HS 2 product codes, Canada has a RCA in 35, of these 35; 15 are sectors where China also has a RCA. Canada exhibits the largest RCAs mainly in resource areas, whereas China has the largest RCAs in mainly textiles and low skilled manufacturing. Overall the RCAs for China and Canada are not positively correlated; this would indicate that China and Canada are not competitors in the U.S. market.

Although the theory of comparative advantage might tell us that China is not a direct competitor to Canada in the U.S. market, this theory might not completely explain all the realties of international trade. Often countries trade in goods that do not correspond to their comparative advantages. For instance a significant portion of Canada-US trade is intra industry, which could be explained by other factors.

An alternative method for analyzing China's threat to Canadian exports is the use of constant market share analysis (CMSA). This type of analysis decomposes the growth of Canadian exports to the U.S. into two effects, a share effect (which assumes Canada keeps a constant share of the U.S. market) and a competitiveness effect (allowing for changing market share). This competitive effect can then be split into two; the change in market share relative to China and the change relative to the rest of the world.[4] Mathematically this is shown in the following equation:[5]

$$\Delta X_{ij} = \Delta Q_i \cdot S_{ij} + S_{ij} \cdot Q_i * (\Delta S_{ij} / \Delta S_{ij} - S_{ik} / S_{ik}) + \Delta S_{ik} / S_{ik} \cdot S_{ij} \cdot Q_i$$

Where Δ is absolute change, X_{ij} is exports of good i by country j (in this case Canada's exports to the U.S.), Q_i is total imports of good i (by the U.S.) at the beginning of the period, S_{ij} is the initial market share of country j (Canada) and S_{ik} the initial market share of the competitor (China) in U.S. imports of good i. For a more thorough discussion on this version of CMSA, see Holst and Weiss (2004).

Applying the constant market share analysis to U.S. imports of Canadian goods, for the period of 1995 -2005 reveals that Canada has experienced a high degree of competition from China in almost all areas of the U.S. market. Table C4

[2] Widgren (2005), "Revealed comparative advantage in the internal market", Turku School of Economics, the Research Institute of the Finnish economy, 2005.
[3] Refers to the international "Harmonized System" of commodity classification. The 2HS level breaks up commodities into approximately 99 categories based on type of product.
[4] Holst and Weiss (2004), ASEAN and China: Export rivals or partners? The World Economy, Vol. 27, No. 8, August 2004.
[5] Holst and Weiss (2004),ibidem.

Table C1. Sectors in which Canada and China Both Exhibit a RCA with the U.S.

HS	Description	Canada RCA	China RCA
79	Zinc and articles thereof	17.67	6.06
44	Wood	6.30	1.09
78	Lead	3.55	1.56
94	Furniture and bedding	2.76	7.07
53	Other vegetable textile fibre	2.41	7.74
03	Fish and seafood	1.93	1.67
86	Railway and traffic signal equipment	1.87	3.93
43	Fur skin and artificial fur	1.51	1.70
16	Prepared meat, fish, etc	1.48	2.25
65	Headgear	1.45	15.30
66	Umbrellas, walking sticks, etc	1.42	120.75
25	Salt, sulfur, earth, stone, etc	1.42	2.14
73	Iron and steel products	1.28	2.41
51	Animal hair, yarn and fabric	1.13	1.04
83	Miscellaneous art of base metal	1.09	2.29

Table C2. Sectors in which Canada Exhibits a RCA with the U.S. but China Does Not

HS	Description	Canada RCA
27	Mineral fuel, oil, etc	7.56
01	Live animals	6.06
06	Live trees and plants	3.18
48	Paper and paperboard	2.95
76	Aluminium	2.86
75	Nickel and articles thereof	2.84
87	Vehicles (except railway) and parts	2.75
18	Cocoa	2.57
19	Baking related	2.18
17	Sugars	1.87
47	Wood pulp, etc	1.86
68	Stone, plaster, cement, etc	1.80
74	Copper and article thereof	1.76
72	Iron and steel	1.61
22	Beverages	1.58
31	Fertilizers	1.53
40	Rubber	1.22
89	Ships and boats	1.09
11	Milling products	1.08
26	Ores, slag and ash	1.03

Table C3. Sectors in which China Exhibits a RCA with the U.S. But Canada Does Not

HS	Description	China RCA
67	Feathers, down, artificial flowers, etc	126.24
64	Footwear	77.92
46	Straw, esparto, etc	70.70
42	Leather art, etc	37.24
95	Toys and sports equipment	14.28
62	Woven apparel	10.82
63	Miscellaneous textile articles	10.46
91	Clocks and watches	10.04
50	Silk, silk yarn and fabric	9.79
69	Ceramic products	7.28
61	Knit apparel	5.16
92	Musical instruments	4.44
96	Miscellaneous manufactures	4.18
05	Products of animal origin	4.17
57	Textile floor coverings	3.82
36	Explosives	2.95
82	Tools, cutlery, etc	2.75
80	Tin and articles thereof	2.50
81	Base metals	1.51
14	Other vegetable products	1.23
85	Electrical machinery	1.15
09	Spices, coffee, and tea	1.14
70	Glass and glassware	1.11
13	Vegetable saps and extracts	1.07
20	Preserved food	1.01

on the previous page decomposes U.S. imports into 12 main categories[6] in absolute terms the U.S. has increased imports from Canada in all categories, (the largest increase was in oil, which increased $60 billion over the past decade).

The 3rd column, titled constant market share effect, shows the value of Canadian exports if Canada had retained its initial 1995 market share (shown in dollar terms and as a percentage of the actual increase). Machinery and motor vehicles exhibit the largest constant market share effect; if Canada had kept its initial market share in these categories, the increase in U.S. imports would have been more than double the actual increase experienced. Overall competitiveness (the sum of the second and third term in the above equation) gives the effect of Canada's competitiveness relative to the rest of the imports in the U.S. market. In categories where Canada has lost market share, this is a negative effect. Machinery and motor vehicles again show the largest effect. The final column gives the measure of Canada's competitiveness relative to China (second term of the equation), in all categories except oil, Canada shows a strong effect from the loss of market share relative to China. For example, China has made the largest gains in machinery, electrical and motor vehicles in the U.S. market. Canada's loss of competitiveness relative to China is many times greater than its overall increase in these categories.

Table C4: Canadian Export Competitiveness in the U.S. Market.

Category	Increase in U.S. Imports from Canada 1995-2005	Constant Market share effect		Overall Competitiveness		Competitiveness viz. China	
	millions $CAD	millions $CAD	% of increase	millions $CAD	% of increase	millions $CAD	% of increase
Agriculture, Food & Bev	8,288	7,082	85	1,206	15	-18,188	-219
Ores and Metals	9,544	18,173	190	-8,630	-90	-93,153	-976
Oil	60,540	61,098	101	-558	-1	41,994	69
Chemicals	8,077	13,747	170	-5,669	-70	-19,417	-240
Plastic & Rubber	8,731	7,799	89	932	11	-15,947	-183
Wood And Paper	6,893	13,316	193	-6,423	-93	-53,505	-776
Clothing and Textiles	1,384	1,825	132	-441	-32	-3,202	-231
Machinery	5,514	11,090	201	-5,576	-101	-211,860	-3842
Electrical	3,607	5,728	159	-2,122	-59	-43,320	-1201
Motor Vehicles	18,837	40,243	214	-21,405	-114	-338,927	-1799
Other Transport	4,394	4,351	99	43	1	-17,319	-394
Misc. Manufactures	13,297	17,500	132	-4,203	-32	-35,679	-268
Total	149,106	195,618	131	-46,512	-31	-591,270	-397

Data for calculations obtained from Statistics Canada

The constant market share analysis of total U.S. imports of Canadian goods shows a constant market effect of 131 per cent, i.e. the increase in U.S. imports would have been 30 per cent greater if Canada had maintained its initial market share. Overall, the absolute change in relative market share of Canada vis-à-vis China is four times the actual value of the increase in U.S. imports from Canada.

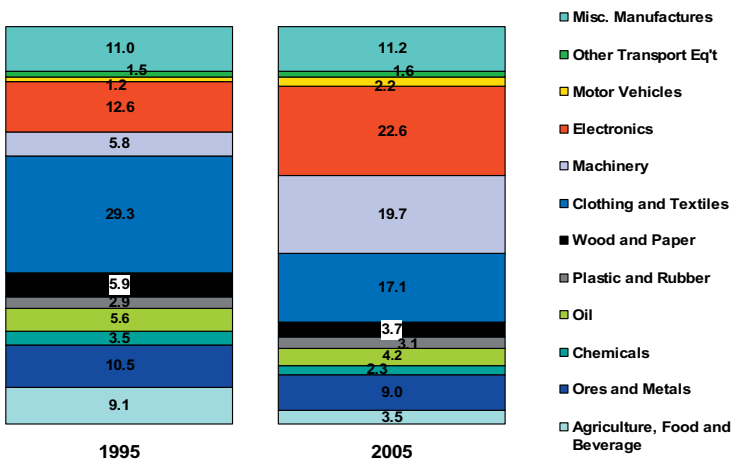
In summary, revealed comparative advantage suggests that China is not a competitor to Canada in the U.S. market place since China's strengths are not in the same sectors as Canada. Using constant market share analysis to decompose the effects on growth of Canadian imports in the U.S., however, suggests that Canada

[6] Agriculture, food and beverages: HS 01-24, Ores and Metals: HS 25,26,68-81, Oil: HS 27, Chemicals: HS 28-38, Plastic and Rubber: HS 38-40, Wood and Paper: HS 41-49, Clothing and Textiles: HS 50-67, Machinery: HS 84, Electrical: HS 85, Motor Vehicles: HS 87, Other Transport: HS 86,88,89, Misc Manufacturers: HS 82,83,90-98

is facing competition from China, especially in machinery, electrical and motor vehicles. This is an important distinction because the RCA measure identifies areas where China and Canada currently have strengths in the U.S. market, whereas it could be argued that the constant market share analysis is more forward looking. For example, although China might not currently have a large amount of automotive exports to the U.S., its share is increasing dramatically (from 0.4 per cent in 95 to 2.1 per cent in 2005) and thus will increasingly pose a threat to Canada in this section of the U.S. market. Currently, RCA analysis reveals that Canada has a comparative advantage in automotive exports to the U.S. while China does not. If China continues its growth in this area, however, the constant market share analysis suggests that China might one day be a significant competitor.

This possible outcome can be seen in the quickly changing composition of China's exports (see Figure C2). China is evolving from an exporter of low cost, labour intensive, manufacturing to more high-tech, capital intensive sectors. A recent paper by Dani Rodrik (2006) identifies China as having a much more sophisticated basket of exports than would be normally expected for a country of its income level.[7]

Figure C2
China's Exports to the World (Share of Total)



Source: Statistics Canada

As China's exports continue to become more sophisticated, Canada will feel increased pressure from China's growing export competitiveness. If Canada does not adjust to the competitive reality of China, we will not be making the most of the opportunity of being next door to the largest market in the world.

[7] Rodrik, Dani (2006), What's so special about China's exports? NBER Working Paper Series, working paper 11947.

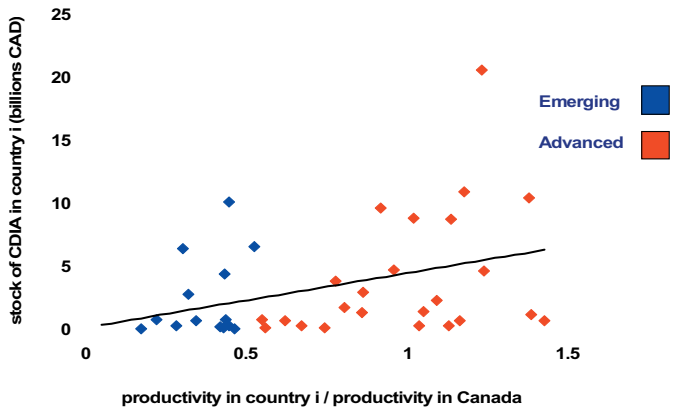
BOX D: CANADIAN DIRECT INVESTMENT ABROAD: WHAT ROLE DO DIFFERENCES IN TECHNOLOGY PLAY IN VERTICAL AND HORIZONTAL DIRECT INVESTMENT?

Canada's economy depends heavily on international trade, with imports and exports equivalent to 72 per cent of Canada's Gross Domestic Product (GDP) as of 2005. But trade is far from the only international connection of importance. Foreign direct investment, both inward and outward, also contributes to Canadian prosperity. Inward direct investment brings with it new technologies, capital, and ways of doing and organizing economic activity, while outward direct investment is essential for increasing Canadian integration into global supply chains and expanding export potential. This paper focuses on Canadian Direct Investment Abroad (CDIA) which, equivalent to 34 per cent of GDP in 2004, plays a substantial role in the well-being of the Canadian economy. The question posed is: how do differences in technology levels between countries affect the location of Canadian direct investment? Do Canadian firms seek out and capitalize on differences in resource endowments such as skilled labour, or do they seek to expand horizontally into foreign markets? Does having technology levels that are closer to Canada's amplify or dampen these motives to engage in direct investment in a given country?

Direct investment can be split broadly into two types: vertical and horizontal. Vertical direct investment occurs when a firm fragments its production process internationally, locating different segments of that production process across different countries. This encompasses the labour-seeking, resource-extracting, and component-outsourcing types of foreign direct investment. Horizontal direct investment, on the other hand, occurs when a firm engages in the same production process in different countries; this covers the market-seeking and differentiated products motives. Vertical direct investment decisions are motivated by a desire to exploit the respective comparative advantages of different countries. These sort of investments allow firms to arrange their production based on where it is most efficient to locate each piece of the process. Horizontal direct investment, on the other hand, is motivated by impediments to the movement of goods and services, such as tariff barriers or high transportation costs, which create incentives to duplicate production abroad. But what role do technology differences between countries play in horizontal and vertical direct investment decisions? This section investigates the Canadian case.

Unsurprisingly, the U.S. is far above any other country as the most important location for CDIA; the U.K., as well, is home to a substantial amount of CDIA. However, due to these high quantities of CDIA in the U.S. and U.K., it is difficult to see how CDIA is distributed in the other countries when those countries are included in a graph. Therefore, the U.S. and U.K. are omitted in Figure D1, which plots CDIA against productivity in the foreign country relative to that in Canada. Productivity is used as a proxy for countries' technology levels relative to Canada's.[1] In this graph, a spray pattern moving from left to right is visible. This indicates a positive relationship, as shown by the trend line, between CDIA and technology level, with higher technology levels associated with

Figure D1
CDIA and Relative Productivity
(U.S. and U.K. Excluded)



Data: Statistics Canada and The Conference Board and Groningen Growth and Development Centre, Total Economy Database, January 2006, http://www.ggdc.net. 2004 data.

[1] As described later in the paper, labour productivity, measured by output per hour, is used as a proxy for technology as described in Ihrig, Jane (2005), "The Influence of Technology on Foreign Direct Investment," *American Economic Association Papers and Proceedings,* Vol. 95, No. 2: 309-313.

more total CDIA in a country. When the sample is split into advanced and emerging economies (as denoted in Figure D1 by the different coloured points) the same spray pattern manifests in both groups, but on different scales, with the quantities invested in advanced economies being substantially larger. Interestingly, if the groups are examined separately, the slope of the trend line is higher in the emerging economies. That is, having technology closer to Canada's is related to higher CDIA, and the importance of higher technology is relatively greater in the emerging markets, compared to the advanced economies.[2] The pattern observed is interesting, but this positive relationship bears further investigation: there may be other factors at play here that are not visible in these graphs. Moreover, the graph does not distinguish between vertical and horizontally motivated foreign direct investment.

Model and Regressions

In an effort to better understand the role of technology differences in determining the location of Canadian direct investment, this section draws on the work of Ihrig (2005), applying the model developed therein to the case of Canada. The model is as follows:

$$\begin{aligned}&\textit{Real direct investment from country } j \textit{ to country } i\\ &= h_1(\textit{sumgdp}) + h_2(\textit{sumgdp} \times \textit{tech}) + h_3(\textit{gdpdiff})^2 + v_1(\textit{skilldiff})\\ &\quad + v_2(\textit{skilldiff} \times \textit{tech}) + v_3(\textit{skilldiff} \times \textit{gdpdiff}) + \textit{controls}\end{aligned}$$

where country *j* is Canada, and country *i* is the recipient country, *sumgdp* is the sum of Canada and the other country's real GDP, *tech* is defined as $|(A^i/A^{world}) - 1|$, where A^i is labour productivity measured as output per hour, in country *i*, and A^{world} is the world average, based on an average of all countries available for that year, *gdpdiff* is the difference between the real GDP of Canada and the other country, *skilldiff* is the absolute value of the difference in skilled labour between Canada and the other country, with skilled labour measured as the proportion of people employed in professional, technical, and similar professions, relative to total employment, and *controls* consist of indices of trade costs and investment costs by country as well as a variable indicating the approximate distance between that country and Canada.

The first three terms in the model, which have h_n coefficients, are used to capture the horizontal motive for direct investment. The result for *sumgdp* is thus expected to be positive, as more horizontal direct investment is likely to occur between countries of larger economic size. Since *sumgdp* × *tech* is used to capture the effect of technology on horizontal direct investment, the result for this term could be positive or negative, as technology could conceivably dampen or amplify the size of horizontal direct investment. Lastly, $gdpdiff^2$ is expected to be negative, as it is expected that larger differences in GDP would decrease the motivation for horizontal direct investment. The following three terms, with coefficients v_n, attempt to capture the motive for vertical direct investment. The expectation is for the result on *skilldiff* to be positive, as vertical direct investment is motivated by a desire to take advantage of differences in endowments, such as more skilled labour or lower wage costs. As with the terms for horizontal direct investment, *skilldiff* × *tech* is used to measure the amplifying or dampening effect of technology on vertical direct investment, and could be positive or negative. Lastly, *skilldiff* × *gdpdiff* is expected to be negative.

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[2] Note that this comment is based on a relatively small number of observations; a larger sample might obviate the comment.
[3] Note that similar regressions were conducted with FDIC as the dependent variable; however, variable registered as insignificant; therefore, the results are not reported here. Further work would have to be done in order to explain these insignificant results.
[4] Countries are split into advanced and emerging based on the listings in the International Monetary Fund's World Economic Outlook Database. Ihrig's definition of advanced economies as countries in the OECD as of 1994 omits some countries that the IMF definition includes, such as Singapore and Taiwan.

A small panel data set of these variables is used, covering four years (2001-04) and 49 countries. The regression uses the fixed effects method, which takes into account the fact that there are differences across countries and/or time periods in the data, caused by variables that are not included in the model. First, the entire sample of data is used. CDIA[3] is regressed upon the terms in the model indicated above. But the motivations for investing in developed nations may be quite different from the factors driving investments into emerging economies. Therefore the sample is additionally split into two groups[4]–advanced economies and emerging market economies–and the regressions are run again. The smaller numbers of observations in these latter two regressions reduces the inexplanatory power, but some useful results are obtained nonetheless. Results are displayed in Table D1. Since the U.S. is home to such a large amount of CDIA, regressions for the full and split sub-samples were run with the U.S. omitted. But the model seems to become unstable when this is done, with only two variables remaining significant (at the 5 per cent level) in the full sample, one in the advanced economy sub-sample, and none in the emerging economies sub-sample. These results are therefore not reported here.

Interestingly, the results for Canada differ from what Ihrig (2005) finds for the U.S. This is perhaps surprising, given that both Canada and the U.S. are advanced economies and share many similar characteristics as well as a fairly high level of economic integration. Ihrig finds support for horizontal direct investment from the U.S. to the full sample of countries and to advanced economies also. She only finds support for vertical direct investment from the U.S. in the case of emerging market economies. In Canada's case, however, the results in Table D1 support vertical direct investment in the full sample rather than horizontal. The results for CDIA to emerging markets are too weak to comment upon, but those for the advanced economies do not support horizontal direct investment either.

The result for the horizontal direct investment term of *sumgdp* is the opposite of what was expected: the coefficient is negative, indicating that as the economic size of the country-pair increases, CDIA decreases. This is the opposite of what Ihrig found for the U.S., which was that the larger the sum of the two economies' GDPs, the greater the U.S. direct investment. Returning to Canada's case, *sumgdp* × *tech* has a positive coefficient, which indicates that the closer the recipient country's technology is to the world average, the less horizontal direct investment it receives from Canada. So possessing technology closer to Canada's has a dampening effect on horizontally motivated CDIA. The result for the third horizontal direct investment term, $gdpdiff^2$, is zero, which is the same result that Ihrig finds for the U.S. Overall, these results do not support the horizontal direct investment motive. As similar results are found in the advanced economies regression, the same can be said of that sub-group.

The results for the vertical direct investment terms, on the other hand, are supportive of that motive in CDIA. For the full sample, the coefficient on skilldiff is positive, indicating that the bigger the skill difference between Canada and the other country, the larger the CDIA. Interestingly, this result is found in the sub-sample of advanced economies as well. The effect of technology on this, as captured

Table D1: Fixed Effects Regressions for Canadian Direct Investment Abroad

Variable	All countries	Advanced economies	Emerging market economies
sumgdp	-7.25**	-9.20**	2.08
	(2.33)	(3.17)	(3.02)
sumgdp × tech	22.97**	24.73**	-1.92
	(3.75)	(4.71)	(6.88)
$gdpdiff^2$	0.00**	0.00**	0.00
	(0.00)	(0.00)	(0.00)
skilldiff	890.84*	1349.56	-119.09
	(440.17)	(744.47)	(218.31)
skilldiff × tech	-1384.58*	-1962.55	21.50
	(677.67)	(1159.77)	(357.05)
skilldiff × gdpdiff	-0.28	-0.34	0.03
	(0.21)	(0.35)	(0.12)
No. observations	131	93	38
R^2	0.87	0.88	0.04

Note: regressions were conducted using STATA. Standard errors are reported in parentheses.

* statistically significant at the 5 per cent level

** statistically significant at the 1 per cent level

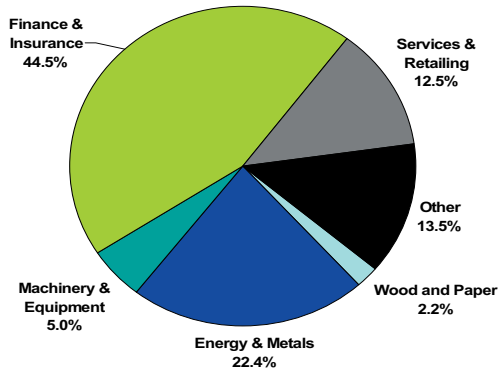
by *skilldiff* × *tech*, is negative, meaning that the closer the recipient country's technology is to the world average, the more vertical direct investment it receives; thus, better technology has an amplifying effect. The last term, *skilldiff* × *gdpdiff* is small and statistically insignificant, as it is in Ihrig (2005). Unfortunately, when the sample is split, none of the results for the emerging market economies are significant, and the results for the last three variables of the advanced economies sample—those that capture the vertical direct investment motive—are not significant either. Nonetheless, though they cannot be relied upon, they do suggest that the sample for advanced economies follows the same pattern as the full sample: supportive of vertical direct investment from Canada but not horizontal.

Interpretation

As mentioned earlier, it is from one perspective surprising that the results for Canada differ from those for the U.S. However, the U.S. is the world's dominant economic power, and home to numerous large firms engaging in foreign direct investment—that is, multinational enterprises. Ihrig's findings of support for U.S. horizontal direct investment therefore understandable, as larger firms are more likely to have the resources to duplicate production abroad.

But what about Canada's case? Why does the evidence point towards vertical rather than horizontal direct investment?

Figure D2
Distribution of CDIA by Industry



Data: Statistics Canada, 2004 data.

First, consider the distribution of Canada's foreign direct investment by industry, as shown in Figure D2. CDIA is dominated by the Finance and Insurance category, which comprises nearly half (45 per cent) of the stock of CDIA. Investments in Energy and Metals follow at 22 per cent, reflecting the importance of resource-seeking direct investment. These two categories alone comprise two-thirds of all CDIA, and both fit with the motive for vertical direct investment. Certainly not all CDIA in these categories is vertical, but the vertical logic fits: firms seeking to optimize production across different countries can locate business processes such as finance and insurance overseas, or choose to invest in raw materials such as energy and metals that they require for their businesses.[5]

Secondly, lower transportation costs, the rapid and continuing development of information and communications technology, and lower trade and investment barriers, have helped drive the international fragmentation of production and thus the growth of global value chains worldwide. In this context, finding support for CDIA being motivated vertically rather than horizontally makes sense, as Canadian firms work to stay abreast of global competition by fitting into and making use of global value chains. But how do the different technology levels found across countries fit into these decisions?

If technology is thought of as another factor of production similar to the standard ones, then the motive for vertical direct investment would say that firms seek differences in labour, capital, and technology, when deciding where to invest. The results found here do not support that view for Canada. Instead of technology differences amplifying the effect of *skilldiff* on CDIA, it is having technology closer to the world average that is linked to more CDIA. Thus the suggestion is that Canadian firms look for differences in labour and capital, but similarities

[5] Although differences in skilled labour are not a perfect proxy for country differences in other endowments such as natural resources, a lower abundance of skilled labour would make it more difficult to exploit those endowments, and thus increase the likelihood of investment in those fields.

in technology. It is not clear from this brief analysis why precisely this is the case, but there are a variety of potential explanations. Firms might need production methods to be able to translate appropriately to the foreign country, which would require a similar level of technology. Higher technology levels in the recipient country might allow better coordination with offices the investing country. And higher technology levels might also be correlated with other factors not investigated here, which could affect incentives for CDIA.

This short highlight section does not fully explore the question of how differing technology levels in recipient countries affect horizontal and vertical foreign direct investment; however, it provides a preliminary look at the effects on CDIA, and perhaps a starting point for further research.[6] Overall, support is for vertical direct investment driving CDIA, and higher technology levels having a positive effect upon that motive for investment.

[6] The addition of more years of data, for example, might serve to address the lack of significance in some of the results. A better proxy for the variable used in the section for vertical direct investment might also be useful, as skilled labour is an imperfect proxy for other differences in endowments.