Foreign Affairs and International Trade Canada
Affaires étrangères et Commerce international Canada

Canada

Canada's State of Trade

Trade and Investment Update – 2011

Including a special feature on

The Evolution of Global Value Chains

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Trade And Investment Update - 2011

This publication is available online at: www.international/gc/ca/economist-economiste/performance

ABOUT THIS DOCUMENT

Canada's State of Trade – 2011 was prepared under the direction of Rick Cameron of the Office of the Chief Economist of the Department of Foreign Affairs and International Trade. The report was written by Rick Cameron, with contributions provided by David Boileau (A Forecast for Canadian Merchandise Exports), Pascal Blais (Decomposition of Per Capita GDP Growth), and by Sonja Djukic of the Small Business and Tourism Branch, Industry Canada (Performance of Small, Medium, and Large-sized Firms in Canadian Exports During the Global Financial Crisis). Statistical assistance was provided by Lydia Gosselin-Couture and Maureen Francoeur. The Special Feature was written by Aaron Sydor. Comments at the drafting stage were provided by Dr. André Downs, Chief Economist, Office of the Chief Economist.

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Catalogue no. FR2-8/2011

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Honourable Ed Fast

Minister of International Trade and
Minister for the Asia-Pacific Gateway

I am pleased to present the 2011 edition of *Canada's State of Trade*. This report provides an overview of Canada's international commercial performance during the past year.

The economic climate of the last few years has been very challenging. However, after enduring the steepest recession in 80 years, the Canadian and global economies posted robust growth. Canada has exhibited one of the fastest rates of economic growth in the G-7—an economic performance that the International Monetary Fund projects will continue into the future.

Since the recovery from the crisis started in July 2009, close to 540,000 jobs have been created in Canada. Not only have we now recouped all of the jobs lost during the recession, but 111,000 new jobs have been created—the bulk of which have been full-time. In addition, Canada's fiscal position is the strongest among the G7 and is on track to be first to return to balanced budgets among the G-7.

The current economic environment nevertheless continues to present both challenges and opportunities of unprecedented scale for Canada. The Harper government, through the Department of Foreign Affairs and International Trade Canada, is committed to working with Canadian businesses to achieve commercial success and improve their bottom lines via trade, and consolidate Canada's competitive position as an economic front-runner in the global economy.

The Canadian government is committed to continuing to ensure Canada remains an attractive and stable environment for business investment and economic success. Canada is emerging from the global recession as one of the world's top-performing advanced economies; throughout the crisis of the past two years, the world has looked to Canada as a model and an inspiration. Our Economic Action Plan, a low-tax plan for jobs and economic growth, has set the stage for success. The next phase of Canada's Economic Action Plan, Budget 2011, is designed to further strengthen the financial

security of Canadian families by protecting and creating good jobs, attracting investment via a competitive tax system, encouraging innovation, and broadening and deepening our trading relationships.

This plan includes the pursuit of a broad and ambitious free trade agenda. Negotiations under the Doha Round of the World Trade Organization remain a priority for Canada, but we are not relying on that multilateral initiative alone. Canadian jobs depend on Canada remaining on an equal footing with its competitors, many of whom are negotiating free trade agreements to their advantage in markets of interest to Canada. The government is thus continuing to aggressively move forward on opening new markets and unlocking the opportunities that freer trade can offer.

Since 2006, the Harper government has concluded free trade agreements with eight countries, and we are continuing free trade negotiations with close to 50 others. This includes trade negotiations with the European Union, Canada's second-largest trading partner, and India, one of the world's fastest-growing economies. We are also exploring the possibility of a closer economic partnering with Japan, and seeking to further deepen our trading relationship with the United States through key initiatives stemming from a Border Vision Declaration personally launched by Prime Minister Harper and President Obama in February.

Additionally, we are seeking better ties and greater access to markets via foreign investment promotion and protection agreements and bilateral air negotiation agreements. They help Canadian investors and exporters grow and expand their operations into new markets.

Canada's State of Trade demonstrates that Canada's international trade is on the upswing. The Harper government is committed to continuing to actively position Canada as a trade and investment leader and as a strategic business partner with access to the world's largest consumer markets. I look forward to working with all Canadians and investors from around the world to build on the progress we have made and to pave the way for even greater achievements in international commerce.

The Honourable Ed Fast
Minister of International Trade
and Minister for the Asia-Pacific Gateway

Executive Summary

In 2010, global economic activity continued to recover from the severe recession recorded in the wake of the global financial crisis. The economic upturn was sustained by monetary and fiscal policy stimulus measures. A prolonged inventory cycle supported the global economic recovery, as firms rebuilt their stocks in response to a more favourable global economic outlook. In addition, further normalization of global financing conditions and improvements in consumer and business confidence aided the recovery. Employment conditions gradually improved over the course of the year, following widespread job losses throughout the preceding two years. The overall improvement in the economic situation and the rebound in activity was accompanied by a strong recovery in world trade, particularly in the first half of the year.

In the second half of the year, the global recovery lost some momentum in the light of waning support from the global inventory cycle along with the retrenchment of fiscal stimuli. Several countries also announced consolidation measures to address their precarious fiscal situations. As a result, global trade dynamics also slowed in the second half of 2010, with trade expanding at a slower pace than in the first six months.

However, the pace of the recovery was rather unbalanced across regions. In advanced economies, the pickup remained fairly modest. At the same time, the emerging economies experienced continued buoyant economic growth, particularly in Asia and South America, to lead the global recovery. This has accelerated the longer-term structural realignment in global economic activity in favour of Asia, notably toward the emerging economies of China and India.

For the year as a whole, world real GDP grew by 5.0 percent in 2010, up from a 0.5-percent contraction in 2009. The advanced economies posted economic growth of 3.0 percent in 2010, after having registered a decline of 3.4 percent the previous year. In contrast, the expansion was more robust in the developing economies, as growth accelerated to 7.3 percent last year, following a 2.7-percent increase in 2009.

Within the developed economies, the advanced economies of Asia fared the best as the Newly Industrialized Economies of Asia advanced by 8.4 percent, while Japan posted the fastest growth among the major advanced economies at 3.9 percent. The United States posted its strongest growth since 2005, up 2.9 percent in 2010 following a 2.6-percent decline in 2009. At the same time, the recovery across most advanced European nations was more subdued, with euro zone growth registered at 1.8 percent after a 4.1-percent decline in 2009. In the United Kingdom, growth in 2010 was even weaker, at 1.3 percent following a 4.9-percent contraction the previous year. However, Germany posted a stronger increase of 3.5 percent last year.

Growth in emerging Asia outpaced all other regions in 2010, led by China and India at 10.3 percent and 10.4 percent, respectively. The next fastest-growing region

among the emerging economies was Latin America and the Caribbean. Growth in that region, which posted a 6.1-percent expansion in real output last year, was led by Brazil, which advanced by 7.5 percent. Sub-Saharan Africa avoided a contraction during the global recession of 2009 and grew rapidly last year, up 5.0 percent. The economic performance of the Commonwealth of Independent States region and that of emerging Europe were similar in 2010, with the former growing by 4.6 percent and the latter by 4.2 percent, while growth in the Middle East trailed all other regions, coming in at 3.8 percent for 2010.

In line with the recovering global economic situation, the pace of Canadian real economic activity rebounded in 2010, up by 3.1 percent after having suffered a 2.5-percent decline a year earlier. The economy began expanding in the second half of 2009 and posted growth in all four quarters of 2010. Output expanded in all provinces and territories in 2010. All major expenditure categories advanced, with the exception of net trade. Inflation remained subdued, at 1.8 percent for the year. Job growth resumed in 2010 after a setback in 2009. Job gains were widespread both regionally and sectorally, although not all regions or sectors posted gains. The national unemployment rate fell from 8.3 percent in January to 7.6 percent in December, averaging 8.0 percent for the entire year. Largely as a result of rising commodity prices, the Canadian dollar appreciated against all major currencies and ended the year above parity with the U.S. dollar.

After the sharpest recorded contraction in 2009, the volume of world trade rebounded in 2010 with the greatest recorded expansion, returning to its pre-recessionary level. However, because of lower commodity prices in 2010 than in 2008 (e.g., crude oil), world merchandise exports remained 5.4 percent below their 2008 peak level, in U.S. dollar terms. Expressed in U.S. dollars, Canadian merchandise exports to the world grew at the same pace as overall world exports, or by 22 percent in 2010. At the same time, Canadian exports of services grew at nearly double the pace of world services exports—15 percent versus 8 percent. However, these metrics are based on data converted into U.S. dollars and they include the effect of the appreciation of the Canadian dollar against its U.S. counterpart.

In Canadian dollar terms, Canadian exports of goods and services to the world rebounded by 8.7 percent in 2010, with goods exports ahead by 9.5 percent and services exports up by 4.4 percent. On the imports side, imports of goods and services rose by 9.2 percent, as goods imports advanced by 10.4 percent and services imports were up by 4.0 percent.

Overall, Canadian exports and imports of goods and services to and from all major markets increased in 2010. Gains in goods and services exports were led by Japan, the EU, and the United States, with advances of 10.5 percent, 10.4 percent and 8.8 percent, respectively. For imports of goods and services, the advances were led by the rest of the world and Japan, with imports up 12.8 percent and 9.4 percent, respectively.

By sector, most of the advances in goods exports were recorded for industrial goods and materials, automotive products, and energy, while exports of machinery and equipment, other consumer products, and agricultural and fishing products fell. In contrast, imports were up across the board. Services exports and imports were up in all major categories, except for exports of government services and imports of commercial services. Canada traditionally runs services trade deficits for travel, transportation, and commercial services and a surplus for

government services; however, in 2010, the country posted its first trade surplus for commercial services.

The appreciation of the Canadian dollar against the other major currencies caused substantial downward revaluations of Canadian direct investment abroad in 2010, lowering the value of direct investment holdings abroad by $35.5 billion. Thus, despite the net acquisitions and the strong investment in existing affiliates during the year, there was an overall 0.7-percent decrease in the value of Canadian direct investment abroad last year. At the same time, foreign direct investment inflows into Canada picked up in 2010, and increased the stock of inward direct investment in Canada by 2.6 percent. Notwithstanding these movements, the stock of Canadian direct investment abroad still exceeded that of foreign direct investment in Canada.

Special feature: The evolution of global value chains

A key structural change in the global economy in recent decades has been the rising importance of global value chains (GVCs). It is increasingly rare that a good or service is completely produced in one location and then the final good exported to the end consumer in another. Rather, value chains are fragmenting with different stages being performed in different jurisdictions based on cost competitiveness. For example, design and research could be conducted in one place, the assembly done in another with parts coming in from around the world, and the entire process managed from a third, all to serve a global market. This implies growing trade, particularly in parts, but also in services, as well as increased flows of people, ideas, and investment.

The factors driving the growth in GVCs are not completely understood, hence it remains unclear whether or not the impact of GVCs will continue to grow, or stagnate—or even decline. Claims that GVCs have arisen due to declining transportation costs and improving information and telecommunications technologies (ICTs) have not yet been substantiated. Indeed, recent research indicates that the current rise of the GVC may be less influenced by the costs of transportation in a traditional sense, and more by the increased speed of transportation. This argument is supported by evidence showing that a growing share of trade, particularly in intermediate inputs, occurs by air—a fast, yet relatively expensive mode of transportation. Likewise, the role of enhanced ICTs in trade remains unconfirmed. Other key factors, which include declining tariff rates and the opening to trade of a large portion of the global economy, may be more significant and, more importantly, under the control of policymakers.

Three trends are increasingly associated with the rise of the GVC: outsourcing, offshoring, and inshoring involve the movement of production activities out of a firm, out of a country, and into a country, respectively. Despite the prominence that they receive in the media, according to recent evidence, offshoring and inshoring are relatively rare occurrences. Furthermore, they tend to balance each other out when they are used. Offshoring of low-skill activities benefits Canadian companies and workers by increasing their productivity and competitiveness, which in turn translates into more and better-paying jobs for Canadians. Evidence also suggests a corresponding net movement into Canada of a number of key high skill activities. The extent to which Canada can prosper within the rapidly changing global economic landscape will depend on Canada's ability to create an economic environment that attracts and retains high value-added activities aimed at improving the standard of living for all Canadians.

Global Economic Performance[1]

Overview and Global Prospects

The global recovery, which gained a foothold toward the middle of 2009, picked up speed at the start of 2010 before decelerating during the second half of last year. This slowdown reflects a normal inventory cycle. As businesses moved to replenish depleted inventories early in the year, economic activity expanded more rapidly.

However, the pace of activity remains geographically uneven, with employment lagging in several countries. Economies that are running behind the global recovery typically suffered large financial shocks during the crisis, often related to housing booms and high external indebtedness, or they are facing financial market pressures. Broadly speaking, the recovery is moving at two speeds, with large output gaps in most advanced economies and closing or closed gaps in emerging and developing economies.

In major advanced economies, economic growth has been modest, especially considering the depth of the recession, reaching just 3.0 percent in 2010 (Table 1-1). In the United States and the euro zone, the economy is following as weak a path as that following the recessions of the early 1990s, despite a much deeper fall. Meanwhile, those advanced economies in Asia have experienced a strong rebound. Overall, growth is insufficiently strong to make a major dent in high unemployment rates, particularly in the advanced Western economies.

In contrast, many emerging and developing economies have seen robust growth, reaching 7.3 percent in 2010, and have low unemployment rates. In a growing number of these economies, there is evidence of tightening capacity constraints. Among emerging and developing economies, those in Asia are in the lead, followed by those in Latin America and the Caribbean, whereas those in eastern Europe are only just beginning to enjoy significant growth.

In most advanced economies, the handoff from public to private demand is proceeding smoothly, reducing concerns that diminishing fiscal policy support might cause a "double-dip" recession. Financial conditions continue to improve, although they remain somewhat fragile. In many emerging market economies, demand is robust and overheating is a growing policy concern. Rising food and commodity prices pose a threat to poor households, adding to social and economic tensions, notably in the Middle East and North Africa.

World real GDP growth is forecast to be about 4.5 percent in 2011 and 2012, down modestly from 5.0 percent in 2010. Real GDP in advanced economies and emerging and developing economies is expected to expand by some 2.4 percent and 6.5 percent, respectively. Downside risks continue to outweigh upside risks. In advanced economies, weak sovereign balance sheets and still-moribund real estate markets continue to present major concerns, especially in certain euro zone

1 Statistics, estimations, and projections in this chapter come from the International Monetary Fund's *World Economic Outlook*, April 2011, supplemented by statistics from the U.S. Bureau of Economic Analysis, the Japan Cabinet Office, the European Central Bank, the U.K. Office for National Statistics, and the World Economic Outlook April 2011 database.

economies; financial risks are also a concern as a result of the high funding requirements of banks and sovereigns. New downside risks are building on account of commodity prices, notably for oil, and, concurrently, geopolitical uncertainty, as well as overheating and booming asset markets in emerging market economies.

TABLE 1-1

Real GDP Growth (%) in Selected Economies (2007-2010 and forecast 2011-2012)

	2007	2008	2009	2010	2011	2012
World	5.4	2.9	-0.5	5.0	4.4	4.5
Advanced Economies	2.7	0.2	-3.4	3.0	2.4	2.6
Canada	2.2	0.5	-2.5	3.1	2.8	2.6
United States	1.9	0.0	-2.6	2.9	2.8	2.9
United Kingdom	2.7	-0.1	-4.9	1.3	1.7	2.3
Japan	2.4	-1.2	-6.3	3.9	1.4	2.1
Euro Zone	2.9	0.4	-4.1	1.7	1.6	1.8
of which France	2.3	0.1	-2.5	1.5	1.6	1.8
of which Germany	2.8	0.7	-4.7	3.5	2.5	2.1
of which Italy	1.5	-1.3	-5.2	1.3	1.1	1.3
NIEs	5.9	1.8	-0.8	8.4	4.9	4.5
Hong Kong	6.4	2.3	-2.7	6.8	5.4	4.2
Korea[1]	5.1	2.3	0.2	6.1	4.5	4.2
Singapore	8.8	1.5	-0.8	14.5	5.2	4.4
Taiwan	6.0	0.7	-1.9	10.8	5.4	5.2
Developing Economies	8.8	6.1	2.7	7.3	6.5	6.5
Developing Asia	11.4	7.7	7.2	9.5	8.4	8.4
of which China	14.2	9.6	9.2	10.3	9.6	9.5
of which India	9.9	6.2	6.8	10.4	8.2	7.8
of which ASEAN-5	6.4	4.7	1.7	6.9	5.4	5.7
Indonesia	6.3	6.0	4.6	6.1	6.2	6.5
Malaysia	6.5	4.7	-1.7	7.2	5.5	5.2
Philippines	7.1	3.7	1.1	7.3	5.0	5.0
Thailand[1]	5.0	2.5	-2.3	7.8	4.0	4.5
Vietnam	8.5	6.3	5.3	6.8	6.3	6.8
C.I.S.	9.0	5.3	-6.4	4.6	5.0	4.7
of which Russia[1]	8.5	5.2	-7.8	4.0	4.8	4.5
Middle East	6.2	5.1	1.8	3.8	4.1	4.2
Latin America/Caribbean	5.7	4.3	-1.7	6.1	4.7	4.2
of which Brazil[1]	6.1	5.2	-0.6	7.5	4.5	4.1
of which Mexico	3.2	1.5	-6.1	5.5	4.6	4.0
Africa	7.2	5.6	2.8	5.0	5.5	5.9
Emerging Europe	5.5	3.2	-3.6	4.2	3.7	4.0

1: IMF forecast for 2010.

Source: IMF World Economic Outlook database, April 2011 and U.S. Bureau of Economic Analysis.

However, there is also the potential for upside surprises to growth in the short term, owing to strong corporate balance sheets in advanced economies and buoyant demand in emerging and developing economies.

United States

Following a burst of strong growth driven by inventory restocking in late 2009 and early 2010, U.S. economic growth slowed but then strengthened again in the second half of 2010. For the year as a whole, real GDP increased 2.9 percent in 2010 after decreasing 2.6 percent in 2009. It was the strongest rate of real expansion in the United States since 2005. The gain primarily reflected upturns in exports, non-residential fixed investment, consumer spending, and inventory investment, and a smaller decrease in residential fixed investment; an increase in imports constituted the main drag on domestic growth.

The 1.7-percent upturn in consumer spending in 2010 added 1.26 percentage points to real GDP growth after subtracting 0.84 percentage point a year earlier and reflected upturns in durables, non-durables, and services. Durables in particular were up strongly—7.7 percent in real terms over 2009 levels—followed by non-durables (2.7 percent) and services (0.5 percent). Personal incomes rose 3.1 percent in nominal terms, while headline inflation was 1.6 percent in 2010.

The rise in non-residential fixed investment added 0.55 percentage point to real GDP growth and reflected a 15.3-percent rise in equipment and software and a smaller decrease (from a 20.4-percent drop in 2009 to a 13.7-percent decline in 2010) in structures.

Residential fixed investment subtracted 0.07 percentage point from real GDP growth in 2010. However, after declining by 24.0 percent in 2008 and 22.9 percent in 2009, the decline in 2010 was a more modest 3.0 percent. Nonetheless, it subtracted from real GDP growth.

The swing in inventory investment added 1.40 percentage points to real GDP growth after subtracting 0.55 percentage point in 2009.

U.S. real exports of goods and services advanced 11.7 percent in 2010 after posting a 9.5-percent retraction in 2009. The improvement in exports added 1.34 percentage points to real GDP growth, reflecting widespread upturns in exports of goods. Exports of services also turned up. However, real imports of goods and services posted a stronger rebound in 2010, up 12.6 percent after registering a 13.8-percent decline the previous year. At the same time, higher imports subtracted 1.83 percentage points from real GDP growth, mostly reflecting widespread upturns in imports of goods. Thus, net exports became a drag on the U.S. economy in 2010, removing 0.49 percentage point from real economic growth.

Government spending slowed, reflecting a larger decrease in state and local government spending and a slowdown in federal government spending.

Recovery in the labour market remains sluggish. After shedding 8.75 million jobs between January 2008 and February 2010, the labour market has added just under 1.5 million jobs since the trough, barely sufficient to keep up with the growth of the working-age population. The employment-population ratio is thus largely unchanged since the start of the recovery.[2] About a third of the decline in the unemployment rate since October 2009—to 8.8 percent in March 2011—is attributable to a decline in labour force participation, which now stands at its lowest level in more than a quarter century.[3]

2 IMF *World Economic Outlook*, April 2011, Chapter 2.

3 Ibid.

Moreover, long-term unemployment and broader measures of underemployment—including the share of workers involuntarily working part-time or only marginally attached to the labour force—remain well above historic highs according to the IMF. The agency argues that the crisis may also have increased structural unemployment in the United States because severe sectoral and regional shocks have created mismatches between labour skill supply and demand.

The U.S. economy is projected to grow by 2.8 percent this year, edging up to 2.9 percent in 2012, with gradually firming private final demand offsetting the waning support from federal fiscal policy. The mid-December fiscal package implies slightly more than a half percentage point addition to growth this year, although recent proposals to curb federal spending would reduce the overall impact of the spending. The IMF expects that the drag on 2011 growth from oil price increases will largely offset the boost from the Federal Reserve's policies of quantitative easing and from stronger net exports. Unemployment is projected to remain high, declining only moderately to about 7.8 percent in 2012.

Japan

Japan's growth in 2010 was the fastest among the major advanced economies, driven by sizable fiscal stimulus and a rebound in exports. After two consecutive years of contraction, the Japanese economy rebounded in 2010, registering a 3.9-percent rate of growth for real GDP. The pick up reflected strong expansion of exports, a boost in inventory investment, and rising government and household consumption that was partly offset by increased imports.

A 24.0-percent increase in real exports led the advances. The gain effectively reversed the 23.9-percent decline in exports in 2009. At the same time, real imports expanded by 9.8 percent after declining by 15.3 percent a year earlier. For the year as a whole, exports contributed 3.0 percentage points to real GDP growth while imports subtracted 1.2 percentage points from growth.

The replenishment of inventories added 0.6 percentage point to real GDP growth after subtracting 1.5 percentage points in 2009 and 0.2 percentage point the year before.

Similarly, Japanese private consumption reversed two years of contraction by expanding 1.8 percent last year. Households led the advance as household consumption grew by 1.9 percent. Overall, growth in private consumption added 1.1 percentage points to GDP growth in 2010.

Weaknesses in the Japanese housing sector persist. The decline in residential fixed investment removed 0.2 percentage point to real GDP growth in 2010, reflecting a 6.3-percent decline in residential investment. Japanese residential fixed investment had fallen by 14.0 percent, 8.0 percent, and 9.6 percent in 2009, 2008, and 2007, respectively.

Non-residential fixed investment expanded by 2.1 percent in 2010, adding 0.3 percentage point to real GDP growth. In comparison, non-residential investment had declined by 16.7 percent in 2009 and by 1.4 percent in 2008.

Finally, government consumption expanded by 2.3 percent last year while public investment was down by 3.2 percent. Overall, public demand added 0.3 percentage point to real GDP growth in 2010.

Looking forward, there are large uncertainties for Japan associated with the Tohoku earthquake. Official estimates of the damage to the capital stock are about 3 to 5 percent of GDP, roughly twice that of the 1995 Kobe earthquake. This, however, does not account for the effects of possible power shortages and ongoing risks associated with the crisis at the Fukushima Daiichi nuclear power

plant. Assuming that the power shortages and the nuclear crisis are resolved within a few months, the IMF projects growth in Japan to slow to 1.4 percent in 2011 before recovering to 2.1 percent in 2012.

Euro zone

In Europe, the recovery is proceeding modestly. Overall, real activity in the region remains below its potential level and unemployment remains high, with substantial variation across economies. According to the IMF, concerns about banking sector losses and fiscal sustainability led to widening sovereign spreads in euro zone countries, in some cases reaching highs not seen since the launch of the Economic and Monetary Union.

After posting a 4.1-percent decline in real GDP in 2009, growth in euro zone real output was up 1.8 percent last year. Gains were modest across most sub-components of GDP with the exception of trade, which posted vigorous rates of expansion.

Real exports were up 11.6 percent in 2010 while real imports advanced 10.7 percent as net exports contributed 0.8 percentage point to overall GDP growth.

The remaining 1.0 percent of growth came from domestic demand. Private consumption and inventory replenishment both contributed 0.5 percentage point to real growth, as real consumption was up 0.8 percent. Government consumption was also up, advancing 0.7 percent to contribute a further 0.2 percentage point to growth; however, a 0.8-percent decline in euro zone gross fixed capital formation (GFCF) removed 0.2 percentage point from growth. For GFCF, it was the third consecutive annual decline.

The euro zone is not without its problems and the outlook is for a continued gradual and uneven expansion. In 2011, the largest economies in the region (e.g., France, Germany and Spain) will implement measures to reduce their deficits, while other countries that have come under market pressure (e.g., Greece, Ireland and Portugal) will continue with sizable front-loaded consolidation. Additionally, financial systems in Europe remain vulnerable and several key issues need to be addressed. In particular, questions about asset quality remain largely unresolved while some euro zone banks face significant capital shortfalls.

Euro zone real GDP is projected to grow at 1.6 percent in 2011 and 1.8 percent in 2012. However, prospects across the region are divergent, largely reflecting differences in the state of public and private sector balance sheets and the stance of macroeconomic policies.

In particular, growth in Germany is expected to moderate from 3.5 percent last year to 2.5 percent this year and 2.1 percent next year, mainly due to the withdrawal of fiscal support and the slowdown in external demand growth. In France, growth is projected to fall in line with the euro zone average, rising to 1.6 percent this year and 1.8 percent in 2012, as consumption growth is subdued by the retrenchment of fiscal stimulus and export growth is weakened by slowing external demand. In Italy, the recovery is expected to remain weak, as long-standing competitiveness problems constrain export growth and the planned fiscal consolidation weighs on private demand. Growth in Italy is forecast to fall below the euro zone average over the next few years, at 1.1 percent for 2011 and 1.3 percent for the following year. The austerity measures taken in response to the sovereign debt crisis will particularly impact those economies most closely associated with the crisis: Greece is projected to contract by 3.0 percent in 2011; Portugal is also projected to post a decline of 1.5 percent this year; and Ireland and Spain are expected to post modest gains of 0.5 percent and 0.8 percent, respectively.

United Kingdom

After registering the largest contraction on record in 2009, at 4.9 percent, the U.K. economy responded by posting growth of 1.3 percent last year. Economic expansion was registered for four consecutive quarters starting with the fourth quarter of 2009. However, the recovery is sputtering as the United Kingdom closed out 2010 with a 0.5-percent decline in economic activity in the fourth quarter of 2010.

As with its euro zone neighbours, gains were most vigorous in trade. Real exports of goods and services advanced 5.3 percent in 2010 after retracting 10.1 percent in 2009. Goods led the increase, up 10.7 percent, while U.K. services exports slipped 2.3 percent. Overall, exports added 1.4 percentage points to economic growth in 2010.

For imports, the rebound was somewhat larger than that observed for exports. Real imports climbed 8.5 percent last year after posting an 11.9-percent decline the year before. Again, goods led the way, up 11.2 percent, while services imports nudged ahead 1.1 percent. The increase in imports, which are a subtraction from GDP, removed 2.4 percentage points from real growth last year.

On the domestic front, household final consumption rose by 0.8 percent during 2010 in contrast to a 3.3-percent decline the previous year. Expenditures on durables led the way, up 2.9 percent, followed by non-durables (1.3 percent), and services (0.5 percent), while semi-durables experienced a reduction of 0.4 percent. The upturn in consumer spending added 0.5 percentage point to real GDP growth.

General government spending also advanced by 0.8 percent in 2010, contributing 0.2 percentage point to growth for the year.

Gross fixed capital formation increased by 3.0 percent in 2010, after having fallen by 15.4 percent in 2009. This expansion added 0.5 percentage point to real output growth in 2010.

Inventories also posted a small net addition in 2010 of nearly £2.6 billion in constant 2006 sterling pounds in contrast to a £16.0 billion drawdown a year earlier.

In the United Kingdom, growth is projected at 1.7 percent in 2011 as front-loaded fiscal consolidation dampens domestic demand. However, the rate of expansion is expected to pick up to 2.3 percent in 2012.

Decomposition of Per-Capita GDP Growth

Economists often use a nation's per-capita real GDP as an indicator of the standard of living of its citizens. Using a method called growth accounting, per-capita real GDP growth can be decomposed into three key components, which are analyzed to determine their individual effects: labour productivity; labour force participation rate; and the employment rate. The relationship between these components is described by the following equation:

$$\%\ \text{Change in GDP Per Capita} = \%\ \text{Change in Labour Productivity} + \%\ \text{Change in Labour Force Participation Rate} + \%\ \text{Change in Employment Rate}$$

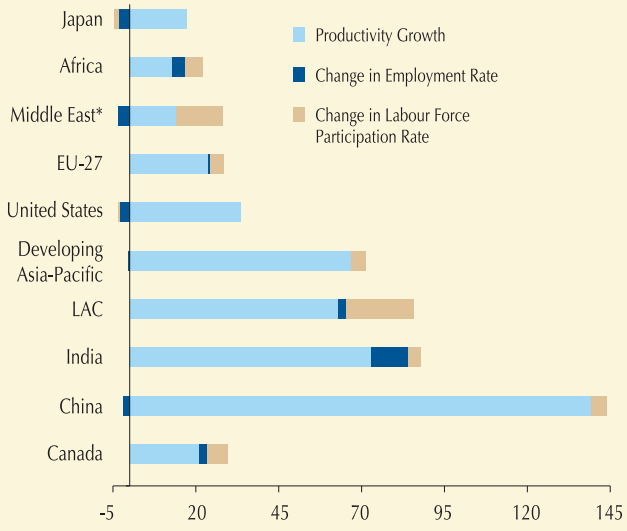
Labour productivity indicates how much each worker employed within an economy produces; the labour force participation rate indicates the proportion of the population that is available for the production of goods and services; and the employment rate indicates the proportion of the available population that actually works in the economy.

This methodology has been applied to ten economies (see chart) that together represent the vast majority of the global economy. The results show how each of the three components described above affected growth in per-capita real GDP from 1991 to 2010 within each economy.

In each of the ten cases, labour productivity was the largest—and sometimes the only—driver of per-capita GDP growth. In both India and China, increasing labour productivity was the most important driver. In India, changes in the labour force participation rate also exerted a positive yet relatively minor effect on per-capita GDP growth. In China, a falling employment rate exerted a small negative effect on per-capita GDP growth.

In Japan, an aging population exerted a downward effect on (i.e. lowered) the labour force participation rate, leaving labour productivity as the sole driver of per-capita GDP growth. The opposite is in play in the Middle East and Latin America and the Caribbean, where a young populace continues to enter the labour market in force, thus positively affecting labour force growth in that region, in addition to productivity growth. But even here, productivity growth was predominant in Latin America and the Caribbean as well as in the entire Developing Asia-Pacific region.

Total Per Capita GDP Growth Accounting Decomposition, 1991-2010**



Data: Global Insight.
Source: Office of the Chief Economist, DFAIT.
*Middle East Comprises Israel, Iran and Saudi Arabia.
**Developing Asia-Pacific 1996-2010, Middle East 1999-2010, EU-27 1993-2010.

Between 1991 and 2010, both Canada and the U.S. saw similar growth in real GDP per capita; in Canada, real GDP per capita grew by 34.6 percent to reach US$35,318 in 2010, whereas in the U.S., real GDP per capita experienced an increase of 35.0 percent, reaching US$42,623. However, in Canada growth in labour productivity was only 23.5 percent over this period, but combined with growth in both the labour force participation rate and the employment rate helped drive the growth in per-capita GDP. By contrast, labour productivity grew 40.0 percent in the United States, but this effect was partially offset by declines in the labour force participation rate and the employment rate.

The lesson to draw from this is that expanding employment or the labour force can be important for improving standards of living. But, many countries with ageing populations are increasingly becoming aware that the most sustainable and effective means by which to achieve continued and long-lasting growth in standards of living is productivity, as evidenced by the massive productivity gains driving growth in China, India and developing Asia-Pacific.

Emerging Economies

Emerging Asia

Growth in emerging Asia outpaced all other regions in 2010, led by China and India at 10.3 percent and 10.4 percent, respectively. Growth was supported by strong export performance, buoyant private domestic demand, and, in some cases, rapid credit growth. For the region as a whole, emerging Asia grew by 9.5 percent.

However, signs of overheating are starting to materialize in a number of economies. Continued high growth has meant that some economies in the region are now operating at or above potential. Output gaps in much of the region have closed or are quickly closing. Inflation is also on the rise. Most of the increase in headline inflation in recent months has been due to energy prices along with a spike in food prices, but core inflation has also been increasing in a number of economies, most notably India. Furthermore, real estate prices have been rising at double-digit rates in a number of economies. At the same time, credit growth is accelerating in some economies (e.g., India and Indonesia), and it remains high in China.

Against this backdrop, growth in emerging Asia is expected to moderate somewhat, although it will continue to expand rapidly this year and next, at a projected 8.4 percent for both years. Export growth is expected to moderate from last year's very rapid pace but will remain robust as gains in market share and increased intraregional trade partially offset the weakness in final demand from advanced economies. Capital flows to Asia are likely to continue, driven by both cyclical and structural factors. Autonomous private consumption growth should remain strong, supported by still-rich asset valuations and improved labour market conditions.

China's growth is expected to lead the region, remaining at a robust 9.6 percent this year and 9.5 percent next year. The drivers of growth are expected to shift increasingly from public to private demand as stimulus is withdrawn. Consumption will be bolstered by rapid credit growth, supportive labour

market conditions, and other policy efforts to raise household disposable income. For India, growth is expected to moderate but remain above trend, with GDP growth projected at 8.2 percent in 2011 and 7.8 percent in 2012. Infrastructure will remain a key contributor to growth, and corporate investment is expected to accelerate as capacity constraints start to bind and funding conditions remain supportive. The ASEAN-5 economies[4] are projected to expand by 5.4 percent in 2011 and 5.7 percent in 2012. The ASEAN-5 will be led by Vietnam, where strong consumption and a recovery in investment will raise growth to 6.3 percent this year and 6.8 percent in 2012.

Emerging Europe

For the region as a whole, emerging Europe posted solid growth of 4.2 percent in 2010. However, performance within the region was mixed, with Turkey leading the growth at 8.2 percent, while Croatia, Romania and Latvia all contracted last year.

The outlook is for a continued, gradual and uneven expansion. Emerging Europe's growth is expected to be 3.7 percent in 2011 and 4.0 percent in 2012. Economic prospects across the region seem to be converging toward the regional average. For leading Turkey, growth is expected to moderate to 4.6 percent this year and 4.5 percent next year. In Poland, growth is expected to remain solid at about 3.8 percent this year and 3.6 percent next year as corporate profitability rises, the absorption of EU funds continues, and bank lending resumes. After contracting in 2010, Croatia is projected to record moderate growth of 1.3 percent this year, rising to 1.8 percent next year while Romania is expected to rebound to 1.5 percent this year and to 4.4 percent in 2012. Most of the other emerging European economies are expected to grow in the 2.8 to 3.3 percent range for 2011, with the exception of Lithuania, which is projected to grow by 4.6 percent.

Latin America and the Caribbean (LAC)

Strong demand from the emerging Asian economies has boosted world commodity prices, to the benefit of Latin America and the Caribbean. More recently, with the rebound in global economic activity, exports to other destinations have also bounced back. This has encouraged strong capital inflows and moderate current account deficits. Despite the support to current accounts from commodity prices, however, deficits are widening and are projected to continue widening on the back of robust domestic demand. Additionally, the generally buoyant conditions are associated with rising inflation in South and Central America. On the other hand, Mexico is not facing overheating pressure at this time.

Against this background, real output expanded by 6.1 percent last year, and is projected to average 4.7 percent in 2011 and 4.2 percent in 2012. As with any large region, however, experiences vary.

For South American economies, the outlook is generally positive, albeit less robust than in 2010. Because of Brazil's systemic importance to the region, many neighbouring countries are currently benefiting from its strong growth. However, projections are for output growth in Brazil to slip to 4.5 percent this year from 7.5 percent last year. With that decline, growth in South America is expected to moderate from 6.5 percent in 2010 to 4.8 percent in 2011. Paraguay, the leading growth performer of all main LAC economies, at 15.3 percent in 2010, will see its expected growth drop to a more sustainable 5.6 percent this year. Similarly, growth prospects for Argentina will fall to a more

4 The Association of Southeast Asian Nations (ASEAN) comprises Indonesia, Malaysia, Philippines, Thailand and Vietnam.

sustainable 6.0 percent from last year's 9.2 percent. On the other hand, Chile is expected to accelerate to 5.9 percent this year, up from 5.3 percent in 2010. Venezuela, which contracted by 1.9 percent in 2010, is expected to return to growth this year, with a 1.8-percent rate of expansion.

For Mexico, prospects continue to be closely aligned with those for the United States. In line with the improved outlook for the U.S. economy, real activity in 2011 is projected to expand by 4.6 percent.

In Central America, and Panama in particular, the recovery is strengthening on the back of external demand, and output gaps are almost closed. Support has also come from a recovery in remittance flows. These trends are expected to continue and the outlook for the region is for 4.0-percent growth this year and 4.3-percent growth next year, up from 3.6-percent growth in 2010.

The outlook for the Caribbean countries has improved in line with the global recovery. Growth in 2011 is now forecast to be 4.2 percent, rising to 4.5 percent in 2012. Much of this, however, reflects the strong performance of the Dominican Republic and post-earthquake rebuilding in Haiti.

Commonwealth of Independent States (CIS) Economies

Recovery in the CIS region is proceeding at a steady pace, following the region's economic collapse during the crisis. Several factors are supporting the recovery. Higher commodity prices are boosting production and employment in the region's commodity-exporting economies. Also, the rebound in real activity in Russia is benefiting other CIS economies through trade, remittances and investment. In addition, a gradual normalization of trade and capital flows to the region continues.

Real activity in the CIS region grew by 4.6 percent in 2010 and is projected to expand by 5.0 percent in 2011 and 4.7 percent in 2012. However, within the region, growth prospects differ substantially.

Notwithstanding the large fiscal stimulus implemented during the crisis (at about 9 percent of GDP), Russia posted only a 4.0-percent rate of increase in 2010. Growth is projected to pick up to 4.8 percent in 2011 and 4.5 percent in 2012. Private sector demand is likely to remain subdued as nonperforming loans in the banking system constrain credit and consumption growth. Among other energy exporters, Turkmenistan is expected to benefit from high gas prices and be among the top performers in the region, growing by 9.0 percent in 2011. In Uzbekistan, growth is also projected to remain high, at 7.0 percent in 2011, supported by strong domestic demand, public investment and commodity exports (including gold and cotton).

For energy importers as a group, growth is projected at 5.3 percent in 2011 and 4.9 percent in 2012 as some of these economies (e.g., Armenia and Moldova) benefit from the rebound in remittances from Russia and others from the return of financial stability (such as Ukraine). As in previous years, for most CIS economies, growth prospects remain highly dependent on the speed of recovery in Russia.

Middle East

The Middle East region weathered the global crisis relatively well, posting a 3.8-percent rate of economic growth in 2010. However, spreading social unrest, rising sovereign risk premiums and elevated commodity import prices will constrain growth prospects in several Middle Eastern economies.

Higher commodity prices and external demand helped boost production and exports in many economies in the region. In

addition, government spending programs continue to foster recovery in many oil-exporting economies. At the same time, political discontent, high unemployment and rising food prices are causing social unrest in a number of countries, which is likely to dampen their short-term growth.

Real GDP in the Middle East region is projected to grow at 4.1 percent in 2011, edging up to 4.2 percent in 2012. But prospects for economic growth vary widely across the region.

The group of oil exporters have the better outlook. Growth for this group is expected to pick up to 4.9 percent this year. The strongest performer is Qatar, where real activity is projected to expand by 20.0 percent in 2011, underpinned by continued expansion in natural gas production and large investment expenditures. In Saudi Arabia, GDP is expected to grow at about 7.5 percent this year, supported by sizable government infrastructure investment. However, for Iran, growth in 2011 is expected to stall temporarily as subsidies for energy and other products are phased out—a much-needed reform that will yield benefits in the medium term. Disruption of oil production in Libya means that, given constraints on non-OPEC capacity, oil production from other OPEC suppliers is likely to increase in 2011.

The economic outlook is less positive for oil importers. The political turmoil in Egypt will likely curtail output and dampen tourism receipts. GDP growth is thus expected to slow to 1.0 percent, down significantly from the 5.1 percent registered in 2010. In Tunisia, growth is projected to slow to 1.3 percent in 2011, down from 3.7 percent in 2010, as expected declines in tourism and foreign direct investment harm other sectors of the economy.

Sub-Saharan Africa

Africa managed to avoid a contraction during the global recession of 2009 and grew rapidly last year. The region trailed only emerging Asia and Latin America and the Caribbean in growth in 2010 and is second only to developing Asia in the outlook for growth in 2011. Output gaps in many of the region's economies are starting to close, although South Africa is a notable exception.

The region grew rapidly last year, advancing 5.0 percent in real terms. Domestic demand growth remained robust, trade and commodity prices rebounded, and macroeconomic policies continued to be accommodative. Terms-of-trade gains are supporting the region's external balances, and the gradual reorientation of exports toward faster-growing regions such as Asia has been sustained.

Looking forward, real activity in sub-Saharan Africa is projected to expand by 5.5 percent this year and 5.9 percent next year, but disparities will remain.

Growth in the region is projected to be led by the region's oil exporters. The expected strengthening of oil prices in 2011 will help sustain the recovery for this group. As a whole, the African oil exporters are projected to grow by 6.9 percent this year and by 7.0 percent in 2012, led by Angola. Following the sharp rebound in oil production last year in Nigeria, oil output is expected to stabilize this year, and the economy is set to expand by 6.9 percent. Most oil exporting economies are planning to use the buoyancy of global oil markets as an opportunity to return to fiscal surpluses and rebuild reserves.

At the same time, growth in Africa's low income countries (LICs) is projected to expand by 5.9 percent this year. Ghana, the third-largest LIC in the region, is projected to grow by 13.7 percent this year as oil production commences in the Jubilee oilfield and

growth in the non-oil sector remains robust. The recovery in other LICs, such as Kenya and Ethiopia, is also expected to stay strong this year, supported by infrastructure investment and improving agricultural production. However, political turmoil in Cote d'Ivoire has dampened growth prospects, and that economy is projected to contract by 7.5 percent in 2011.

In marked contrast to the robust growth in most of the region, recovery is expected to be relatively weak in South Africa, the region's largest economy. Despite an already sizable output gap, South Africa is expected to grow by only 3.5 percent in 2011—a rate that is insufficient to reverse the substantial job losses of the past two years. The outlook primarily reflects the lack of strong domestic demand, as private investment is held back by excess capacity.

Assumptions and Risks

As indicated earlier, all projections in this chapter stem from the IMF's April 2011 *World Economic Outlook*. In making its projections, the IMF has adopted a number of technical assumptions that underpin its estimations. Key among these assumptions are that (1) for the advanced economies, real effective exchange rates remain constant at their average levels during the period between February 8-March 8, 2011; (2) established policies (fiscal and monetary) of national authorities are maintained; and (3) the price of oil will average US$107.16 a barrel in 2011 and US$108.00 a barrel in 2012. In addition, there are a number of working hypotheses concerning various deposit rates in the world's financial sectors. Interested readers should consult the *Outlook* for further details on these technical assumptions.

For the most part, the assumptions made by the IMF modellers are based on officially announced budgets, adjusted for differences between the national authorities and the IMF regarding macroeconomic assumptions and projected fiscal outcomes, with medium-term projections incorporating policy measures that are judged likely to be implemented. Similarly, assumptions about monetary policy are based on the established policy framework in each country.

One of the key assumptions of the forecast relates to oil prices being in the US$107-US$108 per barrel range. There is a risk to growth relating to the potential for oil prices to surprise further on the upside because of supply disruptions. The IMF has examined the case of a temporary disruption pushing prices to US$150 per barrel and found that it would lower real GDP in the advanced economies, in Asia and in Africa by three-quarters of a percentage point, and lower output in Latin America and the Caribbean by one-half of a percentage point. For the CIS and the Middle East, higher prices would yield output gains.

In addition, the outlook for activity a year ago was unusually uncertain because of downside risks stemming from fiscal fragilities. Over the course of the past year, financial risks declined as the recovery gained foothold. Improvements in macroeconomic performance and strong prospects for emerging market assets have supported overall financial stability. Accommodative macroeconomic conditions have helped ease balance sheet risks and have spurred an increase in risk appetite. However, significant fiscal and financial vulnerabilities still exist.

The key downside risks stem from high leverage and limited improvements in credit quality in advanced economies and building credit risks in some major emerging market economies. In particular, weak sovereign balance sheets in several advanced economies raise the potential for high volatility in interest rates and risk premiums. Additionally, bank exposure to real estate continues to pose downside risks. Real estate markets are

moribund in a number of advanced economies and the number of homes at risk of foreclosure remains significant. In the meantime, new risks are appearing because of booming real estate markets in emerging market economies. Finally, the risk of overheating in some emerging market economies cannot be ignored. Growth in these economies could surprise on the upside in the short term because of relatively loose macroeconomic policies, but medium-term risks are to the downside. These risks represent higher interest rates, weaker future income growth and the potential for a large drop in commodity prices.

Overview of World Trade Developments

After the sharpest contraction on record in 2009, the volume of world trade rebounded in 2010 to return to its 2008 peak level—the greatest expansion ever registered.

Global export volumes increased by 14.5 percent last year. Developed economies recorded export growth of 12.9 percent in volume terms over the course of the year while shipments from the rest of the world (including developing economies and the Commonwealth of Independent States [CIS]) rose by 16.7 percent.

Asia exhibited the fastest real export growth of all regions in 2010, with a jump of 23.1 percent, led by China and Japan, whose shipments to the rest of the world rose by 28.4 percent and 27.5 percent, respectively. Meanwhile, the United States and the European Union saw their exports growing more slowly at 15.4 percent and 11.4 percent, respectively. Imports were up 22.1 percent in real terms in China, 14.8 percent in the United States, 10.0 percent in Japan, and 9.2 percent in the European Union.

Regions that export significant quantities of natural resources (Africa, the CIS, the Middle East and South America) all experienced relatively low export volume growth in 2010, but stronger increases in the dollar value of their exports. For example, Africa's exports were up 6 percent in volume terms, and 28 percent in dollar terms.

In nominal terms, merchandise exports were US$15.2 trillion in 2010, but remained 5.4 percent below their 2008 peak level of US$16.1 trillion, largely due to the impact of relatively lower commodity prices in 2010 than in 2008.

Merchandise Trade

Trade values (nominal trade)

After falling by 23 percent in 2009, world merchandise exports were up 22 percent last year, rising from US$12.5 trillion to US$15.2 trillion (Table 2-1).

The factors that contributed to the large drop in world trade in 2009 may have also helped in the rebound of 2010, according to the WTO.[1] These include the spread of global supply chains and the product composition of trade compared to output. The use of global supply chains in goods production causes goods to cross national boundaries several times during the production process; this in turn raises measured world trade flows compared to more traditional trade flows where final goods constitute the bulk of trade. Additionally, the goods that were most affected by the downturn were consumer durables, industrial machinery, etc., which were affected by tight credit and sharp declines in business investment. Since these goods represent a larger share of world trade than of world GDP, the reduction in trade of these goods increased the magnitude of the trade slump relative to GDP in 2009, while the increase in trade of these goods during the recovery of 2010 produced an opposite (positive) effect.

1 WTO Press Release Press/628, "World Trade 2010, Prospects for 2011," April 7, 2011.

TABLE 2-1

World Merchandise Trade By Region and Selected Countries (US$ billions and %)

	EXPORTS				IMPORTS			
	Value US$B	2010 Share	Annual % change		Value US$B	2010 Share	Annual % change	
	2010	(%)	2009	2010	2010	(%)	2009	2010
World	**14,855**	**100.0**	**-23**	**22**	**15,050**	**100.0**	**-23**	**21**
N. America	**1,964**	**13.2**	**-21**	**23**	**2,681**	**17.8**	**-25**	**23**
U.S.	1,278	8.6	-18	21	1,968	13.1	-26	23
Canada	387	2.6	-31	22	402	2.7	-21	22
Mexico	298	2.0	-21	30	311	2.1	-24	29
Central & S. America	**575**	**3.9**	**-24**	**25**	**576**	**3.8**	**-26**	**30**
Brazil	202	1.4	-23	32	191	1.3	-27	43
Europe	**5,626**	**37.9**	**-22**	**12**	**5,841**	**38.8**	**-25**	**13**
EU(27)	5,147	34.6	-22	12	5,337	35.5	-25	12
Germany	1,269	8.5	-23	13	1,067	7.1	-22	15
France	521	3.5	-21	7	606	4.0	-26	8
Italy	448	3.0	-25	10	484	3.2	-24	17
U.K.	405	2.7	-23	15	558	3.7	-33	15
C.I.S.	**588**	**4.0**	**-36**	**30**	**414**	**2.8**	**-33**	**24**
Russia	400	2.7	-36	32	248	1.6	-34	30
Africa	**500**	**3.4**	**-30**	**28**	**463**	**3.1**	**-15**	**14**
Middle East	**916**	**6.2**	**-31**	**30**	**572**	**3.8**	**-15**	**13**
Asia	**4,685**	**31.5**	**-18**	**31**	**4,503**	**29.9**	**-20**	**32**
China	1,578	10.6	-16	31	1,395	9.3	-11	39
Japan	770	5.2	-26	33	693	4.6	-28	25
India	216	1.5	-15	31	323	2.1	-20	25
NIEs	**1,111**	**7.5**	**-17**	**30**	**1,103**	**7.3**	**-24**	**33**

Source: WTO and author's calculations.

All regions experienced double digit increases in the dollar value of both exports and imports in 2010, due in part to rising prices for fuels and other commodities.

For the developed economies, the value of merchandise exports jumped some 16 percent in 2010 to US$8.2 trillion, up from US$7.0 trillion in 2009. However, this rate was slower than the world average of 22 percent; as a result, the share of developed countries in world merchandise exports fell to 55 percent, its lowest level ever.

The higher prices for primary products exported predominantly by developing countries cannot fully explain the falling share of the developed economies in world exports. This is because export prices were even higher in 2008 but the share of developed countries in world trade at that time was also higher, at nearly 58 percent. Instead, slow growth in Europe has curtailed intra-EU exports as well as exports from other developed economies to that region. Additionally, concerns about the possibility

of sovereign defaults in Greece, Ireland, Portugal and Spain brought renewed instability to financial markets and fiscal austerity in the second half of 2010, which held Europe's growth rate to the slowest of any region. A relatively sluggish recovery in the United States has also constrained trade in the developed economies.

Asia registered the fastest export growth of any region in 2010; at 31 percent, it was well above the global average. Japan, at 33 percent, led the way, followed by China and India (each at 31 percent), and the Asian NIEs[2] (30 percent).

The resource-rich regions of the world also exhibited strong growth in the value of their exports last year. A pickup in energy prices helped boost exports from the CIS region by some 30 percent. Russia, the largest CIS economy, saw its exports expand by 32 percent. Similarly, exports from the Middle East, another oil-rich region, also grew by 30 percent over 2009 levels.

Africa was next in terms of largest relative gains. African exports rose by 28 percent in 2010 as exporters benefited from price gains in primary commodities such as metals and ores, as well by increasing demand on the part of fast growing developing economies like China and India.

Exports from Brazil were up 32 percent, in turn helping to pull up total exports from South and Central America, which grew by 25 percent.

North America's exports were up 23 percent. This was slightly better that the world average. Mexico's rebound was the strongest, at 30 percent, followed by Canada (22 percent) and the United States (21 percent). However, part of the Mexican and Canadian performance is attributable to the appreciation of their respective currencies vis-à-vis the U.S. dollar. Calculated from U.S. Federal Reserve Board statistics, the U.S. dollar depreciated 9.8 percent against the Canadian dollar and by 6.5 percent against the Mexican peso.

Lastly, exports from Europe grew the slowest in 2010, at 12 percent. As mentioned above, financial market instability and fiscal austerity measures have held back growth in the region, which in turn has impacted trade performance. Export growth was led by the Netherlands and the United Kingdom, at 15 percent each. Germany also managed to post a growth rate greater than the regional average, while Italy and France underperformed relative to the regional average.

The story is similar on the import side, where developed economy imports increased 16 percent to US$8.9 trillion, while their share of world imports dropped to 59 percent from 61 percent in 2009 and 63 percent in 2008.

Imports into China expanded rapidly in 2010, up 39 percent, while imports into Japan and India grew at the more subdued pace of 25 percent. For the NIEs, imports were up by a third. Overall, imports into Asia expanded by 32 percent, to lead all regions.

Next in terms of fastest-growing imports were the South and Central America and CIS regions, where 2010 imports were up by 30 percent and 24 percent, respectively.

For North America, imports grew at the same rate as exports (23 percent). Again, trade grew fastest in Mexico, where imports were 29 percent ahead of their 2009 levels. Imports into the United States expanded at the same rate as the regional average, while growth was slowest in Canada, at 22 percent.

Imports into Africa were up by 14 percent, half the pace of exports from Africa. Oil-exporting African nations registered only a 4-percent increase in their merchandise imports, which helped trim the pace of imports into this region.

2 Four economies comprise the newly industrialized economies (NIEs) of Asia: Hong Kong, Korea, Singapore and Taiwan.

The Middle East and Europe were tied at 13 percent for the slowest rate of expansion of imports in 2010. For the Middle East, the situation was similar to Africa where exports grew at a far greater pace than imports. For Europe, however, the economic malaise affecting domestic demand on the continent also curtailed imports, considering that an intra-EU export is also an intra-EU import. As with exports, France recorded the slowest pace of imports, at only 8 percent.

Trade volumes (real trade)

The volume of world trade (i.e., trade in real terms, adjusted for changes in prices and exchange rates) surged 14.5 percent in 2010. This was the fastest rate of growth in world exports on record since 1950. The rebound was strong enough for world exports to recover their peak level of 2008.

At the same time, measured world imports grew 13.5 percent last year. In principle, world exports and imports should increase at roughly the same rate, but some discrepancies exist due to differences in data recording across countries. According to the WTO, world trade as measured by exports grew four times as fast as global GDP in 2010, whereas trade normally grows about twice as fast as GDP.

The uneven recovery in output[3] produced an equally uneven recovery in global trade flows in 2010. Merchandise exports from developed economies rose 12.9 percent in volume terms, while those from developing economies and the CIS jumped 16.7 percent. Moreover, imports into developed economies grew more slowly than exports last year (10.7 percent compared to 12.9 percent) while the situation was reversed for developing economies and the CIS (17.9 percent growth in imports compared to 16.7 percent for exports).

Only in Asia and North America did export volumes grow faster than the world average (15.0 percent and 23.1 percent, respectively), whereas slower than average growth was recorded in South and Central America (6.2 percent), Europe (10.8 percent), the CIS (10.1 percent), Africa (6.5 percent) and the Middle East (9.5 percent).

Among countries for which data are available, the five economies with the fastest-growing merchandise exports in volume terms were Jordan (30 percent), China (28 percent), Japan (27 percent), the Philippines (27 percent), and Chinese Taipei (27 percent).

On the import side, faster than average growth was observed in North America (15.7 percent), South and Central America (22.7 percent), the CIS (20.6 percent) and Asia (17.6 percent), while slower growth was reported in Europe (9.4 percent), Africa (7.1 percent) and the Middle East (7.5 percent).

The BRIC countries of Brazil, Russia, India and China all reported very rapid import growth in 2010: 43 percent for Brazil; 39 percent for China; 30 percent for Russia; and 25 percent for India.

Prices and exchange rates

A firming in the global economic recovery and buoyant emerging markets fuelled demand for commodities in 2010. As a result, commodity markets turned in a strong performance last year, with prices gaining on average some 25 percent in U.S. dollar terms, the largest annual advance since 2005.[4] All major commodity sectors recorded price increases in U.S. dollars in the range of 22 to 27 percent, with the exception

3 See *Canada's 2011 State of Trade*, Chapter 1.

4 "Commodity Price Rally Still Has Some Gas In The Tank," Commodity Price Forecast Update, TD Economics, January 14, 2011.

of agriculture (10 percent). In particular, those sectors hardest hit by the downturn and those most levered to China registered the most notable upturns. These commodities included copper, nickel, pulp and crude oil (Figure 2-1).[5]

In Canada, average annual energy prices in U.S. dollar terms rose by 23.3 percent according to Bank of Canada statistics, while those for metals and minerals were up by 28.0 percent.

Crude oil prices rose by 28.7 percent in 2010, averaging US$79.45 a barrel over the course of the year.[6] Prices opened on January 4 at US$81.52 a barrel and remained above the US$80-mark for about a week before slipping beneath this threshold. In early March, oil prices again crossed above this threshold, remaining there until early May. Prices then fell, reaching their annual low of US$64.78 a barrel on May 25. On May 26, they breached the US$70-mark; by the start of October they were again above the US$80-mark. During the last week of the year they rose above the US$90-mark, closing the year out at US$91.38 on December 31.

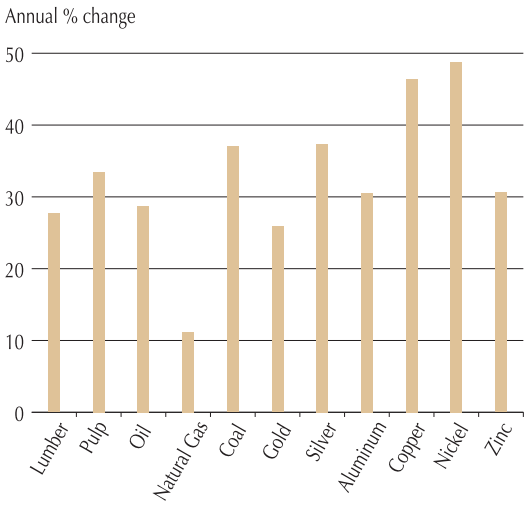
Gold prices averaged US$1,224.55 per troy ounce last year, up 25.9 percent from US$972.39 in 2009. Prices ranged between a low of US$1,058.00 (February 5) to a high of US$1,420.00 (December 7).[7]

The direction taken by the U.S currency also affected commodity prices. The U.S. dollar depreciated against nearly all major and emerging market currencies in 2010. Movements were driven primarily by concerns about the relative U.S. growth prospects as the divergence in the underlying strength of the U.S. and global outlooks and the associated yield differential across those markets prompted some investors to reallocate capital away from the United States, putting downward pressure on the U.S. dollar. The depreciation of the U.S. dollar was also pronounced against currencies closely linked to commodities and the global growth cycle. On the other hand, as concerns about the sustainability of fiscal situations in Europe increased, the U.S. dollar appreciated vis à vis the euro and the pound sterling.

The Canadian dollar rose against the U.S. dollar from US86.6¢ to US97.1¢, a 10.9-percent rate of appreciation for the year. Because of the appreciation, each Canadian dollar of trade was worth 9.5¢ more when expressed in U.S. dollar terms. Thus, trade figures expressed in U.S. dollars overstate the Canadian trade performance in 2010.

FIGURE 2-1

Change in Commodity Prices from 2009 to 2010



Source: TD Bank Commodity Price Forecast Update, January 14, 2011.

5 Ibid.

6 Prices quoted are for West Texas Intermediate (WTI) crude trade in the spot market at Cushing, Oklahoma, as quoted by the U.S. Energy Information Administration (EIA) at http://tonto.eia.doe.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RWTC&f=D.

7 Price per troy ounce, London Afternoon (PM) Gold Price Fixings as quoted at http://www.usagold.com/reference/prices/2010.html.

TABLE 2-2

Leading Exporters and Importers in World Merchandise Trade 2010
(US$ billions and %)

2010 Rank	2009 Rank	Exporters	2010 US$B Value	2010 % Share	2010 Rank	2009 Rank	Importers	2010 US$B Value	2010 % Share
1	1	China	1,578	10.4	1	1	United States	1,968	12.8
2	3	United States	1,278	8.4	2	2	China	1,395	9.1
3	2	Germany	1,269	8.3	3	3	Germany	1,067	6.9
4	4	Japan	770	5.1	4	5	Japan	693	4.5
5	5	Netherlands	572	3.8	5	4	France	606	3.9
6	6	France	521	3.4	6	6	United Kingdom	558	3.6
7	9	Korea	466	3.1	7	7	Netherlands	517	3.4
8	7	Italy	448	2.9	8	8	Italy	484	3.1
9	8	Belgium	411	2.7	9	10	Hong Kong	442	2.9
10	10	United Kingdom	405	2.7	10	11	Korea	425	2.8
13	12	Canada	387	2.5	11	12	Canada	402	2.6

Source: WTO and author's calculations.

Country Ranking by Trade Values

After having claimed top spot among the leading merchandise exporters in 2009, China cemented its hold on that position by posting a 31-percent increase in exports last year (Table 2-2). China's share in world merchandise exports climbed to 10.4 percent in 2010.

After slipping into second place in 2009, Germany lost another position in the ranking, falling to third place in 2010. Moving up into second place last year was the United States, as U.S. exports grew by some 21 percent compared to 13 percent for Germany. The U.S. and German world shares for 2010 stood at 8.4 percent and 8.3 percent, respectively.

Japan held onto fourth spot, registering growth of 33 percent in its exports and a world share of 5.1 percent.

EU nations accounted for all but one of the remaining top ten positions. The Netherlands and France remained in fifth and sixth place, respectively, with shares of 3.8 percent and 3.4 percent.

Strong export growth (28 percent) helped push Korea up from ninth spot to seventh while Italy and Belgium dropped back one position each, to eighth and ninth place, respectively. Korea's share of world merchandise exports stood at 3.1 percent last year, compared to 2.9 percent for Italy and 2.7 percent for Belgium.

The United Kingdom rounded out the top ten world exporters in tenth spot with a 2.7-percent world share.

Canada slipped from 12th place to 13th as Russia moved ahead of Canada.

On the import side, the United States held its position as the largest importing nation in the world by far, with a world import share of 12.8 percent. China (9.1 percent) and Germany (6.9 percent) held down the next two positions.

As noted earlier, France posted one of the lowest growth rates for imports in 2010. France's poor import performance allowed Japan to overtake France for fourth spot among the leading importing nations of the

TABLE 2-3

World Services Trade by Region and Selected Countries (US$ billions and %)

	EXPORTS				IMPORTS			
	Value US$B 2010	2010 Share (%)	Annual % change 2009	2010	Value US$B 2010	2010 Share (%)	Annual % change 2009	2010
World	**3,665**	**100.0**	**-12**	**8**	**3,505**	**100.0**	**-11**	**9**
N. America	**599**	**16.3**	**-8**	**9**	**471**	**13.4**	**-9**	**9**
U.S.	515	14.1	-7	8	358	10.2	-8	7
Canada	66	1.8	-	15	89	2.5	-	15
Mexico	18	0.5	-	-	23	0.7	-	8
Central & S. America	**111**	**3.0**	**-8**	**11**	**135**	**3.9**	**-9**	**23**
Brazil	30	0.8	-9	15	60	1.7	-1	35
Europe	**1,724**	**47.0**	**-14**	**2**	**1,504**	**42.9**	**-13**	**1**
EU(27)	1,553	42.4	-15	2	1,394	39.8	-13	1
Germany	230	6.3	12	2	256	7.3	-12	1
France	140	3.8	-14	1	126	3.6	-10	0
Italy	97	2.6	-	3	108	3.1	-	1
U.K.	227	6.2	-19	0	156	4.5	-19	1
C.I.S.	**78**	**2.1**	**-17**	**10**	**105**	**3.0**	**-19**	**14**
Russia	44	1.2	-19	6	70	2.0	-20	18
Africa	**86**	**2.3**	**-9**	**11**	**141**	**4.0**	**-12**	**12**
Middle East	**103**	**2.8**	**-3**	**9**	**185**	**5.3**	**-8**	**9**
Asia	**963**	**26.3**	**-11**	**21**	**961**	**27.4**	**-10**	**20**
China	170	4.6	-12	32	192	5.5	0	22
Japan	138	3.8	-14	9	155	4.4	-12	6
India	110	3.0	-13	-	117	3.3	-9	-
NIEs	**343**	**9.4**	**-**	**-**	**277**	**7.9**	**-**	**-**

Source: WTO and author's calculations.

world, while France slipped to fifth. Japan absorbed some 4.5 percent of the total world imports compared to 3.9 percent for France.

The United Kingdom, the Netherlands and Italy held on to the sixth through eighth spots, with world import shares of 3.6 percent, 3.4 percent, and 3.1 percent, respectively.

Higher rates of import growth for Hong Kong, Korea and Canada moved these three countries up one position, to ninth, tenth and eleventh places, respectively, while Belgium slipped from ninth to twelfth spot. The world import shares for 2010 of these four economies were 2.9 percent, 2.8 percent, 2.6 percent, and 2.5 percent, respectively.

Services Trade

World services exports rebounded 8 percent to US$3.67 trillion in 2010 after having declined by 12 percent in 2009 (Table 2-3).

According to the WTO, the slower growth of services trade compared to merchandise trade can be partly explained by the smaller decline in services in 2009 (down 12 percent compared to a 22 percent decline for merchandise), which implies that faster than

average growth will not be needed to catch up to earlier trends. Between 2005 and 2010, the average annual growth in the value of merchandise trade was the same as for commercial services trade (8 percent).

Asian exports of services were up 21 percent last year, reaching US$963 billion. Transportation was the most dynamic sector, with a growth rate of 26 percent, closely followed by travel, which also rose rapidly (25 percent), while commercial services (which now represents half of the region's services exports) increased by 17 percent.

South and Central America's exports rose 11 percent to US$111 billion. Exports from Brazil grew faster than the regional average (15 percent).

Africa also posted an 11-percent increase in services exports in 2010, to US$86 billion. The continent's exports advanced 12 percent to US$141 billion. In South Africa, travel receipts increased by 24 percent due to the large number of foreign visitors attending the FIFA World Cup.

The CIS was the only other region to post double-digit growth in services exports last year. Exports from CIS countries increased by 10 percent to US$78 billion last year. Russian export growth of 6 percent was driven by transportation services.

The Middle East exported US$103-billion worth of services in 2010, up 9 percent over 2009.

North America's exports of services were up 9 percent year-on-year, to US$599 billion in 2010. Canadian exports led the way, registering 15-percent growth, while U.S. exports were up 8 percent year-on-year, and Mexico lagged with 5-percent growth.

While the value of Europe's exports was larger than for any other region last year (at US$1.72 trillion), growth was also the least dynamic, just 2 percent on the export side. A 3-percent decline in travel services was at the root of this sluggish performance.

South and Central America's services imports were up 23 percent to reach US$135 billion. As with its services exports, Brazil's services imports grew faster than the regional average (35 percent), with particularly high growth rates observed for imports of transportation services (42 percent) and travel (51 percent, partly due to the strength of the Brazilian real).

Asia imported US$961-billion worth of services in 2010, up 20 percent year-on-year. Transportation was the most dynamic sector, with an import growth rate of 26 percent.

For the CIS region, imports of services rose 14 percent to US$105 billion last year, led by Russia, where imports advanced 18 percent.

In Africa, imports advanced 12 percent to US$141 billion. South Africa posted a notable gain of 25 percent in services imports last year.

TABLE 2-4

World Exports of Services in 2010 (US$ billions and %)

	Value (US$B)	Share (%)	2009-10 growth (%)
All services	**3,664**	**100.0**	**8**
Transportation	783	21.4	14
Travel	936	25.5	8
Commercial services	1,945	53.1	6

Source: WTO and author's calculations.

TABLE 2-5

Leading Exporters and Importers in World Services Trade, 2010
(US$ billions and %)

2010 Rank	2009 Rank	Exporter	2010 US$B Value	2010 % Share	2010 Rank	2009 Rank	Importer	2010 US$B Value	2010 % Share
1	1	United States	515	14.1	1	1	United States	358	10.2
2	3	Germany	230	6.3	2	2	Germany	256	7.3
3	2	United Kingdom	227	6.2	3	4	China	192	5.5
4	5	China	170	4.6	4	3	United Kingdom	156	4.5
5	4	France	140	3.8	5	5	Japan	155	4.4
6	6	Japan	138	3.8	6	6	France	126	3.6
7	7	Spain	121	3.3	7	12	India	117	3.3
8	14	Singapore	112	3.0	8	9	Netherlands	109	3.1
9	10	Netherlands	111	3.0	9	7	Italy	108	3.1
10	12	India	110	3.0	10	8	Ireland	106	3.0
18	18	Canada	66	1.8	13	11	Canada	89	2.6

Source: WTO and author's calculations.

Both the Middle East and North America experienced a 9-percent gain in services imports in 2010, the same as the world average rate. Services imports reached US$185 billion for the Middle East and US$471 billion for North America last year. Imports into Canada grew by 15 percent, while those for Mexico and the United States advanced by 8 percent and 7 percent, respectively.

Finally, services imports into Europe edged up a mere 1 percent last year, to US$1.5 trillion. As with exports, a decline in travel services imports (2 percent) was at the heart of the weak performance.

Transportation was the fastest-growing component of services exports in 2010, with an increase of 14 percent to US$782.8 billion (Table 2-4). This performance is hardly surprising since transportation services are closely linked to trade in goods, which saw record growth last year. Travel grew in line with services overall, whereas commercial services (including financial services) advanced more slowly.

Leading Services Traders by Value

The United States exported US$515 billion in commercial services in 2010, or 14.1 percent of the global total, making it the world's largest services exporter. The remaining four of the top five positions were taken by Germany (US$230 billion, or 6.3 percent of world exports), the United Kingdom (US$227 billion, or 6.2 percent of world exports), China (US$170 billion, or 4.6 percent of world exports) and France (US$140 billion, or 3.8 percent of world exports) (Table 2-5).

The United States was also the leading services importer, with purchases of US$358 billion from foreign providers, equal to 10.2 percent of world imports. This performance was followed by that of Germany (US$256 billion, 7.3 percent of world imports), China (US$192 billion, 5.5 percent of world imports), the United Kingdom (US$156 billion, 4.5 percent of world imports) and Japan (US$155 billion, 4.4 percent of world imports).

China replaced France as the fourth-largest exporter of commercial services, while Germany overtook the United Kingdom in second place. China also moved up the rankings on the import side, taking over the third position from the United Kingdom.

Canada's Economic Performance

In many ways, 2010 was a year of consolidation, as the recovery, begun in 2009, moved to firmer footings: real economic activity expanded in all four quarters; domestic demand was buoyant; business investment rose; trade expanded; and jobs were created. These favourable conditions spurred consumer and business confidence. Output expanded in all provinces and territories in 2010 and, overall, the economy grew by 3.1 percent in real terms after having contracted the year before. Advances in employment brought levels almost back to where they were before the recession started—it would take until the first month of 2011 to actually surpass the pre-recession peak employment level. As a result of rising resource prices, the Canadian dollar appreciated against all major currencies and ended the year just slightly above parity with the U.S. dollar.

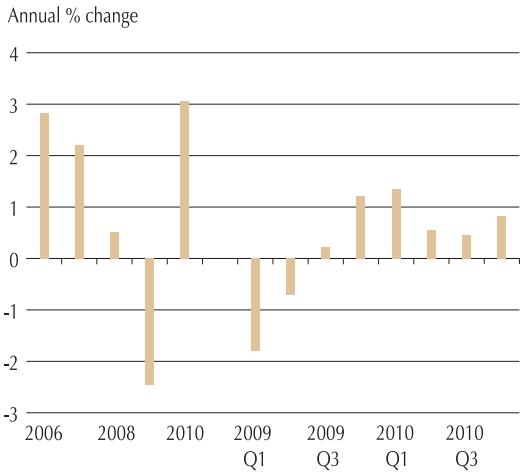
Gross Domestic Product

Canada emerged from the recession toward the end of the first half of 2009 and growth resumed starting in the third quarter of that year (Figure 3-1). Since then, the economy has registered six consecutive quarters of growth until the end of last year. For 2010 as a whole, real GDP expanded by 3.1 percent, offsetting the 2.5-percent contraction registered in 2009.

Turning to the expenditure-based categories of GDP (Figure 3-2), growth in real personal consumption expenditures on goods and services was a little higher than

FIGURE 3-1

Canadian Real GDP Growth, 2006-2010



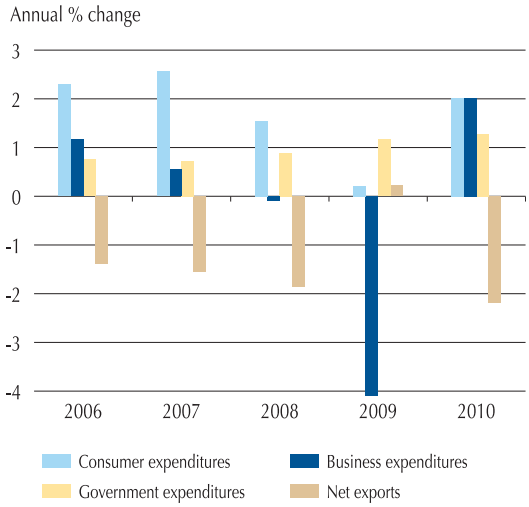
Source: Statistics Canada.

overall growth in GDP, as expenditures advanced by 3.4 percent in 2010 after having only risen by 0.4 percent in 2009.

Real expenditures on durables, semi-durables, and non-durables advanced 5.4 percent, 5.0 percent, and 1.7 percent respectively, while those for services were up by 3.4 percent. Expenditures were up broadly, with a few exceptions: expenditures on fuels, other than those related to motor fuels, were down in 2010, along with those related to reading and entertainment supplies, miscellaneous personal effects, and tobacco products. Spending was up the most for expenditures abroad (up 26.0 percent); women's and girl's clothing (up 10.8 percent); new and used motor vehicles (up 6.8 percent); footwear (up 6.7 percent); and furniture, carpets and other floor coverings

FIGURE 3-2

Contribution to Real GDP Growth, 2006-2010



Source: Statistics Canada.

(up 5.2 percent). With the upturn in spending, personal consumption contributed slightly over 2.0 percentage points to real GDP growth in 2010, up from 0.2 percentage point in 2009.

Real business investment was up 7.1 percent in 2010, after having declined by 16.0 percent the year before. Investment in machinery and equipment rebounded after two years of decline, up 11.2 percent in 2010. Computer and other office equipment, telecommunications equipment, industrial machinery, and trucks all experienced double-digit rates of increase to lead the way. Investment in plants was down by 0.5 percent, as a 1.3-percent gain in investment in engineering structures was not enough to offset a 4.8-percent reduction in investment in buildings.

Investment in residential construction, which includes new housing construction, resales, and renovation activity, rose by 10.4 percent in 2010 following two years of decline. New housing construction was up 15.5 percent in real terms, and renovation activity posted a gain of 10.9 percent, while resale activity was down 1.7 percent.

Businesses were actively re-stocking inventories in 2010 as there was a net $7.7-billion addition (in constant 2002 dollars) to the inventories for non-farm businesses. At the same time, farm inventories were reduced by a net $341 million in real terms last year.

Overall, business activities added another 2.0 percentage points to economic growth in 2010, after having removed 4.1 percentage points from growth in 2009. Business investment accounted for the larger share of the increase, at nearly 1.3 percentage points, while changes in inventories accounted for 0.8 percentage point of the increase.

The volume of exports and imports of goods and services rose by 6.4 percent and 13.4 percent, respectively. Overall, the increase in real exports added 1.8 percentage points to growth in 2010 while the advance in real imports removed 4.0 percentage points from growth over the year. As a result, trade was a drag on growth in 2010, removing a net 2.2 percentage points from growth for the year.

Overall, the volume of exports of goods and services was up by $26.7 billion in chained 2002 dollars. The overwhelming majority (97.5 percent) of the increase in the volume of exports in 2010 occurred on the goods side, with nearly 80 percent of the increase originating from automotive products (up $20.7 billion). The transportation services sector was largely responsible for the gains in services exports in 2010 as a gain in travel was more or less offset by declines in commercial and government services exports.

Likewise, at 86.4 percent, the bulk of the increase in the volume of imports came on the goods side, led by machinery and equipment (up $22.8 billion), automotive

products (up $19.2 billion), and industrial goods and materials (up $11.8 billion). In total, the volume of goods imports was up $57.8 billion in chained 2002 dollars over 2009 levels. Services imports advanced $9.2 billion in chained 2002 dollars, led by travel, up $6.0 billion, and transportation, up $3.0 billion.

With respect to GDP by industrial activity, the advances in the economy were driven by goods production. Industrial activity expanded by 3.3 percent in 2010, led by 5.0-percent growth for goods and 2.6-percent growth for services.

All goods-producing sectors advanced, with the exception of utilities (down 0.3 percent), which was held back by a decline in electricity production. Construction led the gains, up 6.6 percent, followed by manufacturing (up 5.6 percent) and mining and oil and gas extraction (up 5.1 percent). Output in the agriculture, forestry, fishing, and hunting sector expanded 1.4 percent in 2010.

Manufacturing, the largest of the goods-producing sectors, rebounded strongly. Increasing foreign demand, rising domestic consumer expenditures on goods, along with inventory re-stocking, created favourable conditions for the expansion of output. Gains were widespread, led by non-metallic minerals, primary metals, wood, and clothing—all with double-digit gains. Additionally, transportation equipment, machinery, and plastics and rubber all posted growth rates in the 8 to 9 percent range. Overall, 20 of the 21 major manufacturing industries experienced increased output in 2010, with the exception of printing (down 4.6 percent).

The above-mentioned increase in real investment in residential construction and the decline in plant investment were at the heart of the movements in construction output as residential building construction output advanced (up 13.1 percent) while non-residential building construction output retracted (down 0.3 percent). Overall, construction activity was 6.6 percent higher in 2010 than in 2009.

Forestry and fishing, and mining, oil and gas were also affected by strong foreign demand as well as by price effects. Output in forestry and logging was up 14.5 percent, aided by an increase in lumber exports after several years of decline. Mining output posted an 11.0-percent increase, with output up 22.7 percent for non-metallic minerals and output up 20.7 percent for coal. However, notwithstanding significant price increases in the sector, real output in oil and gas held steady, up only 0.7 percent in 2010.

Finally, agriculture output fell 1.7 percent as crop production was down by 3.4 percent last year.

Output in services is not as volatile as goods production and did not decline during the recession. Hence, with both exports and domestic consumption expenditures of services remaining weak, there was less opportunity for it to grow last year. Accordingly, services output increased by some 2.6 percent in 2010—roughly half the pace of goods output. Gains were small for the most part, but widespread. Wholesale trade, transportation and warehousing, and retail trade led the advances, up 5.2 percent, 4.3 percent and 3.7 percent, respectively.

Gross Domestic Product by Province

The turnaround in real output at the national level was mirrored on a regional basis, as output was up in each province and territory. However, regional disparities were present: Prince Edward Island, Nova Scotia, Quebec, Manitoba, and the Yukon posted growth below the national average. In contrast, Newfoundland and Labrador, the

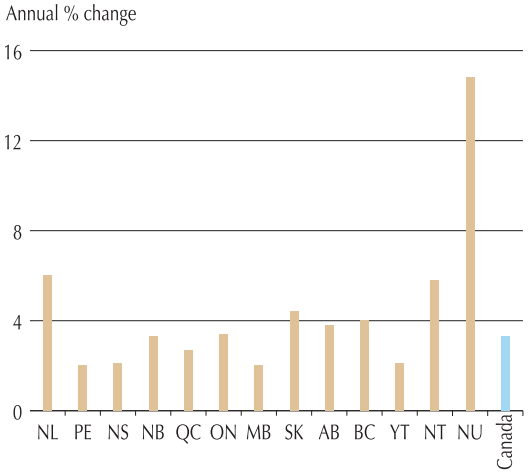
Northwest Territories, and Nunavut all registered much higher rates of growth than for the country overall (Figure 3-3).

In Newfoundland and Labrador, economic output advanced 6.0 percent in 2010, following a 10.4-percent decline the year before. This was the fastest pace of growth among the provinces. The gain was led by mining and oil and gas extraction, in particular by a 34.3-percent rise in metal ore mining along with increased output in oil and gas extraction. Output in construction was up 19.7 percent as residential construction increased by 14.2 percent and work began on a new mineral ore processing plant. Increased goods in circulation led to increased activity in wholesale trade and transportation services. Manufacturing output in 2010 was little changed over 2009 (up 2.8 percent) as gains in seafood product preparations (up 17.2 percent) were partially offset by declines in electronic product manufacturing (down 39.1 percent).

In Prince Edward Island, output expanded by 2.0 percent in 2010, following a 0.2-percent contraction a year earlier. Residential construction and crop and animal production increased, while additional capacity resulted in higher output by utilities. Finance and insurance, retail trade, public administration, and health care also contributed to the overall gains. However, output in manufacturing fell by 8.6 percent last year, as food, transportation equipment, and chemical products posted declines.

In Nova Scotia, real GDP was up by 2.1 percent last year after falling by 0.3 percent in 2009. Gains in manufacturing, residential construction, wholesale trade, retail trade and transportation services outweighed declines in mining and oil and gas extraction and in miscellaneous engineering construction. In manufacturing, transportation equipment manufacturers increased output with work on Coast Guard vessels and naval frigates. Output for manufacturers of rubber also increased, as did that for seafood product preparations and textiles.

FIGURE 3-3
Real GDP Growth by Province, 2010



Source: Statistics Canada.

The economy of New Brunswick posted a 3.3-percent rate of growth in 2010, after having declined by 0.5 percent in 2009. Manufacturing output led the way with an 9.6-percent gain, as wood products, seafood product preparations, and miscellaneous manufacturing posted the bulk of the gains. Forestry and mining output increased, while wholesale trade, retail trade, public administration, and transportation services also expanded. Construction output fell in 2010: residential construction and non-residential construction both increased, but the gains were offset by declines in engineering construction, as several engineering projects neared completion.

After a 0.5-percent contraction in 2009, the Quebec economy expanded by 2.7 percent last year. All major sectors of the provincial economy expanded in 2010, with the sole exception of arts, entertainment, and recreation (which posted a marginal, 0.1-percent decline). On the goods side, manufacturing and construction accounted

for most of the gains. Residential construction was up 16.3 percent to lead the advance in construction. Manufacturing output rose by 1.8 percent last year: strong gains were registered for rubber products (up 36.1 percent), pharmaceuticals (up 17.5 percent), meat (up 16.9 percent), wood (up 9.4 percent), and primary and fabricated metal products (up 3.7 percent), while notable losses were posted for electronic products (down 16.0 percent) and aerospace products (down 11.7 percent). On the services side, retail trade, health care, wholesale trade, transportation services, and public administration were the leading sectors in 2010.

The Ontario economy expanded by 3.4 percent in 2010—just slightly above the national rate. This came on the heels of a severe 3.5-percent contraction in 2009. Similar to Quebec, all major sectors of the provincial economy expanded, with one exception. In the case of Ontario, output by utilities fell last year, as electricity production was down by 3.1 percent. A third of the gains came from manufacturing, which expanded by 8.0 percent. Within manufacturing, gains were widespread, with 18 of 21 major manufacturing industries registering increased output in 2010. The advance was led by motor vehicles and primary and fabricated metal products, which jointly accounted for nearly three quarters of the overall manufacturing gains. Plastics (up 12.0 percent) and machinery (up 8.2 percent) also registered notable gains in output, while losses were posted for aerospace products (down 7.6 percent) and printing (down 6.1 percent). Construction output also rose in 2010, supported by an 11.4-percent expansion in residential construction. Services activities also increased in tandem with goods production, led by wholesale and retail trade, truck and rail transportation, and financial services.

In Manitoba, GDP increased by 2.0 percent in 2010 after a marginal decline in 2009. Gains in construction, transportation services, and wholesale and retail trade were partially offset by losses in agriculture, forestry, fishing, and hunting and in manufacturing. Crop production was down sharply (13.8 percent) as a result of bad weather. Manufacturing output edged up 0.1 percent after two years of decline; an 11.6-percent gain in primary and fabricated metals combined with a 7.3 percent gain in wood products outweighed a 16.8-percent decline in miscellaneous manufacturing, a 12.9-percent decline in printing, and an 8.3-percent decline in machinery manufacturing. Construction output advanced as work continued on major engineering projects, in particular, electric power engineering construction, supported by 19.7-percent jump in residential construction. Education, health care, and public administration also registered gains.

Following a 4.2-percent decline in 2009, Saskatchewan's GDP increased by 4.4 percent last year. Crop production fell sharply (down 18.6 percent) as a result of bad weather and, in turn, manufacturers of agricultural equipment reduced production. Mining and oil and gas output jumped 18.7 percent as potash production picked up as a result of strong provincial exports; however, oil and gas extraction fell for the seventh consecutive year, down 0.9 percent. Manufacturing activity edged down 0.8 percent, as gains in miscellaneous food manufacturing, primary and fabricated metal products, and wood products were offset by declines in meat products and machinery (notably agricultural machinery). All major services categories posted increases, led by finance and insurance, and wholesale and retail trade. Within transportation and warehousing, truck and rail transportation services posted strong gains, while pipeline transportation and warehousing services posted notable declines.

Alberta's GDP expanded by 3.8 percent in 2010, after contracting by 4.8 percent a year earlier. Advances were widespread, with all goods-producing sectors and all services sectors recording increased output. Mining and oil and gas exploration, and manufacturing led on the goods side, up 4.4 percent and 8.7 percent, respectively. Strengthening energy prices led to increases in support activities for mining and oil and gas exploration. Increased output in meat products (up 22.8 percent), machinery manufacturing (up 21.2 percent), and wood products (up 14.2 percent) led the gains in manufacturing. Crop production rose sharply (14.9 percent) as the province experienced more favourable weather than its Prairie neighbours to boost agricultural output, while residential construction jumped 21.4 percent to anchor the gains in construction activity. As was the case elsewhere in Canada, the expansion of activity on the goods side was accompanied by an expansion of services activity, most notably for wholesale trade, transportation and warehousing, and retail trade.

British Columbia's economy grew by 4.0-percent in 2010, after having contracted by 1.8 percent the previous year. Gains were widespread, with only one major sector—utilities—recording a decrease in output. Construction activity was up by 11.3 percent last year, as work continued on major engineering projects, in particular, electric power engineering construction, supported by a 6.3-percent increase in residential construction. Manufacturing output was up by 5.1-percent, with gains led by wood, machinery, and miscellaneous food manufacturing. In support of increased exports, production in forestry products jumped by 21.9 percent last year. Declining electric power generation was behind the decline in utilities output. Wholesale activity and transportation services picked up—truck and rail transportation services in particular—to lead the gains in provincial services output. The 2010 Olympic Winter Games also had a positive impact on output in industries such as performing arts and spectator sports, and accommodation and food services, which expanded by relatively more than in the other provinces and territories.

The Yukon economy expanded for the seventh consecutive year in 2010, advancing 2.1 percent compared to a 3.6-percent increase a year earlier. Construction output was up by 19.0 percent, led by non-residential construction, as work began on a number of community and health services buildings. Output in the services sector was up, with gains in retail trade, public administration, and accommodation and food services.

In the Northwest Territories, GDP rose by 5.8 percent last year, after falling by 10.9 percent in 2009. Construction, principally engineering construction, and mining activity, were the main contributors. Public administration and transportation services led the gains for services output.

The Nunavut economy experienced the fastest growth of all Canadian regions, rising 14.8 percent in 2010 following a 6.2-percent decline in 2009. Increased output in mining and oil and gas exploration accounted for much of the growth last year as the opening of a new mine caused mining output to increase. At the same time, engineering construction activity declined. Heightened exploration activity also led to higher output of support activities for mining and oil and gas extraction. Non-residential construction, mainly of institutional buildings, also contributed to the overall economic advances in the territory.

Employment

Job growth in Canada resumed in 2010 after a setback in job creation in 2009. For the year as a whole, employment rose by 1.4 percent, or 227,900 jobs. Roughly 70 percent of the

job gains, or 157,800 jobs, were in full-time positions. With jobs being created, the national unemployment rate fell from 8.3 percent in January 2010 to 7.6 percent in December 2010. For the year as a whole, the unemployment rate averaged 8.0 percent, down 0.3 percentage point from 2009 (Figure 3-4).

Job gains were widespread across Canada, with only Alberta (down 8,000) and New Brunswick (down 4,000) posting losses in 2010.

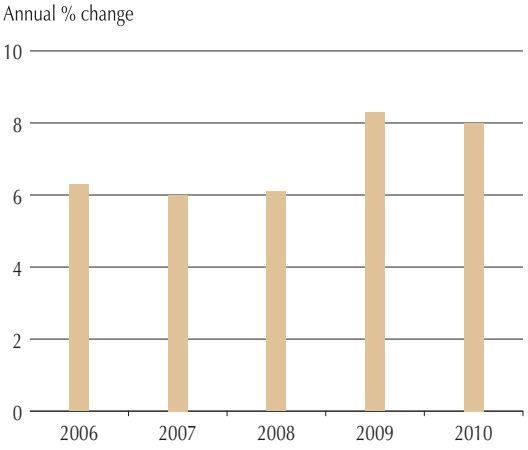
Three provinces accounted for the bulk of the job gains. Ontario was responsible for some 47.4 percent of the national total, followed by Quebec at 29.4 percent, and British Columbia at 16.7 percent.

The number of jobs in the goods-producing industries was up in 2010 compared to 2009. However, not all sub-sectors posted gains. Manufacturing jobs fell 2.1 percent compared to their 2009 level, as this sector cut some 37,500 positions. Similarly, there were 15,400 (or 4.9 percent) fewer jobs in agriculture. This is a continuation of a longer-term trend, as both manufacturing and agriculture have been shedding jobs during much of the decade. However, construction added 56,400 jobs to the payroll, while both utilities and forestry, fishing, mining, quarrying, and oil and gas made smaller additions to their employment levels in 2010. Overall, goods-producing industries added 15,700 positions to the payroll last year.

The services sector, which added 212,200 jobs to the payroll, was responsible for the bulk of the new jobs in 2010. Gains in health care and social assistance services (up 81,500) and in professional scientific and technical services (up 74,800) accounted for about three quarters of the overall gains to services jobs. Small declines were registered for miscellaneous services (down 33,500), transportation and warehousing (down 10,500), and information, culture and recreational services (down 3,600).

FIGURE 3-4

Unemployment Rate in Canada, 2006-2010



Source: Statistics Canada.

Over the course of 2010, Canada closed the gap with the October 2008 peak level of employment, but ended the year with employment just slightly below that pre-recession level. By January 2011, Canadian employment levels had fully recovered all the jobs lost during the recession and the economy continued to add jobs over the first few months of 2011.

Inflation

Consumers paid 1.8 percent more on average for the goods and services in the Consumer Price Index (CPI) basket in 2010 compared to 2009. This was up considerably from the recession-driven 0.3-percent increase registered in 2009, but slightly lower than the average of 2.2 percent recorded over 2006-2008.

For the year as a whole, prices were up in seven of the eight major components of the CPI. Price advances in transportation and shelter rebounded in 2010 after having declined in 2009, driven by price increases

for energy and passenger vehicles. Transportation and shelter combined account for just over 45 percent of the total weight of the CPI basket of goods and services.

Transportation costs were 4.3 percent higher in 2010, after falling 5.4 percent the year before. The increase was primarily the result of higher gasoline and passenger vehicle prices.

The single most important factor in 2010 was the increase in the price of gasoline. Energy prices rose 6.7 percent in 2010, following a 13.5-percent decline in 2009. Prices for gasoline increased 9.1 percent, after falling 17.5 percent the year before. Electricity prices increased 4.8 percent following a 1.8-percent rise in 2009. Natural gas prices declined 1.8 percent, a much slower rate than the 20.1-percent decline in 2009.

Prices for passenger vehicles rose 3.5 percent in 2010, after falling 5.9 percent in 2009 and 6.9 percent in 2008.

Shelter costs rose 1.4 percent, following a 0.3-percent decrease in 2009. Property taxes increased 4.1 percent. In addition to higher electricity prices, accommodation replacement costs increased 3.7 percent, after decreasing 2.6 percent in 2009. However, mortgage interest costs declined 4.4 percent in 2010, after increasing 0.3 percent the previous year.

Price pressures eased for five of the six remaining CPI major components compared with 2009. These components were: food; household operations, furnishings and equipment; clothing and footwear; health and personal care; and alcoholic beverages and tobacco products.

Food prices in particular rose more slowly last year than in 2009 (1.4 percent versus 4.9 percent). Prices for food purchased from stores rose 1.0 percent, significantly slower than the 5.5-percent increase in 2009. The smaller increase in food prices can be largely explained by falling prices for fresh fruits and vegetables, which declined 2.7 percent after rising 8.1 percent in 2009, and by softer price increases for meat as well as for bakery and cereal products.

Prices for clothing and footwear fell 1.9 percent in 2010, following a 0.4-percent decline in 2009. It was the ninth consecutive year in which the price index for this component has decreased.

Finally, prices for recreation, education, and reading advanced 0.9 percent in 2010, the same pace as in 2009. Rapid technological advancements, improvement in product features and quality and market competition by low-cost producing countries continued to push prices for home entertainment equipment down in 2010, while education, reading, and other cultural costs were up over the year.

Provincially, price increases were strongest in Ontario (2.5 percent), and the Atlantic provinces of Newfoundland and Labrador (2.4 percent), Nova Scotia (2.2 percent) and New Brunswick (2.1 percent). Price increases were lowest in Manitoba and the Yukon (0.8 percent), while prices fell 0.7 percent in Nunavut.

The Bank of Canada core index[1] also increased 1.7 percent for 2010 as a whole, following a 1.8-percent increase in 2009.

The Canadian dollar

After depreciating against the U.S. dollar in 2009, the Canadian dollar rose against the U.S. dollar in 2010 (Figure 3-5). Averaging US97.09¢ in 2010, the Canadian dollar was worth US9.53¢ more than in 2009, an

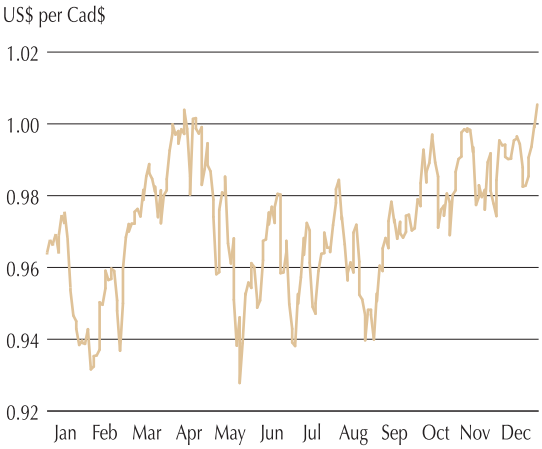
1 The core index is a special aggregate of the CPI and is used by the Bank of Canada as a policy instrument to conduct monetary policy with the aim of holding overall inflation within a 1 to 3 percent target range. The core index is computed by removing eight of the most volatile components of the CPI as defined by the Bank (fruits, fruit preparations and nuts; vegetables and vegetable preparations; mortgage interest costs; natural gas; heating oil and other fuels; gasoline; inter-city transportation; and tobacco products and smokers' supplies) and the effect of changes in indirect taxes from the CPI.

increase of 10.9 percent in its value against the U.S. dollar over the year. Relative to the other major currencies, and based on annual averages, the Canadian dollar also rose 3.8 percent against the yen, by 11.8 percent against the British pound sterling, and by 16.1 percent against the euro.

The Canadian dollar began the year at US96.4¢ on January 4, 2010. By the end of January, the dollar had sunk to US93.9¢, then began rising in the middle of April. On April 23, fears about European sovereign debt were realized when the Greek government requested a EU/IMF bailout package, and money markets began reacting by seeking safe haven in the U.S. dollar. As a result, the U.S. dollar appreciated against foreign currencies, including the Canadian dollar, which began to slide until it reached its low for the year, at US92.8¢ on May 25. The summer and early fall months were very turbulent and the dollar traded in a range between US93.8¢ and US98.1¢. By the end of October, it was again at the high end of this range and began a push that culminated with the Canadian dollar breaking through parity on December 31, the final trading day of the year.

FIGURE 3-5

Canada-U.S. Exchange Rate, 2010



Source: Statistics Canada.

Overview of Canada's Trade Performance

Canada's trade in goods and services followed a path quite similar to that for world trade described earlier. That is to say, there was a rebound, but trade values remained below their 2008 peak levels. Moreover, like global trade, the gains were mostly attributable to increased volumes, while price growth was weak. In fact, import prices into Canada declined last year due to the appreciation of the Canadian dollar.

On the export side, advances were led by industrial goods, driven by strong demand and commodity prices. Both automotive products and forestry products registered their first increases in exports since 2004. However, machinery and equipment exports were down for the third consecutive year. Gains in services exports were widespread.

With Canada having weathered the global recession better than most of its counterparts in the advanced economies, it was better positioned to absorb imports. Imports rose as global activity picked up, bolstered by businesses restocking inventories that were depleted during the recession. Consumers also contributed to the rebound, particularly for automotive products.

In 2009, Canada registered its first trade deficit in 15 years; in 2010, the trade deficit widened by $4.6 billion.

The increase in the shortfall between exports and imports on the trade side further widened the current account deficit, which moved to a $50.0-billion deficit last year from a $43.5-billion deficit a year earlier. The increase in the trade deficit accounted for about three quarters of the deterioration in the current account balance, with the bulk of the remainder coming from an increase in the investment income deficit.

Goods and Services

In line with the global recovery, Canadian exports of goods and services to the world rebounded 8.7 percent ($38.0 billion) to $474.6 billion in 2010. At the same time, Canada's imports of goods and services were up 9.2 percent ($42.6 billion) to $506.5 billion (Table 4-1). As such, the trade deficit widened to $31.9 billion, the second consecutive trade deficit registered by the country after a 15-year string of trade surpluses. The $4.6-billion deterioration in the balance last year followed the massive $51.2-billion decline of the year before.

For 2010 as a whole, Canadian exports and imports of goods and services to and from all major markets—the United States, the EU, Japan and the rest of the world (ROW)—increased (Figures 4-1 and 4-2).

The gains in goods and services exports were led by Japan, the EU and the United States, with advances of 10.5 percent, 10.4 percent, and 8.8 percent, respectively. Overall, Canadian exports to the United States increased by $27.1 billion to $333.6 billion in 2010, to account for 70.3 percent of total exports of goods and services. This was up from a 70.2-percent share the previous year. Similarly, the EU increased its share in total exports to 10.4 percent last year compared to 10.2 percent in 2009. Exports to the EU advanced $4.6 billion to $49.2 billion last year. Exports

TABLE 4-1

Canadia Goods and Services Trade by Region, 2010
($ millions and annual percent change)

	Exports of Goods and Services			Imports of Goods and Services			G&S Balance
	2010	2010 share	% growth over 2009	2010	2010 share	% growth over 2009	2010
World	**474,632**	**100.0**	**8.7**	**506,508**	**100.0**	**9.2**	**-31,876**
U.S.	333,640	70.3	8.8	312,101	61.6	9.0	21,539
EU	49,234	10.4	10.4	55,341	10.9	2.4	-6,107
Japan	10,952	2.3	10.5	11,738	2.3	9.4	-786
ROW[1]	80,806	17.0	6.9	127,328	25.1	12.8	-46,522
	Exports of Goods			**Imports of Goods**			**Goods Balance**
	2010	2010 share	% growth over 2009	2010	2010 share	% growth over 2009	2010
World	**404,543**	**100.0**	**9.5**	**413,110**	**100.0**	**10.4**	**-8,567**
U.S.	296,432	73.3	9.3	259,557	62.8	9.8	36,875
EU	36,355	9.0	13.4	40,284	9.8	3.9	-3,929
Japan	9,708	2.4	9.5	10,011	2.4	7.3	-303
ROW[1]	62,048	15.3	8.1	103,258	25.0	15.1	-41,210
	Exports of Services			**Imports of Services**			**Services Balance**
	2010	2010 share	% growth over 2009	2010	2010 share	% growth over 2009	2010
World	**70,090**	**100.0**	**4.4**	**93,398**	**100.0**	**4.0**	**-23,308**
U.S.	37,208	53.1	5.1	52,544	56.3	5.2	-15,336
EU	12,879	18.4	2.9	15,058	16.1	-1.4	-2,179
Japan	1,244	1.8	18.6	1,726	1.8	22.9	-482
ROW[1]	18,759	26.8	3.1	24,070	25.8	3.8	-5,311

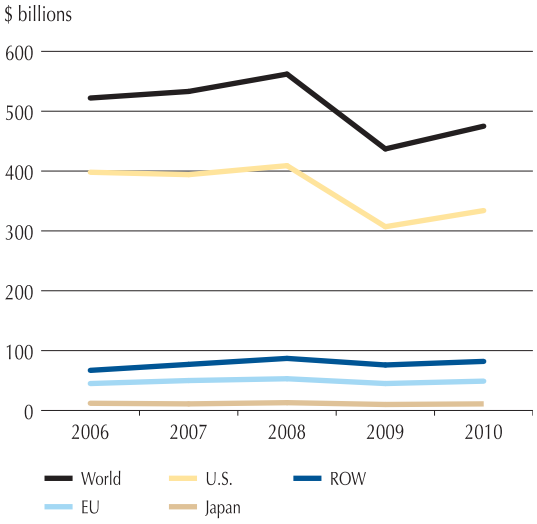
1: ROW = Rest of World.
Source: Statistics Canada CANSIM Matrix 376-0001.

of goods and services to Japan were up $1.0 billion to almost $11.0 billion, or 2.3 percent of total exports. With the shares of United States, the EU and Japan increasing, the share of the ROW fell. The ROW comprises all remaining OECD countries not already mentioned (i.e., those OECD countries apart from the United States, the EU and Japan) and all non-OECD countries. The ROW accounted for 17.0 percent of total Canadian exports (or $80.8 billion) in 2010, down from 17.3 percent a year earlier.

For imports, the situation was much the opposite. The exception was Japan, which managed to hold its 2.3-percent share of total Canadian imports. Imports of goods and services from the United States and the EU increased, albeit at a slower pace than the 9.2 percent registered for overall imports. Hence both economies lost share. The U.S. decline was marginal, down from 61.7 percent to 61.6 percent, as Canada's imports from the United States were up 9.0 percent

FIGURE 4-1

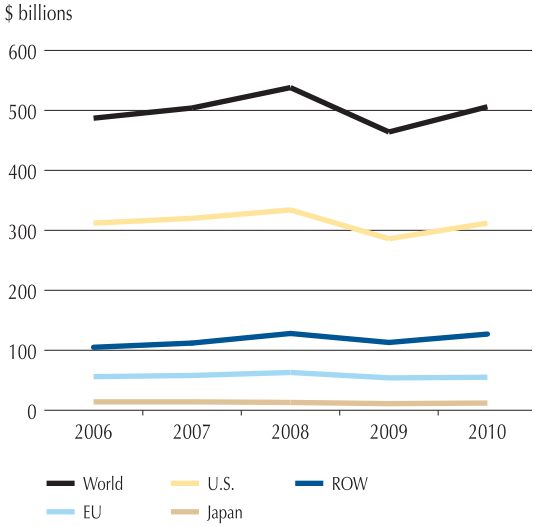
Canada's Exports of Goods and Services by Major Area, 2006-2010



Source: Statistics Canada.

FIGURE 4-2

Canada's Imports of Goods and Services by Major Area, 2006-2010



Source: Statistics Canada.

last year. For the EU, where Canadian imports only increased by 2.4 percent in 2010, the share drop was somewhat larger, falling 0.7 percentage point to 10.9 percent last year. Picking up share in total Canadian imports was the ROW, as imports from that region were up 12.8 percent over the year. As a result, the share of the ROW in Canada's overall imports increased from 24.3 percent to 25.1 percent in 2010.

The $31.9-billion trade deficit in goods and services in 2010 was some $4.6 billion more than the $27.2 billion registered in 2009. Improvements in the trade balance for the United States, the EU and Japan were more than offset by an enlarging trade deficit with the ROW.

Exports to and imports from the United States grew at a similar pace last year to the previous year, leading to a $1.2-billion increase in the bilateral trade surplus. For Japan, it was a case of faster-growing (but smaller) exports expanding a bit more than slower-growing (but larger) imports as the trade deficit with that country narrowed by $32 million to $786 million. With the EU, fast-growing exports (up 10.4 percent) outpaced slow-growing imports (up 2.4 percent) to narrow the bilateral trade deficit by $3.3 billion to $6.1 billion. However, offsetting these gains was a $9.2-billion deterioration in Canada's trade balance with the ROW. Canada exports less to this region than it imports: in 2010, growth in Canadian exports to the region, at 6.9 percent, was considerably lower than the 12.8-percent pace of imports into Canada from the region. This resulted in a widening of the bilateral trade balance. Thus, the $4.6 billion in gains to the trade balance with the United States, the EU and Japan offset the $9.2-billion deterioration in the trade balance with the ROW to yield the $4.6-billion net increase in the overall 2010 trade deficit.

Goods Trade

Much of the recovery in total trade (some 92.2 percent) came from the goods side. This is because goods constituted a much larger share of total exports and grew faster than services last year (9.5 percent versus 4.4 percent). This can partly be explained by the smaller decline in services during the recession in 2009 (down 6.9 percent compared to 24.6 percent for goods), which implies less need for faster-than-average growth to catch up to earlier trends.

The largest increase in goods exports occurred with the **United States.** Exports to Canada's southern neighbour were up $25.3 billion out of the overall $35.0-billion expansion in goods exports last year. At the same time, some $23.3 billion more in imports (out of a total increase of $39.0 billion for all imports) flowed into Canada from the United States. With exports up more than imports, the goods trade surplus with the United States widened by $2.0 billion to reach $36.9 billion in 2010.

Next in importance in terms of the gains in goods trade for Canada in 2010 was the **rest of the world** (ROW) region. This region represented roughly half the remaining gains, apart from those accounted for by the United States. Canada's exports of goods to the ROW grew 8.1 percent in 2010, to $62.0 billion, a $4.6-billion increase over the previous year. However, imports of goods from the region were up even more (advancing 15.1 percent, or $13.5 billion) to $103.3 billion. This difference generated an $8.9-billion widening of the overall trade deficit with the region.

Canadian exports of goods to the **EU** registered the strongest growth of all the regions last year, rising 13.4 percent ($4.3 billion) to $36.4 billion. At the same time, imports of goods from the EU posted the weakest growth at 3.9 percent ($1.5 billion) to $40.3 billion. With these developments, Canada's trade deficit in goods with the EU retreated to $3.9 billion last year.

Lastly, goods exports to **Japan** grew slightly faster than the rate of goods imports in 2010, up 9.5 percent compared to 7.3 percent for imports. As a result, goods exports reached $9.7 billion while imports attained $10.0 billion, and the deficit narrowed to $303 million from $462 million in 2009.

Sectoral Performance of Goods Trade

While trade levels rebounded modestly from the unusually large drop registered in 2009, they remained below pre-recession levels at the close of 2010. A closer examination of trade by the major sectors reveals that not all of the weakness on the export side was related to the recession—some of it reflects longer-term structural changes. On the other hand, imports in certain sectors fully recovered while most other sectors approached their pre-recession peaks. The exception was the price-sensitive energy sector, which remained far below the heights reached just a few years back when the price of crude petroleum hit US$150 a barrel.

The overall 9.5-percent rise in Canadian goods exports in 2010 was the result of rising volumes and modest price increases.[1] Export volumes rose 8.3 percent over 2009 levels, while export prices advanced 1.1 percent. Notwithstanding these gains, the value of exports remained below those levels registered over the years 2004 through 2008.

Exports advanced in four of the seven major groups in 2010, led by industrial goods and materials, automotive products, and energy.

Industrial goods and materials became Canada's largest export sector last year, as exports rose 21.9 percent, or $17.4 billion, to $96.5 billion. At this level,

1 Statistics Canada Catalogue 65 208 X (2011), International Merchandise Trade, Annual Review 2010.

the sector accounted for 23.9 percent of total Canadian goods exports. Metals and alloys led the advances (up 39.8 percent to $39.2 billion) along with metal ores (up 26.0 percent to $13.0 billion). Higher prices were behind much of the gains for metal ores, while price and volume increases were responsible for the gains in metals and alloys. The price gains were particularly strong for nickel, copper and zinc—for both ores and metals. A mix of price and volume gains also helped raise the levels of chemicals, plastics and fertilizers exports, which advanced 17.6 percent to $30.1 billion. For fertilizers, strong volume increases offset an 18.8-percent fall in prices to help pull exports up by 29.4 percent, by value. Miscellaneous industrial goods and materials accounted for the remainder of the increase in industrial goods and materials, with exports up some 13.4 percent. Declines in asbestos and other non-metallic mineral basic products limited the export gains in this category.

Lower price hikes and virtually stagnant volume growth were behind the smaller increase in **energy products**, as energy slipped from the largest export category in 2009 to the second spot last year. Overall, energy exports were up 13.5 percent to $90.7 billion in 2010. Prices for crude oil recovered somewhat in 2010 after a 31.2-percent correction the previous year. However, a 1.8-percent decline in the volume of exports partly offset the price increases. A 3.0-percent increase in the volume of natural gas exports was not enough to offset a 4.9-percent decline in natural gas prices and resulted in a 2.1-percent decline in the value of natural gas exports.

Machinery and equipment exports fell for a third consecutive year, down $4.5 billion, or 5.5 percent, to just under $76.0 billion. This was nearly 20 percent off the peak export level registered in 2007. Losses were widespread throughout the category. Over 40 percent of the losses, or $1.8 billion, occurred in aircraft and other transportation equipment, with the bulk of the decline coming from aircraft. Telecom equipment and office machinery exports both declined in 2010 to account for much of the $1.4-billion loss in other machinery, while industrial equipment and agricultural machinery exports fell $1.2 billion as exports of both of the principal groups that make up this category declined.

After five years of declines, exports of **automotive products** reversed the trend and registered an increase. Exports were up $13.0 billion, or 29.6 percent, to $56.8 billion. Most of the gains came from passenger vehicles, with exports up $11.3 billion on the strength of a 55-percent increase in the volume of automobiles exported. At the same time, exports of auto parts were up by over a fifth in value terms and by over a quarter in volume terms. It was the first increase in parts exports after seven straight years of declines. Trimming back the gains was a 38.6-percent, or $1.5 billion, decline in truck exports.

Agricultural and fishing products exports fell for the second straight year in 2010, this time down by $329 million, or 0.9 percent, to $36.9 billion. The declines were concentrated in wheat (down $1.4 billion), barley (down $128 million), and meat (down $150 million) while gains were mostly moderate across the other agricultural commodities, with the exception of the other cereal preparations category, which was up $1.1 billion.

As was the case for automotive products, **forestry products** halted a five-year slide in exports by recording a $2.3-billion increase (12.0 percent) last year. Forestry product exports returned to $21.8 billion in 2010. Exports of pulp and lumber accounted

for the gains, up $1.7 billion and $1.3 billion, respectively, while newsprint and other paper exports were off by $0.7 billion.

Also on a downward trend in 2010, exports of **other consumer products** fell $1.5 billion, or 8.4 percent, to $16.4 billion. This represented the third consecutive annual decline in exports of these products, which include home furnishings, sporting goods, and apparel.

Imports by major product categories were up across the board in 2010. In aggregate, a 4.5-percent decline in import prices combined with a 15.5-percent increase in the volume of imports to raise the value of exports by $39.0 billion, or 10.4 percent, to $413.1 billion.

With the rebound in auto exports, **automotive product** imports were also on the rise. They were up by $13.3 billion to $68.6 billion, a 24.1-percent gain. Auto parts, some of which were likely used in the production of vehicles that were subsequently exported last year, led the advance, up $5.8 billion. Truck and passenger vehicle imports were also up strongly last year, rising by $4.0 billion and $3.5 billion, respectively.

Imports of **industrial goods and materials** rose by $11.8 billion, or 15.7 percent, to $86.9 billion. Some 70 percent of the increase was accounted for by metals and metal ores, which advanced $8.3 billion, led by precious metals. The remainder of the gains were fairly evenly split between chemicals, plastics, and rubber (led by plastics) and other industrial goods (where metal fabricated basic products were responsible for about half the gains).

Energy imports were up $6.2 billion, or 18.3 percent, to $40.2 billion last year. Petroleum and coal products (up $3.0 billion) and crude petroleum (up $2.3 billion) accounted for most of the increase.

Imports of **machinery and equipment**, Canada's largest import category, were up by a modest 5.3 percent, or $5.8 billion, to $113.7 billion. All import categories advanced, except for aircraft and other transportation equipment. Miscellaneous machinery and equipment, particularly communications equipment, led the gains (up $3.7 billion) while imports of aircraft and other transportation equipment declined $1.2 billion.

Forestry products imports had been declining since 2003, but in 2010 that trend reversed and imports increased. Imports of forestry products were up $259 million, or 10.9 percent, to $2.6 billion. Wood fabricated materials accounted for the increase, up $289 million, while imports of crude wood products declined by $31 million last year.

After recording a rare decline in 2009, **consumer goods** imports resumed growth in 2010, up $237 million, or 0.4 percent, to $57.7 billion. This represented an increase of about 0.3 percent over the pre-recession peak, registered in 2008. Televisions and household furnishings accounted for much of the gains.

Agricultural and fishing products was the only major category to avoid a decline in imports during the 2009 recession and imports continued to expand in 2010. Imports have been continually expanding since 2004 and last year were up $226 million, or 0.8 percent, to $29.6 billion. For the most part, gains were widespread, with notable declines in dried fruits, fruits, and fruit preparations (down $127 million), other cereals and cereal preparations (down $125 million), and corn (down $101 million).

Services Trade

Like goods, trade in services rebounded in 2010 from the declines brought about by the recession of the previous year. And like goods, the rebound was not sufficiently

robust to recover all of the ground lost. In 2010, services exports rose 4.4 percent to $70.1 billion while services imports were up 4.0 percent to $93.4 billion, resulting in a $23.3-billion deficit for the year, or $646 million more than the deficit posted for 2009. Growing deficits in travel and transportation services along with a small deterioration in the government services balance were only partly offset by the elimination of the commercial services deficit to cause the increase in the deficit.

Regionally, Canada runs trade deficits for services with all of its major partners (Table 4-1). The largest is with the United States ($15.3 billion), followed by the ROW ($5.3 billion) and the EU ($2.2 billion), while that with Japan is the smallest ($0.5 billion). Last year, the increase in the services trade deficit came from a widening of the deficits with the United States, Japan and the ROW, while Canada narrowed its services trade deficit with the EU.

Activity in the **travel and tourism** sector picked up in 2010. The strong Canadian dollar helped create favourable conditions for Canadians to travel abroad, with the result that Canadian travel expenditures abroad were up 9.7 percent in 2010 (Table 4-2). Both personal travel expenditures (up 9.4 percent) and business travel expenditures (up 11.7 percent) posted strong gains. At the same time, foreign travel spending in Canada also rose, but not by as much as Canadian spending in the outward direction. Foreign personal travel expenditures in Canada were up by 4.5 percent and foreign business travel expenditures in Canada advanced 6.3 percent. The net result was that Canadians increased their travel expenditures abroad more than foreigners increased their expenditures in Canada, causing the travel services trade deficit to widen by $1.9 billion to $14.1 billion.

In line with the recovery in goods trade with all major partners, trade in **transportation services** to all regions was on the rise in 2010. The sole exception was for transportation services imports from the EU. This was likely related to the weak increase in goods imports from the EU.

Transportation services exports rebounded by 12.3 percent ($1.2 billion) as exports to all major trading partners were up by double-digit figures. Exports of land transport services rose by 8.7 percent, those for water transport by 11.7 percent, and those for air transport by 15.1 percent. Imports of transportation services were also up across the board, except with the EU (down 1.9 percent) as noted above. Overall, imports of transportation services increased 9.4 percent, most notably with the United States (up 16.0 percent). Again, those for land transport posted the slightest rebound (up 6.6 percent); this was followed by air transport (up 9.4 percent) and water transport (up 10.1 percent).

Canada traditionally runs a **commercial services** trade deficit; however, in 2010, that changed and the country posted its first surplus at $477 million. Exports of commercial services advanced 2.5 percent ($1.0 billion) and imports fell 2.3 percent ($0.9 billion), moving the trade balance from a $1.5-billion deficit in 2009 to last year's surplus. Exports of commercial services were up to all major partners, except to the ROW. At the same time, imports of commercial services were also down across the major partners, with the exception of Japan, where imports were up 40.3 percent. However, because Japan only accounted for 2.2 percent of total commercial services imports, the increase with that country was not sufficient to offset the declines posted with the other trading partners.

TABLE 4-2

Services Trade by Detailed Sectors, 2009 and 2010
($ millions and annual percent change)

	Exports			Imports			Balance		
	2009	2010	growth	2009	2010	growth	2009	2010	$ change
Total, all services	**67,143**	**70,090**	**4.4**	**89,807**	**93,399**	**4.0**	**-22,664**	**-23,309**	**-645**
Travel	**15,519**	**16,263**	**4.8**	**27,692**	**30,381**	**9.7**	**-12,173**	**-14,118**	**-1,945**
Business travel	2,528	2,687	6.3	3,520	3,932	11.7	-992	-1,245	-253
Personal travel	12,992	13,576	4.5	24,172	26,450	9.4	-11,180	-12,874	-1,694
Transportation	**10,120**	**11,363**	**12.3**	**19,655**	**21,493**	**9.4**	**-9,535**	**-10,130**	**-595**
Water transport	2,707	3,024	11.7	8,699	9,575	10.1	-5,992	-6,551	-559
Air transport	4,409	5,074	15.1	8,718	9,535	9.4	-4,309	-4,461	-152
Land and other transport	3,004	3,265	8.7	2,238	2,385	6.6	766	880	114
Commercial services	**39,681**	**40,684**	**2.5**	**41,154**	**40,209**	**-2.3**	**-1,473**	**475**	**1,948**
Communication services	2,650	2,723	2.8	2,089	2,201	5.4	561	522	-39
Construction services	298	268	-10.1	351	235	-33.0	-53	33	86
Insurance services	4,340	4,283	-1.3	6,411	6,289	-1.9	-2,071	-2,006	65
Other financial services	2,636	3,156	19.7	4,039	3,468	-14.1	-1,403	-312	1,091
Computer & information services	4,873	5,041	3.4	2,435	2,374	-2.5	2,438	2,667	229
Royalties and licence fees	3,673	3,705	0.9	8,801	8,569	-2.6	-5,128	-4,864	264
Management services	5,881	5,081	-13.6	4,722	5,006	6.0	1,159	75	-1,084
Research and development	3,457	3,901	12.8	1,185	892	-24.7	2,272	3,009	737
Architect., eng., & oth tech. services	4,876	5,513	13.1	3,243	3,111	-4.1	1,633	2,402	769
Oth. Misc. services to business	4,861	4,967	2.2	5,499	5,300	-3.6	-638	-333	305
Audio-visual services	2,137	2,044	-4.4	2,381	2,762	16.0	-244	-718	-474
Government services	**1,824**	**1,777**	**-2.6**	**1,304**	**1,316**	**0.8**	**520**	**461**	**-59**

Source: Statistics Canada CANSIM Matrix 376-0035.

In several instances, the combination of rising exports and falling imports led to improvements in the commercial services trade balance. In particular, the trade balance for other financial services improved the most ($1.1 billion), followed by architectural, engineering, and other technical services ($769 million), research and development ($737 million), and other miscellaneous services to business ($305 million). On the other hand, for management services and audio-visual services, falling exports and rising imports combined to limit the overall improvement in the trade balance.

The Current Account

The current account records the flow of transactions between Canada and its commercial partners. The exchange of goods and services, as discussed above, is the largest component of these transactions. The remaining two components of the current account capture the flow of payments and receipts of investment income and current transfers.

The current account deficit widened from $43.5 billion in 2009 to $50.0 billion last year, a $6.5-billion deterioration in the balance. The bulk of the decline in the current account balance between 2009 and 2010 came largely from the $4.6-billion widening of the deficit in goods and services trade. The $4.0-billion decline in the goods trade balance accounted for roughly 62 percent of the overall decline in the current account balance, while the $0.6-billion decline in the services trade balance was responsible for another 10 percent.

Canada has always run an investment income deficit. Growth in investment income payments was slightly greater than that for investment income receipts (7.8 percent for payments and 7.1 percent for receipts). As a result, there was an overall $1.5-billion widening in the investment income deficit. Profits earned by Canadian direct investors were up by $7.6 billion in 2010, while dividend and interest receipts to portfolio and other investment holders were down by $2.7 billion and $0.9 billion, respectively. At the same time, Canadian payments to foreign direct investors rose by $5.4 billion and those to portfolio investors increased by $2.4 billion compared to 2009, while payments to other investment holders were down by $2.3 billion.

Current transfers are the smallest of the three main components of the current account. In 2010, current transfer receipts were up $93 million to $8.7 billion while current transfer payments increased to $11.2 billion. The net result was a $290-million increase in the current transfer deficit to $2.4 billion in 2010 from $2.1 billion the previous year.

Key Developments in Canadian Merchandise Trade

Canada's trade rebounded with the turnaround in global market conditions in 2010. The pickup in global economic activity, re-stocking of inventories, and a better outlook for consumers helped strengthen foreign demand for Canadian products. This in turn strengthened Canadian demand for foreign intermediate inputs, boosted employment, and helped stimulate consumption in this country. Thus, both Canadian exports and imports were on the rise last year.

This chapter examines in greater detail the developments in Canada's merchandise trade over the past year—across trading partners, commodities and provinces—using Canadian trade statistics that are prepared at the detailed commodity and individual country levels.[1]

Canadian merchandise exports to the world rose to $399.4 billion in 2010, while imports advanced to $403.3 billion. However, for the most part, trade levels with Canada's largest partners remained below their pre-recessionary levels. The bulk of Canada's trade is conducted with very few partners. The top ten destinations for exports made up about 90 percent of total merchandise exports and the top ten import-supplying countries accounted for over 80 percent of all Canadian imports in 2010. There was very little movement in the rankings of Canada's top trading partners. On the export side, the top eight last year were the same eight in the same order as the year before, while on the import side the top nine were unchanged in composition and order.

The three countries breaking into the top ten partners were Brazil and Norway in the ninth and tenth spots, respectively, for exports, and Taiwan in tenth position for imports.

In terms of specific products driving Canada's trade performance in 2010, passenger vehicles, gold, certain energy products (i.e., crude oil and natural gas) and a number of non-energy resources, such as potash, wheat, and metals, generated huge trade surpluses and, for the most part, positive changes to trade balances. On the other hand, a number of manufactured products, led by trucks and automotive parts, telecom equipment, medicines, computers, and integrated circuits generated trade deficits and, again for the most part, negative changes to trade balances. Many of the resource-based products were subject to strong price increases last year, resulting from the historic economic expansion now underway in the emerging markets of the world. The North American automotive sector also appears to be emerging from a huge restructuring effort over the past several years. A bright spot in Canada's trade performance was the upturn in passenger automobile exports after five years of consecutive decline. However, a

1 Canadian trade statistics are provided in two basic forms: Customs basis and Balance of Payments basis. In Chapter Four, the analysis of trade with "major partners" used trade data prepared on the Balance of Payments basis. Trade statistics at greater detailed commodity and individual country levels are provided on a Customs basis only. As Chapter Five examines trade developments in detail, the data in this chapter are provided on a Customs basis.

by-product of the continental restructuring effort seems to be the disappearance of Canadian production of trucks for export.

Another bright spot in Canada's trade performance in 2010, was the increase in exports of wood products after a five-year slide. Canadian exporters of wood and pulp are becoming more active in the fast-expanding Asian markets, after having suffered for years because of weak demand for their products resulting from the slump in the U.S. housing market.

Trade by Top Ten Partners

Merchandise Exports

After plunging by 25.6 percent, Canadian merchandise exports to the world rebounded in 2010, rising 11.0 percent to $399.4 billion. This was a reflection of the tepid recovery from the world-wide recession experienced in 2009. For the most part, exports to Canada's largest partners remained below their pre-recessionary levels. However, 2010 exports to China and the United Kingdom were above their 2008 levels, while those to Brazil were virtually at par with 2008. Strong exports to Brazil essentially returned exports to that country to 2008 levels, while last year's growth in exports to the United Kingdom yielded exports to that country above their pre-recessionary levels. For China, exports continued to grow in 2009[2] and onwards into 2010.

In 2010, two countries—Brazil and Norway—joined the ranks of the top ten destinations for Canadian exports, at 9th and 10th place, respectively; they displaced France (which fell from the 9th to the 11th spot) and India (from 10th to 13th). Collectively, the top ten destinations accounted for 89.9 percent of total merchandise exports.

The **United States** remained Canada's largest export trading partner, accounting for 74.9 percent of total exports in 2010. This was marginally down from the 75.0-percent share registered a year earlier. Exports to the United States rose $29.0 billion, or 10.8 percent, to $299.1 billion. While the U.S. recession ended in June 2009, the recovery continued to be lacklustre by historical standards. Consumer confidence remained weak, affected by a prolonged fall in housing prices and high unemployment levels. Notwithstanding the increase in 2010, Canadian exports to the United States remained lower than in any year during the 1999-2008 period.

For 2010, the bulk of the gains in exports to the United States occurred in three categories: mineral fuels and oils, motor vehicles, and precious metals and stones. Together, these categories accounted for over 95 percent of the increase in bilateral exports during the past year. Buoyant energy prices helped push exports of mineral fuels and oils up by nearly $12.6 billion. Crude petroleum led the advance, with a $9.2-billion gain, followed by light and heavy oils (up $3.4 billion), while natural gas exports were essentially unchanged from the previous year.

Automotive exports to the United States advanced for the first time following five years of consecutive decline. Exports of motor vehicles climbed $11.9 billion to $48.3 billion, with most of the gains coming from passenger vehicles (up $11.4 billion). Automotive parts were also up by $2.0 billion, while truck exports were down by over $0.75 billion. Exports of trucks have fallen, on average, by about 60 percent annually over the past three years, and in 2010 represented less than one sixteenth of the their 2007 amount.

2 *Canada's State of Trade 2010 report.*

Gains in precious metals and stones were led by gold (up almost $2.0 billion) and silver (up $1.1 billion), with coins and precious metals waste and scrap contributing to most of the remaining gains.

Merchandise exports to the **United Kingdom**, which continued to be Canada's second-largest destination, increased to $16.4 billion in 2010, or 4.1 percent of all exports. Exports were up by 35.7 percent (or $4.3 billion). Precious metals and stones led the gains, up $3.5 billion, with gold (up $3.0 billion) accounting for the lion's share of the advance. Nickel (up $0.7 billion) and aircraft (up $0.4 billion) also registered notable gains.

China retained third place among Canada's largest export destinations, accounting for 3.3 percent of all merchandise exports. Exports to China advanced $2.1 billion to $13.2 billion. Pulp, fats and oils, wood, and mineral fuels and oils accounted for much of the gains, advancing $0.7 billion, $0.6 billion, $0.5 billion and $0.4 billion, respectively. However, exports of oil seeds posted a sizeable loss ($0.7 billion), due entirely to reductions in canola seed shipments. Over the five-year period 2006-2010, China's share of Canadian exports has risen from 1.8 percent to 3.3 percent.

Japan was Canada's fourth-largest export destination in 2010. Exports to Japan were valued at $9.2 billion, up $0.9 billion (or 10.6 percent) over 2009. Mineral ores accounted for the largest increase, at $331 million, followed by wood, at $164 million. Japan was the destination for 2.3 percent of all Canadian shipments abroad in 2010.

Mexico was in fifth spot for Canadian exports. Exports to Mexico grew the slowest among the top ten destinations, as they expanded by only 4.2 percent (up $204 million) to just over $5.0 billion. Strong gains in oil seeds (up $188 million) and aluminum (up $104 million) were offset by losses in mechanical machinery and appliances (down $201 million) and electrical machinery and equipment (down $154 million). Smaller gains in other categories, led by iron and steel, meat, and motor vehicles, accounted for the overall increase in exports.

Germany ranked sixth in 2010. Exports to Germany were up $201 million (5.4 percent) to $3.9 billion. Strong gains in mineral ores (up $314 million) and inorganic chemicals (up $122 million) were largely offset by a $379-million reduction in exports of aircraft and parts.

Exports to seventh-ranked **Korea** advanced $182 million (5.2 percent) to $3.7 billion. A $160-million gain in cereal exports was largely offset by a $134 million decline in machinery and appliances. Lesser gains were registered for pulp (up $82 million), mineral fuels and oils (up $60 million), and wood (up $46 million), which contributed to the overall increase.

The **Netherlands** ranked eighth in 2010, the same as in 2009. Exports to the Netherlands were up $490 million (17.8 percent) to $3.2 billion. Strong gains in aluminum (up $226 million), oil seeds (up $215 million), nickel (up $153 million) and inorganic chemicals (up $115 million) were partially offset by a $228-million decline in exports of mineral fuels and oils.

Brazil broke into the top ten Canadian export markets for the first time in 2010, placing 9th—a considerable jump from 14th place in 2009. Exports vaulted 60.4 percent, or $967 million, to nearly $2.6 billion. Three products accounted for the bulk of the increase: fertilizers, up $301 million (180.9 percent); pharmaceutical products, up $281 million (3,158.6 percent); and mineral fuels and oils, up $192 million (94.7 percent). For the most part, Canada recouped all of its exports to Brazil lost during the global recession of 2009.

In 10th spot was **Norway**, up from 13th place in 2009. Exports to Norway jumped 43.4 percent, or $765 million, to $2.5 billion. Gains were widespread among the leading products, but the bulk of the increase was in nickel (up $616 million) and to a lesser extent in aluminum (up $108 million).

Merchandise Imports

Canadian merchandise imports also rose in 2010, but at a slower pace than exports. Total imports were up 10.5 percent ($38.2 billion) to $403.3 billion. There was very little movement in the ranks of the top import suppliers to Canada between 2009 and 2010, with the first nine (the United States, China, Mexico, Japan, Germany, the United Kingdom, Korea, France and Italy) retaining their positions. There was, however, a change in the 10th place spot, with Taiwan displacing Algeria. The top ten import suppliers combined accounted for 80.7 percent of the total Canadian import market in 2010.

Accounting for just over half of all of Canada's imports (50.4 percent), the **United States** was Canada's largest supplier of foreign-produced products; this was down from a 51.2-percent share in 2009. Notwithstanding the decline in share, imports from the United States rose by $16.4 billion (8.8 percent) to $203.2 billion. Increased imports of automotive products led the advances, as imports of these products were up by $7.2 billion. Trucks for transport of goods (up 25.0 percent), passenger cars (up 22.3 percent), and motor vehicle parts (up 21.7 percent) accounted for the bulk of the automotive import gains. Smaller gains were registered for mineral fuels and oils, iron and steel, and mechanical machinery and appliances (up $1.6 billion each), and for plastics (up $1.2 billion). Imports of aircraft and parts were trimmed by $0.6 billion to limit the gains.

China was Canada's second-largest merchandise import supplier. At 12.1 percent, the growth in imports from China was slightly above the overall average, and China increased its share of the Canadian import market from 10.9 percent in 2009 to 11.0 percent in 2010. Imports from China rose by $4.8 billion to reach almost $44.5 billion last year. Mechanical machinery and appliances (up $1.6 billion) and electrical machinery and equipment (up $1.5 billion) accounted for about two thirds of the overall gain. Computer-related equipment and printing machinery led the gains within the former category, while telephone sets and transistors and diodes led the advances in the latter category.

Mexico was in third place, increasing its market share by a full percentage point between 2009 and 2010, rising to a 5.5-percent market share on the strength of a 33.7-percent (or $5.6 billion) increase in shipments to Canada. More than 60 percent of the gains came from motor vehicles (mostly trucks and passenger vehicles) and electrical machinery and equipment (in particular telephone equipment and parts). Mechanical machinery and appliances and mineral fuels and oils accounted for about half of the remaining gains.

Imports from **Japan**, Canada's fourth-largest source, were up $1.1 billion (8.8 percent) to $13.4 billion in 2010. Automotive products (mainly parts and passenger vehicles) and mechanical machinery and appliances (led by bulldozers, graders, scrapers, etc. and piston engines) accounted for roughly 60 percent of the overall gains.

Imports from **Germany**, Canada's fifth-largest supplier of imports in 2010, advanced $0.6 billion (5.9 percent) to $11.4 billion. Automotive products accounted for the gains, expanding by $0.7 billion. Increased imports of passenger cars largely accounted for the increase in automotive products.

Electrical machinery and equipment imports were also up ($110 million), but were more than offset by a $130 million decline in mechanical machinery and appliances.

Imports from the **United Kingdom**, which placed sixth among Canada's top ten import sources, were up $1.3 billion (13.9 percent) to $10.7 billion. Mineral fuels and oils registered the largest increase, at nearly $1.0 billion, with crude oil accounting for some 80 percent of the gains and non-crude oil making up most of the remainder.

Imports from seventh-ranked **Korea** were up $217 million (3.7 percent) to $6.1 billion. The largest increase was for ships and boats (up $193 million), followed by automotive products (up $77 million) and mineral fuels and oils (up $49 million). Partially offsetting the gains was a $175-million decline in electrical machinery and equipment.

Eighth-ranked **France** was the only country in the top ten to register a decline in imports in 2010. Imports fell 3.6 percent to $5.4 billion in 2010 from $5.6 billion a year earlier. Despite a $314-million increase in aircraft and parts imports, declines in a number of other categories contributed to the overall decrease. Imports of pharmaceutical products fell the most ($194 million), with notable declines recorded for mineral fuels and oils ($92 million), electrical machinery and equipment ($66 million), mechanical machinery and appliances ($65 million) and articles of iron and steel ($40 million).

Italy held on to its ninth place standing, as imports from that country expanded by $0.2 billion to $4.6 billion. Mineral fuels and oils (almost totally non-crude oils) were up by $113 million, followed by pharmaceutical products ($43 million), and beverages ($27 million).

Taiwan entered the top ten import-supplying economies for the first time in tenth spot. Canadian imports from Taiwan rose by $625 million (up 18.7 percent) to almost $4.0 billion in 2010. Electrical machinery and equipment accounted for just under half of the overall gains (up $286 million), with precious metals and stones (up $85 million) and articles of iron and steel (up $82 million) also contributing strongly to the advance.

Merchandise Trade by Top Drivers

Out of more than 1,200 goods,[3] the 26 products listed in Table 5-1 were included for their overall impact on the change in Canada's trade balance. Jointly, these products made up slightly less than half of Canada's merchandise exports in 2010 and nearly a third of merchandise imports. Twelve of the selected products generated improvements to the trade balance amounting to nearly $25.9 billion. Another fourteen products registered the largest declines in the trade balance, totalling some $16.8 billion. When taken together, these 26 products produced a $9.1-billion improvement in Canada's trade balance from 2009 to 2010. In comparison, Canada's overall trade balance only improved by $1.4 billion.

As seen in the Table 5-1, these top drivers fall into two broad categories: trade surplus products and trade deficit products. Within each category, trade is further subdivided into trade that flows substantially in both directions and trade that is primarily one-way.

Products for which there are substantial trade flows and for which Canada registers a trade surplus include passenger

3 Canada's merchandise trade is usually reported by what is known as the Harmonized System (HS) of Trade Classification, an internationally defined system for codifying traded products. Within the HS system, trade is broken down into some 97 chapters, also known as the HS 2-digit level. Each chapter is then broken down into sub-categories at the 4-digit level and each 4-digit sub-category is further broken down into individual products at the 6-digit level. This section examines those products at the HS 4-digit level that drove the change in Canada's trade balance over the past year.

TABLE 5-1

Canadian Merchandise Trade by Top Drivers
($ millions and percent)

Commodity	2010 Exports $	Export Growth %	2010 Imports $	Import Growth %	Blnce 2010 $	Δ Blnce 2010/2009 $
TRADE SURPLUS PRODUCTS						
Large Exports and Large Imports						
Passenger Cars	37,985.6	43.0	22,999.8	18.5	14,985.9	7,834.2
Crude Oil	51,942.0	21.3	23,854.2	12.4	28,087.8	6,496.3
Gold	13,831.6	65.4	7,575.9	67.9	6,255.7	2,406.8
Petroleum Gases	18,359.4	0.11	4,204.4	18.6	14,155.0	-639.7
Subtotal	122,118.7	27.1	58,634.3	20.4	63,484.4	16,097.7
Large Exports and Small Imports						
Potash	5,196.6	41.9	25.5	2.7	5,171.2	1,533.1
Chemical Woodpulp	4,960.9	36.0	164.0	4.7	4,796.9	1,304.5
Nickel Mattes	2,792.7	85.5	86.4	73.4	2,706.3	1,250.7
Aluminum, Unwrought	6,025.2	23.9	299.2	46.4	5,726.0	1,068.5
Sawn Lumber	5,050.3	28.0	487.5	22.7	4,562.8	1,015.5
Coal	5,986.7	20.8	1,078.2	1.9	4,908.5	1,010.1
Raw Diamonds	2,681.5	38.6	521.5	26.7	2,160.1	637.2
Canola Oil	2,188.0	41.8	224.1	51.8	1,963.8	567.9
Uncoated Paper	2,452.7	-21.8	494.1	-4.8	1,958.6	-658.0
Aircraft	6,969.1	-10.8	2,210.4	-3.8	4,758.8	-751.4
Iron Ores & Concentrates	3,190.6	-5.3	916.6	206.1	2,274.0	-796.0
Wheat And Meslin	4,671.2	-22.4	12.7	-32.8	4,658.5	-1,344.0
Subtotal	52,165.5	12.4	6,520.1	16.7	45,645.4	4,837.9
TRADE DEFICIT PRODUCTS						
Large Exports and Large Imports						
Medicaments, Dosage Form	3,982.0	-29.3	8,879.6	-6.8	-4,897.6	-1,003.5
Motor Vehicle Parts	9,058.2	30.1	18,353.6	22.9	-9,295.4	-1,327.6
Telephone Equipment & Parts	3,185.2	-12.7	7,496.2	20.6	4,311.0	-1,742.9
Subtotal	16,225.4	-0.1	34,729.3	13.2	-18,504.0	-4,074.0
Small Exports and Large Imports						
Precious Metals Waste	629.3	15.8	1,986.0	-24.8	-1,356.7	741.0
Medicaments, Bulk	3,982.0	-29.3	8,879.6	-6.8	-4,897.6	-1,003.5
Electronic Integrated Circuits	1,631.6	-28.1	3,559.1	1.8	-1,927.5	-701.3
Trucks (Transport Of Goods)	705.2	-55.7	11,570.5	34.7	-10,865.3	-3,866.2
Bulldozers, Graders, Scrapers Etc	137.1	-37.1	2,579.0	38.8	-2,441.9	-802.4
Tractors	323.2	-54.4	2,626.9	32.4	-2,303.7	-1,027.9
Computers	1,767.0	-10.0	8,355.2	12.6	-6,588.2	-1,128.5
Subtotal	9,175.3	25.2	39,556.3	50.7	-30,380.9	-7,788.7
26 Product Total	**199,684.9**	**20.3**	**139,440.0**	**25.4**	**60,244.8**	**9,073.0**
Total All Commodities	**399,420.7**	**11.0**	**403,347.2**	**10.5**	**-3,926.5**	**1,362.0**

Source: Office of the Chief Economist, DFAIT; with data from Statistics Canada.

Performance of Small, Medium, and Large-sized Firms in Canadian Exports During the Global Financial Crisis[1]

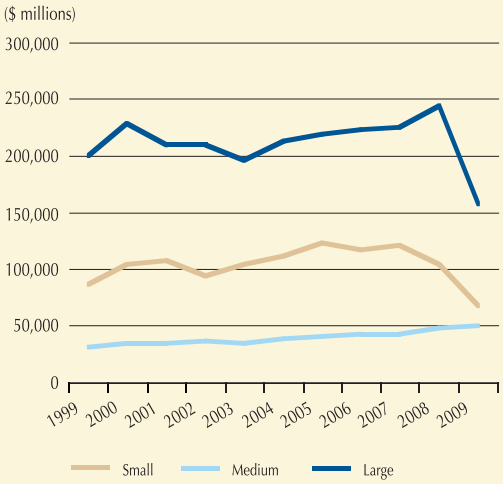
Export Performances by Firm Size and the Crisis

During the recent global financial crisis, medium-sized Canadian exporters (businesses with 100 to 499 employees) performed better than either small or large exporters, increasing the value of their exports by 7 percent between 2008 and 2009 to $51 billion (Figure 1). This continued a decade-long trend during which the share of medium-sized enterprises in Canadian exports has steadily increased. In contrast, large firms (those with 500 or more employees) saw the value of their exports decrease by 36 percent to $157 billion during the crisis. Small businesses (those with fewer than 100 employees) make up the remaining category. During the crisis, small firms experienced a 34-percent drop in export (from $103 billion in 2008 to $68 billion in 2009). In 2009, small firms accounted for 86 percent of Canadian exporters.

The Crisis and Canada's Exports to the United States

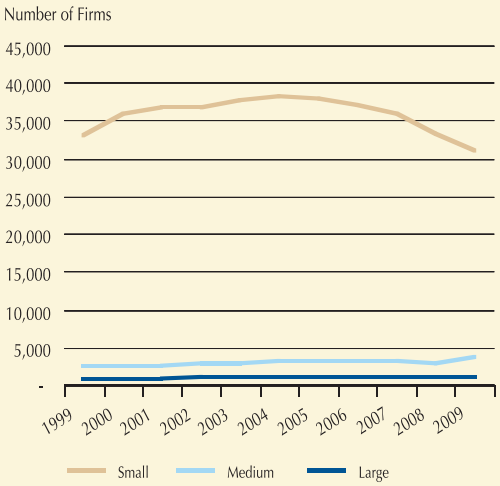
The value of Canadian exports to the United States increased from $279 billion in 1999 to $322 billion in 2008, which represented 78 percent of the total value of Canadian exports. However, the advent of the global financial crisis caused the value of Canadian exports to the United States to fall by 31 percent to $225 billion in 2009. At the same time, Canada's large firms experienced a similar sharp decline in exports to the United

Value of Exports, by Firm Size, 1999-2009



Source: Statistics Canada, Exporter Register.

Number of Exporters, by Firm Size, 1999-2009



Source: Statistics Canada, Exporter Register.

1 Additional information on small business exporters is available in Industry Canada's Key Small Business Statistics, Special Edition: Canadian Small Business Exporters. This report investigates the importance of small business in international markets by examining the number of exporters of merchandise and the value of exports by industry, province, destination and firm size over the 1999-2009 period. The report also provides a financing profile of Canadian SMEs that exported in 2007 and explores the involvement of SMEs in global value chains. To receive the publication, please subscribe online at www.ic.gc.ca/SMEstatistics/subscription.

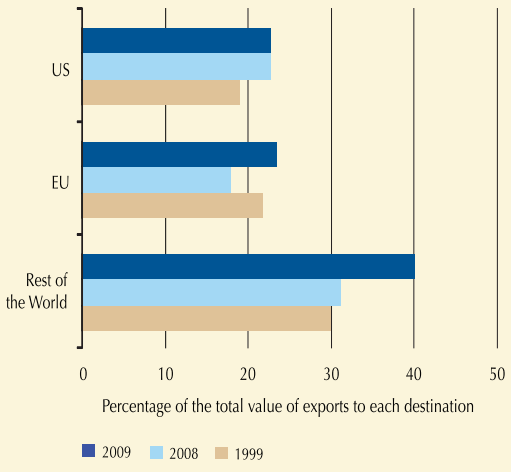
States, of roughly the same magnitude as the overall decline. This result is hardly surprising given that large firms account for the vast majority of Canada's exports to the United States. For Canada's small businesses, exports to the United States also fell, by 30 percent between 2008 and 2009, while medium-sized firms were slightly less affected—down by 25 percent over the same period.

The somewhat different performance among different sized firms can partly be explained by relating the size of a firm to the industry to which it belongs. For example, transportation equipment and mining and oil and gas extraction accounted for about 45 percent of Canadian merchandise exports to the United States in 2008. One feature of the oil and gas and other resource-related sector is that it is more likely to be populated by large firms, which would in turn have been subjected to the sharp declines in resource prices during the global crisis. Large firms are also major participants in the automotive sector, which was already declining but then fell sharply during the crisis. By contrast, small and medium-sized enterprises typically serve niche markets or provide intermediate inputs as part of integrated North American value chains. These activities were likely less impacted by the crisis.

Small Business and Other Export Destinations

Small firms are particularly important for exports to non-traditional markets. Canada's small firms accounted for just over 20 percent of total merchandise exports to both the United States and the EU in 2009; however, they accounted for over 30 percent of exports to the rest of the world before the global financial crisis, and subsequently saw that share shoot up to 40 percent in 2009. The absolute value of their exports also increased slightly. Meanwhile, the shares and the absolute value of exports for both medium-sized and large firms declined during the crisis.

Small Business Exports by Destination



Source: Statistics Canada, Exporter Register.

Main Export Destinations for Canadian Small Businesses

Source: Statistics Canada, Exporter Register.

The share of exports destined for the United States from Canada's small businesses has also decreased since 1999. In 2009, the United States received 66 percent of the total value of Canadian small business exports, down from 75 percent in 2008 and 82 percent in 1999. In contrast, exports to Japan, China and South Korea have become increasingly important for Canada's small businesses over the last decade. In 2009, these firms exported disproportionally more than medium-sized or large firms to a number of key emerging markets. For example, small firms accounted for 65 percent of the value of Canadian exports to India, 63 percent to Egypt and 60 percent to Turkey.

vehicles, gold and certain energy products (e.g. natural gas and crude oil). The resource-based products were affected by price changes in 2010. For crude oil, prices were up last year, helping to underpin the expansion of the trade balance for this product. Likewise, prices of precious metals were on the rise in 2010, with the price of gold up from US$973 per troy ounce in 2009 to US$1225 per troy ounce in 2010.[4] Natural gas prices fell over 2010 while experiencing a modest increase in export volumes, resulting in a small increase in value of natural gas exports; however with imports up by more, the balance narrowed. For passenger cars, most of which were destined for the United States, the gain was a result of volumes increasing while prices fell. Overall, these four products registered a $63.5-billion trade surplus, up $16.1 billion over the previous year.

Products for which Canada typically reports large exports and smaller imports are largely composed of non-energy resources such as potash, metals, and wheat. Many of these products benefited from strong price gains along with improving demand conditions as production began to pick up coming out of the global recession. For pulp, strong demand from China helped push exports up. By contrast, wheat exports fell in 2010, as both export prices and volumes fell last year. Finally, sales of big ticket items such as aircraft were likely impacted by the recession. The trade surplus for these products grew by $4.8 billion to $45.6 billion.

Products with substantial trade flows but for which Canada registers a trade deficit include telecommunications equipment, medicines, and motor vehicle parts. The subsiding of fears of a global influenza pandemic may explain the fall in trade of dosage-sized medicaments, while the pickup in the North American automotive market likely explains the strong increases in auto parts trade. However, the overseas business environment is generally weak as compared to Canada; this might lie behind the increase in telecom imports at the same time as exports were down. Overall, the increase in exports of auto parts was offset by the declines in medicaments and telecom equipment and the value of exports of these products was little changed over the year while imports increased, resulting in a $4.1-billion widening of the deficit for these products.

Products for which Canada typically reports large imports and smaller exports are largely composed of manufactured goods. For most categories, Canadian demand was up while foreign demand was off. Overall, the trade deficit for these products widened by $7.8 billion to $30.4 billion.

4 Statistics Canada Cat. No.: 65-208, *International Merchandise Trade: Annual Review 2010.*

Merchandise Trade by Major Product Groups

This section examines Canada's 2010 trade performance according to the following 12 product groups: energy; vehicles and parts; machinery and mechanical appliances; electrical and electronic machinery; technical and scientific equipment; agricultural and agri food products; minerals and metals; chemicals, plastics and rubber; wood, pulp and paper; textiles, clothing and leather; consumer and miscellaneous manufactured products; and other transportation equipment. The first five of these groups are single chapters under the Harmonized Classification system, while each of the remaining seven groups are comprised of several HS chapters.

Energy Products[5]

Canadian exports of energy products increased 15.6 percent ($12.8 billion) to $94.8 billion in 2010, making energy Canada's largest export product group. As explained in Chapter Four, most of the gains were caused by price increases, while volumes held fairly steady. Notwithstanding the increase, exports remained well below their record-setting 2008 level ($133.3 billion), established when crude oil prices surpassed US$150 per barrel.

Imports of energy products into Canada also rose last year, up 18.0 percent ($6.2 billion) to $40.6 billion. With exports rising more than imports in value terms, the trade surplus for energy products expanded to $54.2 billion.

China is a growing market for Canadian energy exports. Exports were up 45.0 percent ($394 million) in 2010, reaching nearly $1.3 billion—a level five times as great as two years ago. However, the United States was by far the principal destination for Canadian energy exports in 2010, accounting for some 92.6 percent ($87.7 billion) of total Canadian exports of fuels, oils, and other energy products. The United States also supplied $12.3 billion (30.4 percent) of Canada's total energy imports. With exports exceeding imports, Canada posted a bilateral trade surplus with the United States for energy products, amounting to $75.4 billion. This was an overall increase in the trade surplus for energy products of $10.9 billion. Thus, the United States accounted for more than the total of the increase in the energy products trade surplus. Important declines in energy products balances came from trade with Nigeria (down $1.2 billion), the United Kingdom (down $1.1 billion), Iraq (down $633 million), Mexico (down $475 million), and Saudi Arabia (down $440 million) to account for much of the difference between the U.S. balance and the total balance for these products.

Three commodities (crude oil, non-crude oil, and petroleum gases—almost exclusively natural gas) make up about 90 percent of the trade in energy products—a little more for imports and a little less for exports. Crude oil is the largest of the three categories, making up 55 percent of energy exports and almost 59 percent of energy imports. Crude oil exports advanced $9.1 billion in 2010 to reach $51.9 billion, a 21.3 percent increase over 2009 levels. Increased exports to the United States (up $9.1 billion) accounted for the gain, while the largest export declines were registered for India (down $38.4 million), Malaysia (down $38.1 million) and Chile (down $25.1 million).

Crude oil imports grew at a slower pace than exports, rising 12.4 percent to $23.9 billion in 2010. Ten countries posted notable gains amounting to $5.1 billion while another ten posted notable losses totalling $2.5 billion to explain the overall $2.6 billion increase in imports. Nigeria (up $1.2 billion), the United Kingdom (up $0.8 billion),

5 HS Chapter 27.

and Iraq (up $0.6 billion) led the advancing countries, followed by Brazil at $549 million. Brazil was a new source of crude oil imports for Canada in 2010, as there were no imports of crude recorded from Brazil in the two previous years. Suppliers that experienced a decline in crude oil imports into Canada were led by Norway (down $854 million), Azerbaijan (down $624 million) and the United States (down $364 million). Four countries—Venezuela, Denmark, Algeria, and the United Arab Emirates (UAE)—recorded declines of between $100 million and $200 million each, with shipments from the UAE virtually disappearing. France, Trinidad and Tobago, and the Ukraine posted no sales to Canada last year after having supplied $65 million, $63 million and $9 million, respectively, in crude oil imports the year before.

With crude oil exports up more than imports, the trade surplus for these products widened by $6.5 billion, from $21.6 billion in 2009 to $28.1 billion last year.

Canadian exports of non-crude petroleum oils were up $2.8 billion (23.5 percent) to $14.8 billion last year. Exports to the United States accounted for the gains as they were up by $3.4 billion (31.9 percent). Limiting the gains were losses to European destinations. Combined, exports of these products to France, Germany, Italy, the Netherlands, Spain, Switzerland and the United Kingdom fell by $438 million, led by a $140-million decline to the Netherlands. At the same time, Canadian imports of non-crude oils increased by nearly $2.7 billion (38.3 percent) to $9.6 billion. The United States accounted for roughly half the gains at $1.3 billion. Imports from the Netherlands posted the largest decline, at $130 million. As a result of these increases, there was a small increase in the trade surplus for non-crude petroleum oils, to $5.2 billion in 2010 from $5.0 billion a year earlier.

Exports of petroleum gases were up marginally by $19.7 million (0.1 percent) between 2009 and 2010, to $18.4 billion. Virtually all of these exports were destined for the United States. Imports of petroleum gases advanced more strongly than exports, rising by $659.4 million (18.6 percent) to $4.2 billion. About two thirds of the increase came from the United States, with the remainder largely coming from Trinidad and Tobago (up $135 million) and Qatar (up $53 million). As imports were up more than exports, the surplus in petroleum gas trade narrowed by $640 million to $14.2 billion in 2010.

About half of the remaining smaller energy categories registered a deterioration in their trade balances last year, while the other half posted improvements. For example, coal recorded the largest gain, as its trade surplus widened by $1.0 billion, while electricity recorded the biggest loss, with a $364 million-narrowing of its trade surplus. These categories contributed about $0.5 billion to the overall $6.0 billion increase in the energy trade surplus.

As noted above, exports to China have increased rather strongly over the last couple of years. Two commodities have accounted for the bulk of the increase—coal and petroleum coke. For coal, exports to China were up by over 53 percent last year after having almost quadrupled the year before, while coke exports jumped by 358.5 percent in 2010 after having risen by over 67 percent a year earlier. Coal is the larger of the two export products, accounting for roughly eight of every ten dollars of shipments of energy products to China.

Vehicles and Parts[6]

As reported earlier, exports of vehicles and parts reversed a five-year slide and posted a gain in 2010. For the year as a whole, exports were up $11.8 billion (30.8 percent) to $50.2 billion. Imports also increased, although at a slower pace. Imports of vehicles and parts posted a $10.9-billion increase to $60.3 billion, up 22.1 percent over the 2009. With these movements, the automotive trade deficit narrowed to $10.1 billion in 2010 from $11.0 billion a year earlier.

Some 96 percent of Canadian automotive exports were destined for the United States in 2010, while that country supplied roughly two thirds of Canada's automotive imports. Other important suppliers of automotive products to the Canadian market include Mexico (9.9 percent), Japan (9.5 percent) and Germany (5.6 percent).

The bulk of the changes in automotive trade can be attributed to three products—passenger vehicles, transportation vehicles (i.e. trucks) and automotive parts. Together, these three products accounted for over 95 percent of exports and nearly 88 percent of imports of automotive products.

Passenger vehicles were the largest of the three major automotive product categories, accounting for over 75 percent of automotive exports and nearly 40 percent of automotive imports in 2010. Passenger vehicle exports were up 43.0 percent ($11.4 billion) to $38.0 billion last year, with the United States accounting for all of the increase. At the same time, imports of these products grew by 18.5 percent ($3.6 billion) to $23.0 billion. Import gains were led by the United States ($2.1 billion), followed by Mexico ($0.8 billion) and Germany ($0.6 billion). Korea (down $116 million) and Brazil (down $100 million) registered the largest declines over the year. With exports advancing considerably more than imports, the trade surplus for passenger vehicles more than doubled in 2010, rising from $7.2 billion in 2009 to $15.0 billion last year.

Parts and accessories were the second-largest category of automotive trade, and represented 18 percent of automotive exports and 30 percent of imports in 2010. Trade in these products expanded with the pickup in North American automotive production: exports increased by $2.1 billion to $9.1 billion, while imports were up by $3.4 billion to $18.4 billion. With these movements, the trade deficit in automotive parts and accessories widened by $1.3 billion to $9.3 billion. On the export side, the bulk of the increase was to the United States (up $2.0 billion) followed by Mexico (up $57 million). For imports, the United States accounted for about 70 percent of the increase ($2.4 billion), with Japan ($286 million), Mexico ($273 million), Korea ($192 million) and China ($173 million) accounting for most of the remainder of the gains.

Canadian truck exports have virtually disappeared over the past decade or so. They reached a peak of $14.4 billion in 2002 and have fallen every year since, with the exception of the slight increase registered in 2005. In 2010, exports were valued at $705 million, less than one-twentieth of the 2002 value; export values have more than halved in each of the past three years. The bulk of the decline was in shipments to the United States. At the same time, truck imports were up by more than a third last year, or nearly $3.0 billion. Canada sources over 95 percent of all truck imports from its two North American neighbours, so it is no surprise that imports of trucks sourced in the United States led the advances (up $1.8 billion) followed by Mexico (up $940 million).

6 HS Chapter 87.

Mechanical Machinery and Appliances[7]

Mechanical machinery and appliances (hereafter machinery) comprises a single chapter in the HS classification system. It is also one of the largest categories of goods in Canada's trade, covering a variety of items ranging from ball bearings to mobile cranes and derricks.

Machinery exports fell $1.1 billion (3.7 percent) in 2010, to $28.8 billion. Declines were widespread, with only 36 of 87 subcategories registering increases. Leading the declines were gas turbines (mainly for aircraft), air or vacuum pumps, appliances for manufacturing semiconductor crystals, and computers and components, as these exports decreased by $349 million, $321 million, $220 million, and $196 million, respectively. A pickup in the automotive sector led to gains for piston engines and engine parts, which partially offset the declines. Notable declines occurred in exports to China (down $279 million), Mexico (down $201 million), Korea (down $134 million) and France (down $112 million). There was a gain of $132 million posted to Russia.

In contrast to exports, imports of machinery rose over 2010, up $4.1 billion (7.8 percent) to nearly $57.0 billion. The vast majority of the increase went to four countries—China, the United States, Mexico and Japan—as imports from those countries rose by $1.6 billion, $1.6 billion, $695 million and $415 million, respectively. Piston engines posted the largest increase, at $1.1 billion followed by computers, self propelled dozers, and engine parts, at $933 million, $721 million and $381 million, respectively. Gas turbines posted the largest decrease, at $645 million.

The combination of falling exports and rising imports in 2010 meant that the trade deficit for mechanical machinery and appliances widened by $5.2 billion to $28.2 billion, completely erasing the $4.3-billion improvement in the balance registered in 2009. The trade deficits with China (up $1.9 billion), the United States (up $1.6 billion), Mexico (up $0.9 billion) and Japan (up $0.5 billion) all widened, to account for over 90 percent of the deterioration in the trade balance.

Electrical and Electronic Machinery and Equipment[8]

Exports of electrical and electronic products fell by $1.1 billion to $15.1 billion, most notably to the United States (down $1.0 billion, or 90.6 percent of the total). Smaller declines to Mexico (down $154 million) and Hungary (down $96 million) accounted for much of the remainder while a $71-million increase in exports to China helped stem the losses. Among the products that comprise this category, gains and losses were evenly split with 23 of the 48 major subcomponents posting gains, another 23 posting losses, and no trade in the final two categories. However, the losses compiled were greater than the gains and so overall exports fell. The key losses were concentrated in three products—integrated circuits, telephone and related equipment, and television receivers—which fell by a combined $1.2 billion.

Imports of electrical and electronic products advanced to $42.5 billion in 2010, up $4.2 billion from a year earlier. Higher imports from China (up $1.5 billion), Mexico (up $1.2 billion), the United States (up $0.8 billion), Denmark (up $0.4 billion) and Taiwan (up $0.3 billion) accounted for the overall gain. Increases were widespread

7 HS Chapter 84.

8 HS Chapter 85.

across products, led by telephone and related equipment, insulated cables and wires, electric generators and rotary converters, and semiconductor devices, to account for two thirds of the gain.

With exports falling by $1.1 billion and imports expanding by $4.2 billion in 2010, the trade deficit in electrical and electronic machinery and equipment widened by $5.3 billion to nearly $27.5 billion.

Technical and Scientific Equipment[9]

Exports of technical and scientific equipment edged down 0.6 percent ($30.8 million) to $5.4 billion last year. On a regional basis, losses were widespread, but small for the most part. The largest export decline occurred with Germany, where exports were down by $15.9 million. On the other hand, exports to the United Kingdom advanced $34.3 million, while those to Hong Kong and the United States were up by $21.3 million, and $20.6 million, respectively. At the same time, imports rose by $343 million to $11.6 billion. Gains were led by Japan (up $102 million), Mexico (up $77 million) and China (up $74 million), while imports from the United States were down by $76 million.

On the export side, gains were led by liquid crystal devices and lasers (up $57.4 million), followed by miscellaneous machines (up $32.8 million), while losses were largest for direction finding compasses and navigational instruments (down $61.0 million) and surveying, meteorological, and geophysical instruments (down $50.2 million). For imports, gains were most notable for surveying, meteorological, and geophysical instruments (up $104.6 million) and automatic regulating or control instruments and their parts (up $82.2 million), but were partially offset by losses in medical/surgical instruments and appliances (down $64.4 million).

Again, the combination of falling exports and rising imports set the stage for a deterioration of the trade balance for technical and scientific equipment. Last year, the trade deficit in these products widened by $374 million, to $6.1 billion.

Agricultural and Agri food Products[10]

Canadian exports of agricultural and agri food products edged up $382 million (1.0 percent) to $39.2 billion in 2010. Exports to Mexico led the way, up $213 million, while exports to six other countries (the Netherlands, China, Korea, Pakistan, Russia and the United Arab Emirates) registered gains of between $100 million and $200 million for each. At the same time, important losses accrued to Iraq (down $263 million) and to Saudi Arabia, Morocco, India and Italy, with declines of between $100 million and $200 million each. Exports of canola oil posted the largest increase, up $644 million. Increased exports to China were responsible for over 87 percent of the gain. Soya bean exports also advanced, up $310 million from 2009, with the Netherlands accounting for nearly 70 percent of the increase. Pork exports expanded by $212 million, with important gains to the United States and Russia. By contrast, price corrections in cereals and grains contributed to declines in the value of their exports in 2010. For example, wheat prices were down 16.9 percent while barley prices were off by 13.9 percent. The net result was that the value of wheat exports tumbled $1.4 billion and barley exports declined by $115 million. Exports of frozen potatoes and other vegetable also fell in 2010, down $135 million, with two thirds of the decline attributed to fewer sales in the U.S. market.

9 HS Chapter 90.

10 HS Chapters 1 through 24.

Imports of agricultural and agri food products also rose in 2010, but by less than for exports. For the year, imports of this major commodity group were up by $134 million (0.5 percent) to $29.9 billion. For the most part, changes by suppliers were fairly small. For example, the largest increases were a $147 million rise in imports from Mexico followed by a $54 million increase from Guatemala, while the largest declines were posted by the United States (down $333 million) and New Zealand (down $33 million). Likewise, gains and losses by product were fairly small. A $178-million advance in ethyl alcohol led all imports of agricultural and agri food products, followed by coffee (up $110 million) and sugar (up $104 million), while a $105-million reduction in soya bean oilcakes posted the largest decline.

With exports rising more than imports, Canada's trade surplus in agricultural and agri food products widened by $249 million to $9.2 billion in 2010.

Minerals and Metals[11]

Rising prices for primary commodities proved a boon to trade in minerals and metals last year. Exports of minerals and metals jumped up by $14.9 billion to $63.4 billion in 2010. Gains were registered across all HS chapters that make up this category, with the exception of articles of stone, plaster, and cement (HS Chapter 68) and glass and glassware (HS Chapter 70), which posted declines of $62 million and $54 million, respectively. Advances were led by precious metals and stones, where exports were up by $7.8 billion to account for slightly over half the overall gain. Iron and steel (up $2.0 billion), aluminum (up $1.7 billion), and nickel (up $1.6 billion) also recorded strong gains. Three countries—the United States, the United Kingdom and Norway—accounted for over 80 percent of the gains, with advances of $7.2 billion, $4.1 billion, and $745 million, respectively.

At the product level, four commodities recorded increases in exports in excess of $1.0 billion in 2010. Gold led the gains, with exports up nearly $5.5 billion (65.4 percent) to $13.8 billion. Gold prices were up 25.9 percent last year and averaged US$1,224.55 per troy ounce for the year. The United Kingdom accounted for some 55 percent of the gains, followed by the United States, at 36 percent, with Switzerland and Hong Kong accounting for the remainder.

Nickel exports advanced $1.3 billion (85.5 percent) to $2.8 billion as prices were up 48.8 percent over the year. Norway (up $06 billion) and the United Kingdom (up $0.7 billion) accounted for the gains. Exports of unwrought aluminum rose by $1.2 billion (23.9 percent) to $6.0 billion, led by gains to the United States (up $0.7 billion), the Netherlands (up $0.2 billion), and Mexico (up $0.1 billion). Finally, exports of silver more than doubled last year, up $1.0 billion (137.8 percent) to $1.8 billion. All of the gains came from the United States, which absorbed over 98 percent of total Canadian exports of silver.

On the import side, imports of metals and minerals were up $9.5 billion in 2010, to $49.0 billion. As was the case for exports, the gains were widespread, with only lead and related articles (HS Chapter 78) registering a decrease last year. Precious metals and stones (up $3.5 billion), iron and steel (up $2.2 billion), articles of iron and steel (up $1.1 billion) and metal ores (up $1.0 billion) led the gains. Geographically, gains were widespread. The United States accounted for 43.4 percent of the overall increase in

11 HS Chapters 25, 26, and 68 through 83, except for Chapter 77. Chapter 77 is being held in reserve and presently does not exist in the HS system.

imports, followed by Argentina (9.7 percent), Peru and the United Kingdom (6.3 percent each), and China (6.0 percent).

Gold imports, which accounted for nearly one third of the increase, were up by $3.1 billion (67.8 percent) to $7.6 billion. Three countries—Argentina, Peru and the United Kingdom—accounted for nearly 60 percent of the overall gain in gold imports, up by $888 million, $547 million, and $377 million, respectively. Thus, gold accounted for some 96.6 percent of the overall increase in metal and mineral imports from Argentina, some 91.0 percent for these imports from Peru, and 63.0 percent of these imports from the United Kingdom.

With exports of metals and minerals increasing by more than imports in 2010, the trade surplus for this category widened by $5.4 billion to $14.4 billion.

Chemicals, Plastics, and Rubber[12]

Exports of chemicals, plastics, and rubber increased by $2.7 billion to $41.5 billion in 2010. Fertilizers posted the largest gain, up $1.4 billion, followed by plastics (up $744 million), organic chemicals (up $670 million), inorganic chemicals (up $480 million), and rubber (up $410 million). A $1.4 billion decline in pharmaceuticals put a cap on the gains. The United States accounted for over 60 percent of the gains, Brazil accounted for 20 percent and China 10 percent.

The overall gain in exports of fertilizers was due to a $1.5-billion rise in potash exports and a $98-million decline in nitrogen based fertilizers. The United States accounted for slightly over half of the increase in potash exports, with Brazil, China and Malaysia together accounting for a further 38 percent of the overall increase.

Exports of plastics were up by 7.2 percent ($744 million). Polyethylene (up $391 million) and polyvinyl chloride (up $67 million) were responsible for over 60 percent of the overall gain in plastics.

The net decline in exports of pharmaceuticals was the result of a $1.7-billion decline in dosage-form medicaments that was partially offset by a $166-million increase in exports of blood and vaccines. The United States accounted for 73.5 percent of the decline for dosage-form medicaments, with Ireland (down 12.5 percent) and Switzerland (down 10.7 percent) accounting for much of the remainder.

Imports of chemicals were up by $1.8 billion to $55.2 billion in 2010. The gains were greatest for plastics (up $1.3 billion), rubber (up $495 million), and inorganic chemicals (up $437 million), but were partially offset by a $1.0-billion decrease in imports of pharmaceuticals. The bulk of the gains came from increased imports from the United States (up $1.7 billion), China (up $352 million), and Kazakhstan (up $179 million), while notable declines were registered for Ireland (down $685 million), Switzerland (down $296 million) and Australia (down $186 million).

Canadian imports of plastics were up across most subcategories, most notably for polypropylene (up $253 million), polyethylene (up $207 million), polyacrylics (up $135 million) and polyesters (up $110 million). Imports from the United States were up $1.2 billion, to account for over 85 percent of the overall increase in plastics imports.

Imports of rubber and related products were led by increases in natural rubber (up $222 million) and synthetic rubber (up $127 million) to account for about 70 percent of the overall advance in this subcategory.

12 HS Chapters 28 through 40.

For inorganic chemicals, aluminum oxides, radioactive isotopes, and miscellaneous metal oxides accounted for about two thirds of the increase in imports last year.

The $2.7-billion increase in exports was greater than the $1.8-billion increase in imports in 2010, resulting in a $0.9-billion narrowing of Canada's trade deficit in chemicals, plastic, and rubber, to $13.7 billion last year.

Wood, Pulp, and Paper[13]

As mentioned in the previous chapter, exports of forestry products halted a five-year overall slide in exports. In 2010, exports of wood, pulp and paper increased by $2.4 billion to $27.2 billion over 2009, with gains in pulp (up $2.0 billion) and wood (up $1.3 billion) outweighing a $0.9 billion decline in paper and paper products.

Roughly half of the advance came from greater exports to China. Japan and India were next, with each accounting for a little over 10 percent of the gain, followed by Korea and the United States, at a little over 5 percent of the advance for each country.

Pulp exports were up, led by chemical wood pulp (up $1.3 billion) and wood pulp from mechanical or chemical pulp processes (up $423 million). Together, these two products accounted for over 85 percent of the overall increase in pulp exports.

For wood exports, lumber accounted for the bulk of the increase (up $1.1 billion), with particle board and logs making up most of the remainder of the gains. In the case of lumber, the United States, China and Japan together made up about 90 percent of the overall increase, accounting for 46 percent, 33 percent, and 13 percent of the gains, respectively.

Broad declines were registered for exports of various paper and paperboard products in 2010. Overall, outward shipments fell by $910 million, as exports of uncoated paper fell by $683 million, or 75 percent of the overall decline. Fewer exports of uncoated paper to the United States accounted for virtually all of the decline.

Imports of wood, pulp, and paper rose by $138 million in 2010. Wood led the advance, as imports were up by $245 million. Pulp was the only other category to post an increase, with imports ahead by $32 million. Fewer imports were reported for paper and paperboard (down $71 million), books and newsprint (down $57 million), manufactures of straw (down $9 million), and cork (down $3 million).

With exports up by $2.4 billion and imports advancing by only $138 million, the trade surplus in wood, pulp and paper widened by $2.2 billion to $14.3 billion in 2010.

Textiles, Clothing, and Leather[14]

Canadian exports of textiles, clothing and leather (TCL) reversed a seven-year slide in exports with a $347-million increase in 2010, as total TCL exports reached $4.4 billion. Increases were registered in 12 of the 19 major categories that comprise this group. Exports to the United States advanced $119 million, while those to Hong Kong and China were up by $80 million and $33 million, respectively, to account for roughly two thirds of the overall gains.

Gains in exports were led by furskins and artificial fur (up $120 million) and raw hides and skins (other than furskins) (up $95 million), followed by impregnated textiles (up $45 million) and man-made filaments, yarns, and fabrics (up $44 million), to make up the bulk of the advances.

13 HS Chapters 44 through 49.

14 HS Chapters 41 through 43, and 50 through 65.

Imports of TCL products also rose in 2010, up $322 million to $16.0 billion. As with exports, gains were widespread, with only 4 of the 19 major categories that make up this group posting declines over their 2009 levels. Gains were small across the group, with leather articles registering the largest increase, at $90 million. Similarly, losses were small, with imports of woven apparel down the most, at $113 million, followed by furskins at $11 million.

Imports from China were up the most ($177 million), followed by Cambodia (up $63 million), Poland (up $48 million) and Mexico (up $36 million). At the same time, imports from the Netherlands were down the most, at $48 million, followed by India (down $44 million).

With exports rising by $347 million and imports up by only $322 million, the trade deficit for TCL products improved marginally (down $24 million) to $11.6 billion in 2010 .

Consumer Goods and Miscellaneous Manufactured Products[15]

Exports of consumer and miscellaneous manufactured products fell by $2.2 billion in 2010. All of the decline was attributable to special provisions, in particular to reductions in unclassifiable exports (generally these are low-value export transactions and confidential commodities), repairs, and goods of U.S. origin returning to the United States without transformation. Once these special provisions are removed from consideration, exports of the remaining consumer and miscellaneous manufactured products increased by $303 million, with some 85 percent of the advance attributable to furniture and bedding, which rose by $259 million last year.

Seats, other than barber and dental seats, led the gains for furniture exports as they rose by $307 million in 2010. The principal export category was "parts for seats," which accounted for 94 percent of all exports of these products. The main destination for exports of seats was the United States, which accounted for some 90 percent of the overall shipments abroad.

Exports of toys, games, and sports equipment, the next largest subcomponent, also increased last year, up $34 million. A $107 million gain in articles for funfair, table or parlor games was mostly offset by declines in toys, sporting goods, and other entertainment articles, which fell by $47 million, $31 million, and $11 million, respectively.

Imports of consumer and miscellaneous manufactured products were up $1.1 billion last year, with just under 40 percent of the gain attributable to special provisions. After taking these special provisions into account, imports of consumer and miscellaneous manufactured products were up by $664 million. Furniture and bedding accounted for the increase, up $780 million last year; all other major subcomponents that comprise this group registered fewer imports last year than in 2009.

All subcomponents of furniture and bedding registered increased imports in 2010: seats and their parts accounted for just over half the increase, with miscellaneous furniture and lamps and lighting fixtures accounting for another 30 percent of the overall increase.

Articles for funfair, table or parlor games registered the largest decline in consumer products, down an overall $211 million in 2010. A $303-million decline in imports of these products from China was behind the decline.

15 HS Chapters 66, 67, and 91 through 99.

Other Transportation Equipment[16]

Exports of other transportation equipment fell by 10.4 percent ($1.2 billion) to $10.7 billion in 2010. Losses were registered in all three subcomponents of this group: aircraft and related equipment exports were down by $925 million, while those for railway equipment, and ships and boats, were down by $197 million and $117 million, respectively.

Declines in aircraft and related equipment mainly centred on aircraft, with exports falling by $868 million to $6.9 billion, accompanied by a $515-million decline in exports of aircraft parts. Sales of aircraft to the United States were down $1.1 billion while those to Denmark and Germany fell by $358 million and $353 million, respectively. By contrast, exports to the United Kingdom were up by $388 million. Increases in excess of $100 million were also recorded for Switzerland (up $158 million), Latvia (up $155 million), Ethiopia (up $147 million) and Angola (up $112 million).

On the import side, a $629-million decline for aircraft and related equipment was partially offset by increases of $109 million for ships and boats and $8 million for railway equipment.

The decline in imports of aircraft and related equipment was dominated by a $515-million decrease in parts for aircraft, supported by an $88 million decline for aircraft. For aircraft parts, three countries—the United Kingdom, the United States and Japan—accounted for much of the overall decline, as imports from these three countries fell by $229 million, $159 million, and $123 million, respectively.

For railway equipment, advances for locomotives, freight cars, containers, and parts were largely offset by declines for self propelled and not self propelled coaches.

Yachts and other pleasure vessels, up $75 million, and cargo vessels, up $52 million, accounted for most of the increase in imports of ships.

With exports falling more than imports, the trade surplus in other transportation equipment narrowed by $726 million to $3.3 billion in 2010.

Trade by the Provinces and Territories

Canadian merchandise trade rebounded in 2010 across most provinces and territories, with a few exceptions: exports declined for Manitoba and the Yukon; imports into the Northwest Territories were down; and both exports and imports fell for Prince Edward Island.

Ontario posted the largest recovery in trade among the provinces and territories, as the province accounted for more than one half of the overall increase in Canadian merchandise exports in 2010, and over 70 percent of the rise in merchandise imports. Overall, Ontario's exports were up $20.8 billion (19.1 percent) to $168.5 billion and imports advanced by $27.4 billion (13.2 percent) to $235.7 billion (Table 5 2). On the export side, half of the gains ($13.2 billion) came from the automotive sector, with precious metals and stones responsible for another quarter of the gains ($6.3 billion). Other sectors with important increases included iron and steel (up $1.5 billion), nickel (up $1.1 billion), and chemicals, both inorganic and organic (together up $1.1 billion). A number of sectors posted declines, the most important of which were pharmaceuticals (down $1.5 billion) and electrical machinery and equipment (down $0.9 billion). As with exports, the increase in Ontario's imports was greatest in automotive products (up $10.6 billion), which

16 HS Chapters 86, 88, and 89.

TABLE 5-2

Merchandise Trade by Province and Territory, 2010
($ millions and percent)

	2010 Exports $	Export Growth %	Export Share %	2010 Imports $	Import Growth %	Import Share
Ontario	168,459.9	14.1	42.2	235,670.9	13.2	58.4
Alberta	78,662.3	11.3	19.7	19,218.2	7.7	4.8
Quebec	59,205.1	2.0	14.8	66,951.9	5.8	16.6
British Columbia	29,320.1	14.5	7.3	37,052.2	1.1	9.2
Saskatchewan	24,195.4	10.4	6.1	8,108.9	11.9	2.0
New Brunswick	12,696.4	28.1	3.2	10,694.5	13.8	2.7
Manitoba	10,365.2	-2.5	2.6	13,773.4	5.9	3.4
Newfoundland	9,212.5	6.7	2.3	3,576.9	35.4	0.9
Nova Scotia	4,413.2	1.1	1.1	8,080.6	21.4	2.0
Northwest Territories	2,069.1	35.6	0.5	0.2	-89.8	0.0
PEI	716.9	-8.9	0.2	41.1	-0.4	0.0
Yukon Territory	98.6	-23.3	0.0	94.7	22.4	0.0
Nunavut	6.1	53.6	0.0	83.8	68.1	0.0
Total	**399,420.7**	**11.0**	**100.0**	**403,347.2**	**10.5**	**100.0**

Source: Office of the Chief Economist, DFAIT; with data from Statistics Canada.

accounted for 39 percent of the overall increase. Mechanical and electrical machinery and equipment (up $3.4 billion and $3.3 billion, respectively) accounted for a further 24 percent of the total provincial increase.

Exports from Alberta posted the next-largest increase, up $8.0 billion (11.3 percent) to $78.7 billion last year. Over 95 percent of the gains came from energy, with virtually all of the gains originating from crude oil. As reported earlier, most of the gains in this sector came about because of price increases, with volumes holding fairly steady over last year. Imports into Alberta advanced by $1.4 billion (7.7 percent) to $19.2 billion. Automotive products led the gains with an increase of $307 million, followed by articles of iron and steel, at $278 million. Conversely, aircraft and aircraft parts posted the largest decline in provincial imports last year, at $291 million.

British Columbia registered the third-largest increase in exports among the provinces and territories in 2010, with exports up $3.7 billion (14.5 percent) to $29.1 billion. The strength in international commodity markets was reflected in these gains as mineral fuels and oils (up $1.2 billion), wood (up $1.0 billion), pulp (up $0.9 billion), and mineral ores (up $0.5 billion) accounted for over 90 percent of the advance. However, in line with the general weakness in Canadian exports of paper products in 2010, provincial exports of paper fell $340 million last year. At the same time, the province posted a small increase in imports, up $394 million (1.1 percent) to $37.1 billion. Strong gains in mineral fuels (up $605 million) and mechanical and electrical machinery and equipment (up $351 million and $347 million, respectively) were largely offset by a $1.1-billion decline in automotive imports.

Higher energy prices also impacted trade in Newfoundland and Labrador, where a $311 million increase in energy exports accounted for about half of the overall $580-million gain in provincial exports. Likewise, rising prices boosted imports of energy by $709 million to fully account for three quarters of the overall $934-million increase in that province's merchandise imports.

Rising international energy prices affected the energy trade in every Canadian province. For New Brunswick, energy accounted for 80.6 percent of the increase in provincial exports and 75.1 percent of the increase in imports to that province. Energy accounted for 82.5 percent of the increase in imports to Quebec; for 30.7 percent of the increase to Manitoba; and for 80.0 percent of the increase to Nunavut. Conversely, there was little impact on the import side in Saskatchewan, although energy accounted for over 70 percent of the increase in that province's exports.

For Prince Edward Island, a $27.0-million increase in exports of fresh and prepared seafood was more than offset by a $43.4 million decline in vegetable preparations and an $18.6-million decline in mechanical machinery and appliances. As a result, exports from the province slipped 8.9 percent ($70.2 million) to $716.9 million.

Quebec benefited from a $1.4 billion increase in exports of aluminum. Precious metals and stones also boosted exports from Quebec by $694.6 million, from Nunavut by $680.2 million and from the Northwest Territories by $570.1 million. By contrast, exports of cereals posted notable losses, down $81.7 million in Manitoba, $645.1 million in Saskatchewan, and $752.8 million in Alberta. Aircraft exports from Quebec declined $1.0 billion in 2010.

A Forecast for Canadian Merchandise Exports

Introduction

The rapid growth of developing economies is changing the global economic landscape. Newly emerging economies are becoming global powers, while advanced economies are beginning to see their influence wane. While the world is already witnessing evidence of these global economic changes, as emerging markets continue to grow at faster rates than advanced economies, over the long term the shift in global economic power will become even more pronounced. These changes will affect Canada in many ways, including exerting a direct impact on Canada's future trade patterns. The countries that are currently among Canada's top export markets may not be the same in the future.

Employing a frequently-used and well-tested model of trade in conjunction with private-sector forecasts of economic growth for each of Canada's trading partners, we develop a long-term outlook for Canadian exports to 2040. The results of this forecast show that, due to size and proximity to Canada, the U.S. will continue to be, by far, Canada's most important export market. However, as a result of their strong growth, China, India, and

Brazil will all become much more important destinations for Canadian exports going forward.

The Gravity Model of Trade

The gravity model of trade is a commonly used tool to analyze trade flows between countries. The name *gravity* is given to this model because, similar to the model used in physics to explain the gravitational force between two bodies, it shows that the trade between two countries is mainly a function of the economic size of the two countries and the distance between them. The model is widely used for many reasons. First, the model has high explanatory power, meaning the model provides a good prediction of current trade flows. Second, the model generates consistent results: different gravity models applied to different countries, regions, and time periods yield similar findings. Gravity models of trade also allow for the addition of other variables that impact trade, such as common language, membership in the WTO, and bilateral free trade agreements. The following gravity model was designed to explain Canada's merchandise exports.

> Exports = F(GDP, distance, WTO membership, FTA, landlocked, language, U.S.)
>
> where,
>
> exports is Canadian merchandise exports to each individual country in 2007;
>
> GDP is real GDP of the export market;
>
> distance is the partner country's distance from Canada; and,
>
> the other terms are dummy variables for WTO membership, a free trade agreement with Canada, being landlocked, and having English or French as a spoken language. Finally a special dummy variable was introduced for the U.S., because it shares a land border, and a unique economic relationship, with Canada.

The model is based on 175 observations and has a high explanatory power, accurately predicting roughly 90 percent of Canada's current merchandise exports. This model was then shocked using a private third-party forecast for long-term GDP to give a prediction of Canada's future exports in 2040. Because GDP is the only variable allowed to change[1], it is the difference in each country's relative GDP growth that drives the forecast for Canada's trade.

GDP Forecast

IHS Global Insight (GI) provided the forecast for GDP growth to 2040 used in the model. GI predicted that by 2040 world GDP will increase to more than two and a half times its current level, from approximately US$50 trillion to US$130 trillion. Most of this growth will come from the emerging markets, especially in the emerging Asia-Pacific region. By 2040 the emerging Asia-Pacific region will constitute 32 percent of global output, up from 16 percent in 2009. Advanced economies will fall from 68 percent of output in 2009 to 48 percent in 2040. Other emerging markets in Latin America and Caribbean, Europe, the Middle East and Africa will also witness their share of global GDP

1 Variables such as WTO membership and free trade agreements are assumed to remain constant, while others such as landlocked or distance do not change over time.

Top 20 Destinations for Canadian Merchandise Exports, 2009 and 2040

Rank	Top 20 in 2009	Top 20 in 2040
1	United States	United States
2	United Kingdom	China
3	China	United Kingdom
4	Japan	India
5	Mexico	Mexico
6	Germany	Germany
7	South Korea	France
8	Netherlands	Japan
9	France	Brazil
10	India	South Korea
11	Belgium	Italy
12	Italy	Spain
13	Australia	Australia
14	Norway	Turkey
15	Brazil	Netherlands
16	Hong Kong	Russia
17	United Arab Emirates	South Africa
18	Switzerland	Poland
19	Saudi Arabia	Israel
20	Spain	Ireland

increase, rising from a combined share of 16 percent in 2009 to 20 percent in 2040. It should be noted that the GI forecast is just one of many long-term forecasts that could be used in this exercise, however, while these forecasts may differ for individual countries the broad regional trends GI identified are similar to most other long-term forecasts.

Canada's Export Markets in 2040

The results of this exercise show a scenario wherein the composition of Canada's top 20 export markets in 2040 may differ slightly from what it is today. The United States would remain Canada's largest trading partner far into the future. In 2010, the U.S. market accounted for 74.9 percent of Canadian merchandise exports, already down from 77.7 percent in 2008 prior to the global economic crisis. By 2040 the U.S. share of Canadian exports is expected to be 75.5 percent. This is not surprising; despite the rapid growth in emerging economies, the United States remains a large and wealthy market that is right next door to Canada, whereas emerging markets are a significant distance away. In short, proximity is important. Likewise, the United Kingdom, Mexico, Germany, and France would remain among Canada's top 20 export markets. Those countries that are expected to see the largest improvements in rank as export markets for Canada are those predicted to see large growth in their GDP: China, India, Brazil and Spain. Strong forecast GDP growth suggests that Turkey, Russia, South Africa, Poland, Israel and Ireland will all be included in Canada's top 20 list by 2040. By contrast,

due to their relatively slower growth outlook, Belgium, Norway, Hong Kong, the United Arab Emirates, Switzerland and Saudi Arabia would no longer be among Canada's top 20 merchandise export markets in 2040.

Overview of Canada's Investment Performance

The ebb and flow of regional economic prospects is reflected by the movements of capital around the world. On the global scale, investment is increasingly being directed toward Asia, Latin America, and Africa. These are precisely the areas where Canadian investors have been concentrating their efforts, as direct investment flows to the non-OECD rest of the world increased and stocks of direct investment with these areas were on the rise. At the same time, ongoing problems and weak outlook for many European nations has reduced the attractiveness of that region and Canadian investors have responded by divesting from that area.

The prudent macroeconomic and fiscal stewardship in Canada going into and coming out of the recession is a positive in the eyes of investors. That, coupled with Canada's relatively strong economic outlook among the developed economies, has made Canada an attractive place to invest. Accordingly, investment into Canada was on the rise in 2010, led by North American and Asian investors.

Global Foreign Direct Investment Flows

Global inflows of foreign direct investment (FDI) were stagnant in 2010, rising marginally from US$1,114 billion in 2009 to almost US$1,122 billion in 2010, according to the United Nations Conference on Trade and Development (UNCTAD) (Table 6-1).[1] A strong rebound in FDI flows to developing Asia and Latin America offset declines in inflows to developed countries.

The source of funding also shifted as increased profits of foreign affiliates, especially in developing countries, boosted reinvested earnings, while the uncertainties surrounding global currency markets and European sovereign debt resulted in negative intracompany loans and lower equity investments. Moreover, cross-border mergers and acquisitions (M&As) increased by 37 percent in 2010, while international greenfield projects fell both in number and in value.

The year was marked by a drop in flows during the second quarter, a rebound in the third quarter, and a flat fourth quarter. Moreover, the pattern of investment inflows was uneven among regions. In particular, FDI inflows to developed countries contracted further in 2010, while those to developing and transition economies recovered, surpassing the 50-percent mark of global FDI flows for the first time.

FDI inflows to the developed countries fell 6.9 percent to US$526.6 billion. This was in spite of a 43-percent surge in FDI in the United States. At US$56.2 billion, this was the single biggest increase in FDI among the major economic regions.

FDI to European nations fell most sharply, down 19.9 percent (US$72.1 billion) to the EU and 21.9 percent (US$83.0 billion) to the continent as a whole. The Netherlands and Luxembourg saw significant

1 Global FDI inflows data taken from UNCTAD's *Global Investment Trends Monitor No. 5*, January 17, 2011.

TABLE 6-1

Global FDI flows by Region and Selected Countries
(US$ billions and %)

	FDI inflows				FDI outflows			
	2009	2010[a]	Change (%)	Share (%)	2009	2010[a]	Change (%)	Share (%)
World	**1,114.1**	**1,122.0**	**0.7**	**100.0**	**1,188.7**	**1,346.2**	**13.2**	**100.0**
Developed economies	**565.9**	**526.6**	**-6.9**	**46.9**	**882.3**	**969.5**	**9.9**	**72.0**
Europe	378.4	295.4	-21.9	26.3	503.5	516.7	2.6	38.4
European Union	361.9	289.8	-19.9	25.8	433.6	450.0	3.8	33.4
Austria	7.1	12.6	78.8	1.1	6.5	10.8	67.4	0.8
Belgium	33.8	50.5	49.5	4.5	-17.0	31.1	-	2.3
France	59.6	57.4	-3.7	5.1	147.2	122.9	-16.5	9.1
Germany	35.6	34.4	-3.5	3.1	78.2	104.9	34.1	7.8
Ireland	25.0	8.4	-66.3	0.7	23.9	16.2	-32.2	1.2
Italy	30.5	19.7	-35.5	1.8	39.2	23.1	-41.0	1.7
Luxembourg	27.3	12.1	-55.7	1.1	18.7	18.3	-2.3	1.4
Netherlands	26.9	-24.7	-	-2.2	26.9	31.9	18.5	2.4
Poland	11.4	10.4	-8.9	0.9	5.2	4.7	-9.9	0.3
Spain	15.0	15.7	4.3	1.4	9.7	22.3	128.7	1.7
Sweden	10.9	12.1	11.6	1.1	25.8	30.1	16.6	2.2
United Kingdom	45.7	46.2	1.2	4.1	44.4	24.8	-44.1	1.8
United States	129.9	186.1	43.3	16.6	248.1	325.5	31.2	24.2
Japan	11.9	2.0	-83.4	0.2	74.7	56.7	-24.1	4.2
Canada	18.7	n.a.	-	-	38.8	36.9	-5.0	2.7
Developing economies	**478.3**	**524.8**	**9.7**	**46.8**	**257.6**	**316.1**	**22.7**	**23.5**
Africa	58.6	50.1	-14.4	4.5	4.5	4.0	-11.3	0.3
Egypt	6.7	6.8	1.7	0.6	0.6	1.2	105.8	0.1
South Africa	5.7	1.3	-77.9	0.1	1.2	0.5	-60.9	0.0
Latin America and the Caribbean	116.6	141.1	21.1	12.6	47.6	83.9	76.4	6.2
Brazil	25.9	30.2	16.3	2.7	-10.1	11.5	-	0.9
Chile	12.7	18.2	43.4	1.6	8.1	8.7	8.5	0.6
Colombia	7.2	8.7	20.8	0.8	3.1	6.5	110.6	0.5
Mexico	12.5	19.1	52.9	1.7	7.6	12.7	67.1	0.9
Asia and Oceania	303.2	333.6	10.0	29.7	205.5	228.1	11.0	16.9
West Asia	68.3	57.2	-16.2	5.1	19.0	-0.2	-	0.0
Turkey	7.6	7.0	-8.0	0.6	1.6	1.8	14.6	0.1
South, East and South-East Asia	233.0	274.6	17.8	24.5	186.4	228.2	22.4	17.0
China	95.0	101.0	6.3	9.0	56.5	68.0	20.3	5.1
Hong Kong, China	48.4	62.6	29.2	5.6	64.0	76.1	18.9	5.7
India	34.6	23.7	-31.5	2.1	15.9	13.2	-17.3	1.0
Malaysia	1.4	7.0	409.7	0.6	8.0	13.2	64.7	1.0
Singapore	16.8	37.4	122.7	3.3	18.5	19.7	6.9	1.5
Thailand	5.9	6.8	14.2	0.6	3.8	2.7	-29.2	0.2
South-East Europe and the CIS	**69.9**	**70.5**	**0.8**	**6.3**	**48.7**	**60.6**	**24.3**	**4.5**
Russia	38.7	39.7	2.5	3.5	43.7	51.7	18.4	3.8

Source: UNCTAD.

a Preliminary estimates by UNCTAD.

declines: the Netherlands experienced negative FDI flows (or divestment) in the amount of US$24.7 billion after having attracted US$26.9 billion in investment in 2009, while investment flows to Luxembourg more than halved over the year, falling US$15.2 billion. In addition, uncertainties about sovereign debts also caused declines in FDI, with the largest impacts seen in Ireland and Italy (down US$16.6 billion and US$10.8 billion, respectively). Elsewhere, FDI in France and Germany, the region's major economies, fell only slightly (down US$2.2 billion and US$1.2 billion, respectively).

FDI inflows to Japan plunged 83.4 percent (US$9.9 billion) due to a number of large divestments (e.g. Liberty Group, Ford).

In contrast to the developed economies, FDI flows to developing economies rose 9.7 percent to US$524.8 billion in 2010, due to a relatively fast economic recovery and increasing South–South flows. The value of cross-border M&As—an increasingly important mode of FDI entry into developing countries—more than doubled. Notwithstanding this general increase, significant regional disparities were observed as Latin America and South, East, and South-East Asia experienced strong growth in FDI inflows, while West Asia and Africa saw declines.

FDI inflows to South, East, and South-East Asia rebounded strongly in 2010. After a 17.5-percent decline in 2009, investment into the region rose by 17.8 percent in 2010, to US$274.6 billion. Booming inflows in Singapore, Hong Kong, China, Indonesia, Malaysia and Vietnam were behind the increase, while India registered a notable decline (31.5 percent).

A surge in cross-border M&As was behind the significant increase in FDI flows to Latin America and the Caribbean in 2010. Overall, FDI into the region reached US$141.1 billion. Compared with negative values in 2009, M&As reached US$32.0 billion in 2010, and nearly reached the peak values registered in the region during the 1990s. By sector, the targets of these deals were mainly in the oil and gas, metal mining, and food and beverages industries. Brazil (US$30.2 billion) was the largest recipient country for the fourth consecutive year. Mexico (US$19.1 billion) and Chile (US$18.2 billion) also experienced significant inflows last year.

After peaking in 2008, inflows to Africa have fallen for the past two years. In 2010, FDI inflows to the region were down by 14.4 percent, to US$50.1 billion in 2010. Subregionally, inflows to North Africa appear to have stabilized, while in sub-Saharan Africa, inflows to South Africa declined to roughly a quarter of their 2009 level. Overall, increased FDI from developing Asia and Latin America to Africa was insufficient to offset the decline of FDI from developed countries, which still account for the largest share of inward FDI flows to many African countries.

FDI flows to West Asia, at US$57.2 billion, were 16.2 percent lower than they were in 2009. The picture varied by country, with inflows to the United Arab Emirates rebounding modestly from relatively low values in 2009, to little change in performance for Lebanon, to a drop in Saudi Arabia.

The transition economies of South-East Europe and the Commonwealth of Independent States (CIS) registered a marginal increase of 0.8 percent in FDI inflows in 2010, to US$70.5 billion, after falling more than 40 percent in the previous year. FDI flows to South-East Europe were down by nearly a third due to sluggish investments from European Union countries (traditionally the dominant source of FDI in the subregion). In contrast, investment in the CIS economies rose by some 5 percent, due to stronger commodity prices and a faster economic recovery.

Turning from a source-based analysis to a destination-based analysis, global FDI outflows rose from US$1,189 billion in 2009 to US$1,346 billion in 2010, an increase of 13.2 percent according to the most recent UNCTAD statistics.[2] Notwithstanding the increase, outflows remain 40.6 percent below their peak level, set in 2007.

> The statistical anomaly in which global outflows do not equal global inflows is the result of various reasons, including different methods of data collection between host and home countries, different data coverage of FDI flows (i.e. treatment of reinvested earnings), and different times used for recording FDI transactions. In addition, the fact that outflows exceed inflows suggests that part of flows recorded as outflows in home countries may not be necessarily recorded as inflows of FDI in host countries.
>
> UNCTAD: *Global Investment Trends Monitor No. 6*, April 27, 2011.

According to UNCTAD, the rise of FDI outflows in 2010 reflected an improvement of corporate profits and the increasing internationalization of multinational corporations. The financial crisis has caused firms to rationalize their corporate structure and increase efficiencies wherever possible, often by relocating business functions to cost-advantageous locations.

For the developed countries, FDI outflows for 2010 rose to US$969.5 billion, up 9.9 percent over the previous year. This was, however, only half of the peak level recorded in 2007. Reflecting the divergent economic situations in the major economies of the developed world, trends in FDI outflows differed markedly across countries and subregions, and also in their three components—equity investment, reinvested earnings, and other capital flows (mainly intracompany loans).

Outflows from the United States were up US$77.4 billion (31.2 percent) to US$325.5 billion. Increased cross-border M&A deals by U.S. firms, which more than tripled in 2010, accounted for about 80 percent of the overall increase.

Outflows from Europe were also up, but only slightly (2.6 percent), reaching US$516.7 billion in 2010. However, in contrast to their U.S. counterparts, cross-border M&A deals carried out by European companies fell 67.1 percent last year. In some European countries, outflows were mostly driven by intracompany financing to affiliates located abroad (for example, for Germany and Switzerland). For the United Kingdom, traditionally one of the largest investor countries, net outflows tumbled 44.1 percent to US$24.8 billion—a level last seen in 1993—as parent firms withdrew or were paid back loans from their affiliates in order to strengthen their balance sheets at home.

Similarly, for Japan, outward FDI fell by 24.1 percent to US$56.7 billion, as declining intracompany loans and reinvested earnings outweighed a 77.8-percent increase in cross-border M&As.

For the developing countries, FDI outflows were up 22.7 percent over 2009 to reach US$316.1 billion last year. However, there was an uneven pattern among regions, with Latin America and the Caribbean and developing Asia posting strong increases while outward flows from Africa and West Asia declined.

Outward FDI from South, East, and South-East Asia rose by 22.4 percent in 2010, led by Hong Kong, China, Korea, Taiwan and Malaysia. Companies from China continued on a buying spree, actively acquiring overseas assets in a wide range of industries

2 Global FDI outflows data taken from UNCTAD's *Global Investment Trends Monitor No. 6*, April 27, 2011.

and countries, as outward flows rose by US$11.5 billion to a record US$68.0 billion. Cross-border M&A purchases by companies from the region as a whole surged to US$93.5 billion in 2010, with China (US$29.2 billion) and India (US$26.4 billion) accounting for nearly 60 percent of the region's M&A activity.

For Latin America and the Caribbean, outward FDI flows were up sharply in 2010, rising 76.4 percent (US$36.3 billion) to US$83.9 billion. The advances were underpinned by a US$12.0-billion hike in cross-border M&A activity. The region's multinational firms have increased their acquisitions abroad, particularly in developed countries where investment opportunities have arisen in the aftermath of the crisis. For example, according to UNCTAD, Brazilian companies such as Vale, Gerdau, Camargo Correa, Votorantim, Petrobras and Braskem have undertaken acquisitions in the iron ore, steel, food, cement, chemical, and petroleum refining industries in developed countries. At the same time, Mexican firms such as Grupo Televisa, Sigma Alimentos, Metalsa and Inmobiliaria Carso also purchased firms in the United States in industries such as media, food, motor vehicles and services.

FDI flows from Africa fell for the third consecutive year, slipping to US$4.0 billion last year from US$4.5 billion in 2009. Outflows fell significantly from the two major outward investors—Libya and South Africa—which together accounted for more than half of the regional total in 2009. Outflows from Egypt were up strongly in 2010, more than doubling to US$1.2 billion.

Firms in West Asia withdrew capital in 2010. This was due to a combination of divestment and falling investment values. According to UNCTAD, the largest divestment deals included the US$10.7-billion sale by Zain Group (Kuwait) of its African operations to Bharti Airtel (India), and the $2.2-billion sale by International Petroleum Investment Company (Abu Dhabi's sovereign wealth fund) of a 70-percent stake in Hyundai Oilbank in the Republic of Korea. At the same time, West Asian greenfield projects abroad—mainly in other developing countries—dropped in value as government-controlled entities—West Asia's main outward investors—redirected funds homeward to support their home country.

In 2010, FDI flows from the transition economies of South-East Europe and the Commonwealth of Independent States (CIS) grew by 24.3 percent, reaching a record US$60.6 billion. As in past years, most of the outward FDI projects were carried out by Russian companies, followed by those from Kazakhstan.

As developed countries are still confronting the effects of the crisis, many multinationals in developing and transition economies are investing in other emerging markets, where the recovery is strong and the economic outlook better. For 2010, UNCTAD estimated that 70 percent of investment by developing and transition economies was directed toward other developing and transition economies, compared with a 50-percent share by investors from developed countries.

Canadian Direct Investment Performance

Inward Investment

Inflows

After more than halving in each of the two previous years, FDI inflows into Canada picked up, rising 5.4 percent ($1.2 billion) to $22.5 billion in 2010 (Table 6-2). However, this level is less than one fifth of the record $123.1 billion posted in 2007. The bulk of the inflows came in the form of long-term inflows to Canadian-based subsidiaries of

TABLE 6-2

FDI flows into Canada by Region
($ millions and %)

	2009	2010	CHANGE	GROWTH (%)
World	21,327	22,477	1,150	5.4
US	10,574	16,078	5,504	52.1
EU	3,176	1,320	-1,856	-58.5
Japan	442	1,891	1,449	327.6
Oth OECD	2,894	-3,352	-6,246	-215.9
ROW	4,242	6,542	2,300	54.3

Source: Statistics Canada.

foreign firms, as only some 31 percent of the inflows were directed to net purchases of existing interests in Canada.

The advance was due to a sharp rise in investment levels from the United States, the non-OECD rest of the world (ROW), and Japan. At the same time, EU levels tumbled and there was a divestment of funds by other OECD investors. Inflows from the United States, at $16.1 billion, accounted for 71.5 percent of the total inflows. Next in terms of investor importance was the ROW, at $6.5 billion (29.1 percent of the total), followed by Japan, at $1.9 billion (8.4 percent of the total). Investment from the EU into Canada fell to $1.3 billion last year, or 5.9 percent of the total. The overall EU performance can be explained by a $3.8-billion investment from other EU investors accompanied by a $2.5-billion divestment by U.K. investors. It was the second consecutive year that U.K. outward investors have redirected funds homeward, although last year's amount was somewhat less than the $4.1-billion divestment registered in 2009.

By sector, 44.9 percent of the inflows were directed to energy and metallic minerals, followed by finance and insurance (20.0 percent), services and retailing (12.7 percent), machinery and transportation equipment (4.1 percent), and wood and paper (3.0 percent). The remaining 15.2 percent went to all other industries.

Inward FDI Stock

With the increase in the flow of investment into Canada in 2010, the stock, or cumulative holdings, of direct investment also rose for the year. Foreign direct investment in Canada reached $561.6 billion in 2010, up $14.0 billion (2.6 percent) over 2009 levels (Table 6-3). This represented 34.6 percent of GDP. The gains came mostly from North American investors, as investment from this region was up by $14.5 billion. Investors from Asia and Oceania increased their holdings by $1.7 billion while those from South and Central America and the Caribbean were up by $0.1 billion. Holdings by European and African investors dipped by $1.8 billion and $0.5 billion, respectively.

Investment from North America is dominated by the United States, which increased its FDI holdings in Canada by 5.1 percent to $306.1 billion in 2010, up $14.8 billion over 2009. Partially offsetting the advance were declines from Bermuda and Barbados. With the United States accounting for all of the gains in FDI in Canada, the U.S. share rose to 54.5 percent of all FDI in Canada. This was the first time the United States increased its share since 2004. Notwithstanding the increase, the U.S. share has been trending down since 1999 when the United States accounted for 69.7 percent of all FDI in Canada.

TABLE 6-3

Stock of Foreign Direct Investment into Canada by Country and Region
($ millions and %)

	2009	2010	CHANGE	GROWTH (%)
All countries	**547,578**	**561,616**	**14,038.0**	**2.6**
North America	**296,376**	**310,899**	**14,523.0**	**4.9**
Barbados	639	177	-462.0	-72.3
Bermuda	2,093	0	-2,093.0	-100.0
Mexico	202	197	-5.0	-2.5
United States	291,369	306,141	14,772.0	5.1
South America	**14,805**	**14,907**	**102.0**	**0.7**
Brazil	13,355	13,494	139.0	1.0
Europe	**173,188**	**171,436**	**-1,752.0**	**-1.0**
Belgium	3,449	3,617	168.0	4.9
Finland	1,220	1,135	-85.0	-7.0
France	17,707	19,032	1,325.0	7.5
Germany	9,751	10,184	433.0	4.4
Ireland	1,565	1,531	-34.0	-2.2
Italy	1,013	1,124	111.0	11.0
Luxembourg	10,156	11,357	1,201.0	11.8
Netherlands	52,223	51,752	-471.0	-0.9
Russia	564	1,036	472.0	83.7
Switzerland	22,907	20,355	-2,552.0	-11.1
United Kingdom	44,758	42,178	-2,580.0	-5.8
Africa	**2,084**	**1,547**	**-537.0**	**-25.8**
South Africa	744	652	-92.0	-12.4
Asia/Oceania	**61,125**	**62,827**	**1,702.0**	**2.8**
Australia	4,574	2,632	-1,942.0	-42.5
India	6,523	6,554	31.0	0.5
Japan	14,407	15,995	1,588.0	11.0
China	12,855	14,056	1,201.0	9.3
South Korea	2,188	2,771	583.0	26.6
United Arab Emirates	3,752	3,824	72.0	1.9

Data: Statistics Canada.

Countries from the Asia and Oceania region increased their holdings of FDI in Canada by $1.7 billion (2.8 percent) to $62.8 billion in 2010. Japan led the advances with a gain of $1.6 billion, followed by China (up $1.2 billion), Korea (up $0.6 billion), and the United Arab Emirates (up $0.1 billion). However, Australian companies reduced their holdings by $1.9 billion (42.5 percent) to limit the overall gains from the region.

Investment from South and Central America and the Caribbean was up $102 million to $14.9 billion in 2010. Brazil (up $139 million) and Argentina (up $39 million) posted notable gains, while losses elsewhere lowered the overall gain.

FDI into Canada from Europe fell by $1.8 billion (1.0 percent) in 2010, to $171.4 billion. Notwithstanding the overall loss, some countries registered notable gains

TABLE 6-4

Stock of Foreign Direct Investment into Canada by Major Sector
($ millions and %)

	2009	2010	CHANGE	GROWTH (%)
Total, all industries	**547,578**	**561,616**	**14,038**	**2.6**
Agric.,forestry, fishing & hunting	960	1,292	332	34.6
Mining and oil and gas extraction	87,354	92,205	4,851	5.6
Utilities	5,220	5,954	734	14.1
Construction	4,948	5,554	606	12.2
Manufacturing	198,337	195,418	-2,919	-1.5
Wholesale trade	34,274	34,711	437	1.3
Retail trade	14,894	16,287	1,393	9.4
Transportation and warehousing	5,067	5,113	46	0.9
Information & cultural industries	10,564	12,730	2,166	20.5
Finance and insurance	76,839	82,213	5,374	7.0
Real estate & rental and leasing	5,282	5,350	68	1.3
Prof.l, scientific and tech. services	12,023	10,933	-1,090	-9.1
Mgm't of companies & enterprises	72,600	73,847	1,247	1.7
Accommodation & food services	2,915	2,967	52	1.8
All other industries	16,301	17,042	741	4.5

Source: Statistics Canada.

including: France (up $1.3 billion), Luxembourg (up $1.2 billion), Russia (up $0.5 billion) and Germany (up $0.4 billion). A number of other countries registered smaller increases as well. However, declines were posted by a few countries, most notably by the United Kingdom (down $2.6 billion), Switzerland (also down $2.6 billion) and the Netherlands (down $0.5 billion).

The holdings of African investors were $537 million lower in 2010 (down 25.8 percent) than in 2009, with FDI from South Africa alone down $92 million.

Approximately three quarters of the overall increase in FDI into Canada in 2010 went to services-producing industries, and one quarter to goods-producing industries (Table 6-4). Within services, the sector that has attracted the most inward FDI over the years is finance and insurance, and this was again the case in 2010. FDI into this sector rose 7.0 percent, to $82.2 billion, an increase of $5.4 billion over 2009. Information and culture was the next most attractive sector to foreign investors in 2010, as the stock of investment in this sector jumped 20.5 percent ($2.2 billion). Retail trade was up $1.4 billion (9.4 percent) and management of companies and enterprises was up $1.2 billion (1.7 percent), while professional, scientific, and technical services posted the only decline on the services side, at $1.1 billion (down 9.1 percent).

On the goods side, all sectors posted increases in FDI, with the exception of manufacturing. Advances were led by a $4.9-billion increase in investment in mining and oil and gas extraction—particularly oil and gas extraction, which attracted three quarters of the overall sectoral investment. Investment in utilities was up $734 million over the year, followed by construction (up $606 million), and agriculture, forestry, fishing and hunting (up $332 million). Overall FDI in manufacturing fell by $2.9 billion, as large declines in primary metal manufacturing (down $3.5 billion), chemicals (down $1.8 billion), and transportation equipment

TABLE 6-5

FDI outflows from Canada by Region
($ millions and %)

	2009	2010	CHANGE	GROWTH (%)
World	44,390	38,017	-6,373	-14.4
US	13,897	14,728	831	6.0
EU	12,842	-8,288	-21,130	-164.5
Japan	17	-22	-39	-237.5
Oth OECD	8,042	11,435	3,393	42.2
ROW	9,592	20,164	10,572	110.2

Source: Statistics Canada.

(down $0.9 billion) outweighed small gains in many other manufacturing industries, which were led by petroleum and coal products (up $1.5 billion) and plastic and rubber products (up $0.6 billion).

Outward Investment

Outflows

Canadian direct investment outflows fell for the second consecutive year, down 14.4 percent ($6.4 billion) to $38.0 billion in 2010, after falling by 48.5 percent the year before (Table 6-5). A sharp decline in investment flows to the EU was responsible for the decline. After having invested $12.8 billion in the EU in 2009, there was an $8.3 billion divestment in the region in 2010. This generated a $21.1-billion swing in outward flows last year over 2009 levels. Similarly, there was a $22-million divestment with Japan last year, following $16 million in investment a year earlier. Partially offsetting these declines were increases to the ROW (up $10.6 billion), to the other OECD countries (up $3.4 billion), and to the United States (up $831 million).

The bulk of the outward flows were invested in the finance and insurance sector, which accounted for 73.6 percent of the total outflows. Energy and metallic minerals was next in importance (at 20.8 percent), followed by wood and paper (7.6 percent) and services and retailing (7.4 percent). In addition, there was divestment in machinery and transportation equipment and in all other industries equal to 0.2 percent and 9.2 percent of the total, respectively.

Looked at another way, some $23.4 billion of the funds were directed toward net acquisitions of direct investment interests while the remaining $14.7 billion comprised other flows of funds to existing affiliates, such as net long-term loans and re-invested earnings.

Outward FDI Stock

Changes to the stock of Canadian direct investment abroad (CDIA) are primarily affected by two factors. The first factor is, of course, the flow of outward direct investment over the year. If all other factors are held steady, one would expect the stock of outward FDI to increase with net additions to outward flows and to decline with net subtractions to outward flows. The second factor is the change in the exchange rate. This affects CDIA because the value of direct investment abroad is usually denominated in the foreign currency where the investment is held. The exchange rate comes into play when those foreign-denominated values are converted to Canadian dollars to calculate the stock of foreign investment abroad. When the value of the Canadian dollar is appreciating, the restatement of the value of

direct investment abroad in Canadian dollars decreases the recorded value. The opposite is true when the dollar depreciates.[3]

The Canadian dollar appreciated against most foreign currencies in 2010, in particular, the U.S. dollar, the euro, and the pound sterling. Thus, despite the net acquisitions and the strong investment in existing affiliates over 2010, the valuation effect on foreign currency-denominated holdings lowered the value of direct investment holdings abroad by $35.5 billion, contributing to the overall decrease in the value of CDIA.

Canadian direct investment abroad declined in value for a second consecutive year in 2010, nudging down 0.7 percent to $616.7 billion, a decline of $4.5 billion from 2009 (Table 6-6). Losses were concentrated in Europe (down $19.1 billion). Partially offsetting those losses were gains in Asia and Oceania (up $11.8 billion), South and Central America and the Caribbean (up $2.8 billion) and Africa (up $0.4 billion). A small decline ($0.4 billion) was also posted for North America.

At 59.7 percent of the total, North America was the most important destination for CDIA, with assets valued at $386.0 billion. Notwithstanding the 5.7-percent appreciation of the Canadian dollar against the U.S. dollar, the value of CDIA to the region fell by only 0.1 percent ($377 million). Declines were led by the United States, where holdings were down by $2.5 billion (1.0 percent). Smaller losses were also registered for Bermuda and the Bahamas, two countries whose currency is pegged one-to-one against the U.S. dollar, and Mexico, whose currency also depreciated against the Canadian dollar in 2010. Partially offsetting the losses were gains to the Cayman Islands, the British Virgin Islands, and Barbados of $1.0 billion, $0.7 billion, and $0.5 billion, respectively.

The bulk of the losses in CDIA originated from Europe. Similar to the North American situation, the appreciation of the Canadian dollar against the principal currency of the region—the euro—led to widespread declines in the reported value of CDIA. There are no data for 5 of the 17 euro zone countries, and only 3 of the remaining 12 (Luxembourg, Italy and Spain) registered increases in their CDIA values in 2010. Losses were notable for France (down $6.9 billion), the Netherlands (down $5.1 billion), Ireland (down $1.5 billion) and Germany (down $1.0 billion). Elsewhere across the continent, CDIA was down by $3.2 billion in the United Kingdom and by $1.2 billion in Hungary. Overall, CDIA in Europe fell 10.9 percent to $157.1 billion last year.

Fast-growing Asia is a region of keen interest to Canadian investors. The value of CDIA in Asia and Oceania jumped 27.1 percent to $55.2 billion in 2010. About two thirds of the increase was with Australia, where holdings increased by 57.9 percent ($7.7 billion) to $21.0 billion. Other important gains were registered for China (up $1.3 billion), Japan (up $0.7 billion), Mongolia (up $0.6 billion), Singapore (up $0.5 billion) and Indonesia (up $0.4 billion). Korea posted the largest decline, at $0.4 billion.

CDIA in South and Central America and the Caribbean increased 9.3 percent, to $33.2 billion in 2010. Most of the gains were concentrated in Brazil (up $1.2 billion), Chile (up $1.1 billion) and Argentina (up $0.5 billion), with smaller gains in Peru and Colombia. At the same time, Canadian investment in Venezuela was reduced by 60.6 percent ($0.6 billion) during the year.

3 Note: this currency effect only applies to foreign direct investment held abroad since foreign direct investment in Canada is directly recorded in Canadian dollars and the fluctuation of the Canadian dollar has no impact on the recorded value.

TABLE 6-6

Stock of Canadian Direct Investment Abroad by Country and Region
($ millions and %)

	2009	2010	CHANGE	GROWTH (%)
All countries	**621,181**	**616,689**	**-4,492**	**-0.7**
North America	**368,403**	**368,026**	**-377**	**-0.1**
Bahamas	14,948	14,864	-84	-0.6
Barbados	51,163	51,709	546	1.1
Bermuda	14,031	13,828	-203	-1.4
British Virgin Islands	2,939	3,678	739	25.1
Mexico	4,575	4,551	-24	-0.5
United States	252,387	249,910	-2,477	-1.0
South America	**30,394**	**33,214**	**2,820**	**9.3**
Argentina	1,965	2,472	507	25.8
Brazil	8,515	9,675	1,160	13.6
Chile	12,230	13,341	1,111	9.1
Colombia	575	824	249	43.3
Peru	3,890	4,183	293	7.5
Venezuela	1,012	399	-613	-60.6
Europe	**176,193**	**157,076**	**-19,117**	**-10.9**
Belgium	1,258	1,097	-161	-12.8
France	15,688	8,758	-6,930	-44.2
Germany	9,717	8,741	-976	-10.0
Hungary	13,260	12,058	-1,202	-9.1
Ireland	22,962	21,454	-1,508	-6.6
Italy	711	1,008	297	41.8
Luxembourg	6,125	7,264	1,139	18.6
Netherlands	11,184	6,127	-5,057	-45.2
Russia	501	560	59	11.8
Switzerland	6,669	6,844	175	2.6
United Kingdom	73,402	70,160	-3,242	-4.4
Africa	**2,629**	**3,047**	**418**	**15.9**
Congo, Dem.Rep.	0	123	123	-
Asia/Oceania	**43,470**	**55,240**	**11,770**	**27.1**
Australia	13,328	21,045	7,717	57.9
Hong Kong	6,112	6,285	173	2.8
India	617	492	-125	-20.3
Indonesia	2,390	2,810	420	17.6
Japan	6,603	7,324	721	10.9
Kazakhstan	2,372	2,304	-68	-2.9
Mogolia	617	1,214	597	96.8
China	3,471	4,789	1,318	38.0
Singapore	2,877	3,358	481	16.7
South Korea	784	404	-380	-48.5

Source: Statistics Canada.

TABLE 6-7

Stock of Canadian Direct Investment Abroad by Major Sector
($ millions and %)

	2009	2010	CHANGE	GROWTH (%)
Total, all industries	**621,181**	**616,689**	**-4,492**	**-0.7**
Agric., forestry, fishing & hunting	2,760	2,906	146	5.3
Mining and oil and gas extraction	100,022	105,535	5,513	5.5
Utilities	13,767	11,742	-2,025	-14.7
Construction	1,665	1,535	-130	-7.8
Manufacturing	102,714	86,660	-16,054	-15.6
Wholesale trade	5,051	3,980	-1,071	-21.2
Retail trade	6,092	7,639	1,547	25.4
Transportation and warehousing	22,150	24,828	2,678	12.1
Information & cultural industries	24,204	23,113	-1,091	-4.5
Finance and insurance	229,760	242,272	12,512	5.4
Real estate & rental and leasing	9,883	10,816	933	9.4
Prof.l, scientific and tech. services	8,028	8,414	386	4.8
Mgm't of companies & enterprises	90,025	80,582	-9,443	-10.5
Accommodation & food services	2,617	2,213	-404	-15.4
All other industries	2,444	4,450	2,006	82.1

Source: Statistics Canada.

Investment in Africa rose by 15.9 percent to $3.0 billion in 2010, led by a $123-million gain in the Democratic Republic of the Congo.

An $8.1-billion increase in investment in services-producing industries was completely offset by a $12.6-billion reduction in investment in goods-producing industries, to account for the overall $4.5-billion decline in CDIA in 2010 (Table 6-7). On the services side, investors increased their holdings in finance and insurance by $12.5 billion to $242.3 billion. Investments in transportation and warehousing were up also by $2.7 billion, while those in miscellaneous services industries, and retail trade were up by $2.0 billion and $1.5 billion, respectively. Holdings in management of companies and enterprises services were lower by $9.4 billion, to $80.6 billion, while those in information and cultural industries, and in wholesale trade were reduced by $1.1 billion each. Overall, two thirds of all CDIA was placed in services-producing industries at the end of 2010.

Investment holdings in goods-producing industries fell by 5.7 percent to $208.4 billion last year. Advances in mining and oil and gas extraction and agriculture, forestry, fishing and hunting (up $5.5 billion and $0.1 billion, respectively) were not enough to displace losses in construction, utilities, and manufacturing. CDIA in the construction sector declined by $0.1 billion in 2010 while that in utilities was lower by $2.0 billion; however, investment in manufacturing accounted for most of the losses, down by $16.1 billion. Within manufacturing, CDIA was down in 12 of the 21 major manufacturing sectors and unchanged in 2 others. Declines were most prominent for primary metals (down $4.2 billion), chemicals (down $3.6 billion), non-metallic minerals (down $2.1 billion), printing (down $1.8 billion), plastics and rubber (down $1.5 billion), fabricated metal products

(down $1.5 billion), and computer and electronic products (down $1.5 billion). Partially offsetting the losses were gains to transportation equipment (up $1.0 billion), paper manufacturing (up $0.6 billion) and wood products (up $0.6 billion).

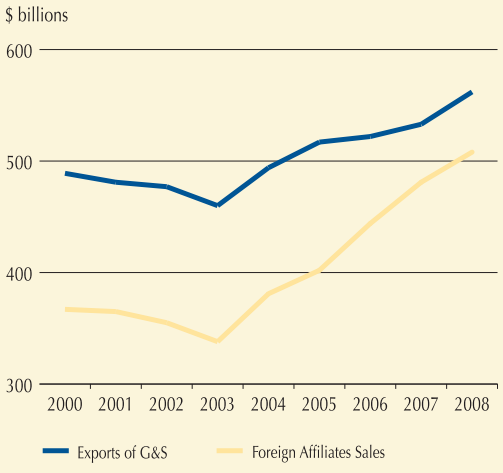
The 2008 Performance of Canadian Affiliates Abroad

Canadian goods and services can be sold abroad in two ways. First, they can be sold directly as an export from a Canadian company. Alternatively, they can be sold indirectly via a foreign-located subsidiary of a Canadian company. Sales by majority-owned foreign affiliates of Canadian businesses[1] are an increasingly important avenue by which Canadian companies engage in international commerce, having risen from the equivalent of three quarters of the value of Canadian exports of goods and services in 2000 to slightly over 90 percent in 2008, the latest year for which data are available.

Sales of goods and services by foreign affiliates of Canadian businesses rose to $507.8 billion in 2008, up 5.5 percent ($26.4 billion) over 2007 (Figure 1). This was the same rate of expansion as for Canadian exports of goods and services in 2008, and the fifth consecutive year of increase.

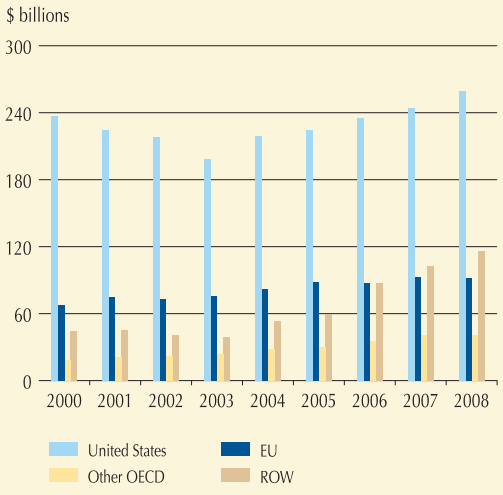
Gains were led by increased sales in the United States and the non-OECD rest of the world (ROW). For the United States, Canadian subsidiaries reported increased sales of $15.4 billion (6.3 percent) to $259.3 billion, or roughly the equivalent of 63.4 percent of total exports of goods and services to the United States in 2008 (Figure 2). Sales by subsidiaries grew faster in the ROW, although not by as much, as they were up 12.3 percent ($12.7 billion) to $115.8 billion. Subsidiaries are the preferred route of delivery

Sales by Canadian Foreign Affiliates Abroad vs Canadian Exports of Goods and Services, 2000-2008



Source: Statistics Canada.

Sales of Canadian Affiliates Abroad by Region, 2000-2008



Source: Statistics Canada.

of Canadian goods and services in this region and were equivalent to 188.3 percent, or nearly double, the value of direct exports of goods and services from Canada to the ROW in 2008. Partially offsetting the gains were lower sales in the EU and in other OECD countries (including Japan). Sales by Canadian subsidiaries in the EU were 1.2 percent lower in 2008 than in 2007, as they fell by $1.1 billion to $92.0 billion. For other OECD countries, Canadian subsidiaries experienced a 1.4-percent reduction in sales, as sales slipped by $0.6 billion to $40.8 billion in 2008.

Sales by goods producers advanced in 2008, while those for services producers declined. For goods producers, the bulk of the gains came from mining and oil and gas extraction, with the other three major sectors also advancing but by lesser amounts. Sales by Canadian affiliates in mining and oil and gas extraction rose by $22.4 billion to $133.1 billion, a 20.2-percent increase. Supporting the overall increase by goods producers, affiliates in the manufacturing sector reported a $6.5-billion (3.3 percent) increase in sales, followed by utilities and construction at $0.4 billion (2.6 percent), and agriculture, forestry, fishing and hunting at $0.2 billion (6.6 percent).

Declines were registered for five of the eight major services producers. Sales by affiliates in management of companies and enterprises services posted the largest decline at $3.7 billion (20.0 percent). Finance and insurance was down $2.4 billion (4.2 percent), retail trade was down $1.8 billion (8.1 percent), and information and cultural industries was down $1.1 billion (6.0 percent), all notable declines. Partially offsetting the declines were particularly strong increases in transportation and warehousing, up $3.5 billion (30.9 percent), and professional, scientific and technical services, up $2.2 billion (25.6 percent).

With the gains, goods producers accounted for 69.2 percent of all sales by foreign affiliates in 2008, up from 66.9 percent in 2007. Over the longer term, the share held by the goods-producing affiliates has been on the rise, up considerably from the 61.7-percent share held in 2000.

Employment in Canadian-owned Foreign Affiliates

As the global recession took hold and economic activity weakened, firms across the globe shed jobs. Canadian multinationals were no exception, as they reduced their overseas labour force by 17,000 persons in 2008 to 1,141,000, a decline of 1.5 percent. The losses were widespread, with all regions posting lower employment levels, except for the other OECD countries where employment was unchanged in 2008 from 2007. However, losses were more heavily concentrated in the United States and the United Kingdom. Canadian companies shed some 11,000 jobs in the United States (64.7 percent of all jobs losses) and another 3,000 jobs in the United Kingdom (17.6 percent of all job losses). However, the United States only accounted for between 53 to 54 percent of total employment by Canadian affiliates, while the share was only 5 percent for affiliates located in the United Kingdom.

By sector, losses came primarily from the goods-producing industries, which reduced payrolls by some 21,000 employees. In particular, Canadian subsidiaries in manufacturing shed 26,000 positions, while mining and oil and gas extraction added 6,000 positions. Services-producing

industries added a net 4,000 jobs to their payrolls as gains in professional, scientific and technical services and transportation and warehousing (up 8,000 and 3,000, respectively) outweighed losses in retail trade (down 4,000), management of companies and enterprises services (down 2,000), finance and insurance (down 1,000), and information and cultural industries (down 1,000).

1 Data cover only majority-owned foreign affiliates, or affiliates where the Canadian parent owns more than 50 percent of the firm. This is a more narrow definition than that used for direct investment statistics, which only require 10-percent control.

The Evolution of Global Value Chains

Introduction

The world economy has undergone significant transformation over the past two decades. During the 1990s, productivity growth, stagnant since the 1970s, appeared to reassert itself, especially in the United States, driven by advances in computing and information technologies. In the early part of the decade, many developing economies experienced a period of rapid economic growth, only to be cut short with the Asian financial crisis in 1997 followed by similar crisis in Russia, parts of Latin America and the OPEC countries. The 2000s, which began with a high-tech bust and the terrorist attacks of 9/11, subsequently entered a period of great economic stability that became known as the "great moderation" during which a number of developing economies became known emerging economies,[1] and a few of the largest and fastest growing were singled out as the BRICs.[2] The "great moderation" ended, however, and the final years of the decade were arguably even more eventful than the early years with a global financial crisis and resulting sharp decline in global trade. Post crisis, the gap in economic performance between rich and emerging economies has widened, the weakness in the fiscal situation among many of the former has become more pronounced, and the global imbalances that had been growing for a number of years have moved to the forefront of many policy debates.

Over these two decades another, but much more gradual, change was also taking place as firms reorganized their business operations into global value chains (GVCs). Although not as apparent as some of the other changes taking place, as this special feature will show, GVCs have exerted a huge impact on world trade and have likely played an important role in many of the developments noted above. For example, GVCs have likely contributed to the rapid growth of the emerging economies, sharpened the decline in world trade during the recent financial crisis but may have also moderated its impact, and will influence the response to global imbalances. And most importantly, GVCs impact on productivity growth, competitiveness, and therefore the standards of living within economies – the fundamental goal of economic progress and policy.

The concept of global value chains (GVCs) was introduced in the special feature contained in *Canada's State of Trade 2007*.[3] Since then, a significant amount of research

1 Coined by Antoine W. Van Agtmael during his tenure with the International Financial Corporation of the World Bank in 1981, the term "emerging economies" came into widespread use in the 2000s.

2 Originally coined by Jim O'Neill of Goldman Sachs in a 2001 paper "Building Better Global Economic BRICs" but made popular in O'Neill's 2003 paper "Dreaming in BRICs."

3 "The Rise of Global Value Chains" by Aaron Sydor, in the *Seventh Annual Report on Canada's State of Trade*, "Trade and Investment Update – 2007." Available at http://www.international.gc.ca/economist-economiste/performance/state-point/2007.

and analysis has been devoted to understanding GVCs and how they work. This year's special feature provides an overview of some of that recent work, draws on the latest statistics and attempts to provide a link between GVCs and economic theory.

Putting GVCs in Their Place

> *A global value chain describes the full range of activities undertaken to bring a product or service from its conception to its end use and how these activities are distributed over geographic space and across international borders.*[4]

This definition offers a structural view of GVCs, presenting them as a series of activities, performed by any number of firms with each activity located in the jurisdiction where it is most efficiently undertaken. This definition describes how GVCs are organized and why. Another view of GVCs, however, might focus on the transactions they generate; for example, the cross-border flow of intermediate goods and services that are combined in a final product that is sold globally. Both definitions can be reconciled with recent developments in economic theory.

Since the economist David Ricardo expressed his views in 1817, international trade theory has been governed by the notion of "comparative advantage," according to which each participant in trade will specialize in producing the good in which it has comparative advantage. According to Ricardo's model, the meaning of comparative advantage is expressed as a cost advantage, the source of which is not made explicit, although it is generally interpreted and modeled as an advantage based on differences in technology or geography. The result is the well known example of the exchange of British cloth for Portuguese wine. Heckscher and Ohlin built on this foundation, arguing that differences in what they referred to as "factor endowments" determine differences in relative costs. According to the Heckscher-Ohlin (H-O) model, this relationship produces, for example, the result that labour intensive countries should specialize in producing labour-intensive products and capital-intensive countries should focus on capital intensive products.

Both of these classical models recognize that firms and individuals trade, and that differences in technology (Ricardo's model) or endowments (H-O model) are specific to particular locations, i.e. countries. However, under the so-called "new trade theory" developed by Paul Krugman in the 1980s, such differences are no longer the only consideration. According to this theory, even countries that are similar will engage in and benefit from trade providing each specializes and thereby becomes more efficient in production as a result of economies of scale. Again, it is firms or individuals that trade, but the potential gains from specialization are a characteristic of the industry.

Along with economies of scale, geographical proximity is another key element of the new trade theory. Here firms will locate near their customers and their suppliers to reduce transportation costs and gain an advantage over their competitors. Large population centres thus become magnets for production, which is self-perpetuating as firms engaged in upstream and downstream activities follow suit and industrial clusters emerge. But, once again, the differences in transportation costs and the relative importance of being close to suppliers and to customers, i.e. agglomeration effects, are characteristics associated with the industry.

4 Adapted from the definition of global value chains used by GVC Initiative at Duke University http://www.globalvaluechains.org.

If classical theory focuses on differences in characteristics between locations, and new trade theory focuses on the characteristics of individual industries, then the more recent heterogeneous firm theory (often called new new trade theory) focuses on the differences between individual firms. New new trade theory recognizes that within a given industry and in a given location, significant variation can exist between firms. Although many firms do not engage in international trade, those that do so tend to be more productive. Firms that both trade and invest abroad tend to be the most productive.

According to new new trade theory, engaging in international trade enables the best firms to expand and replace weaker firms, resulting in increased productivity, higher wages and improved standards of living. Under both classical and new trade theory, most of the gains from trade occur as a result of the movement of resources between industries,[5] whereas new new trade theory suggests that most benefits arise from differences within industries, i.e. between firms. According to new new trade theory, trade takes place because of the differences between individual firms which can possess a technology or intellectual property (IP) that makes them better able to compete internationally. This produces a second source of benefit from trade because when individual firms expand, they can spread their fixed costs of innovation across a larger customer base, thereby increasing the incentive to innovate. Such a dynamic benefit that accumulates over time, much like compound interest, can potentially be an important gain from trade.

The idea of global value chains builds on this evolution of the understanding of why and how trade occurs and the resulting impacts. As recognized by new new trade theory, even within a country or industry, firms can operate very differently. One of those differences may be how firms integrate into global value chains; if firms produce their own intermediate inputs or if they source them from outside the firm, if their human resource or accounting departments are next door to their production facilities or are located half way around the world. GVCs may therefore explain some of the observed productivity differences between firms as identified under the new new trade theory. But, potentially more importantly, GVCs can be treated like a technology employed by the firm to become more competitive. GVCs help to look into the black box that is the firm and understand how they operate and why.

Several models of GVCs have been developed, each aimed at providing a theoretical framework to predict the behaviour of firms engaged in global trade.[6] Feenstra and Hanson (1996, 1997) begin with a Heckscher-Ohlin framework but divide the production process for any particular final good or service into activities. These activities are then allocated to the location where they are most efficiently performed. Grossman and Rossi-Hansberg (2008) provide a similar model for trade but focus on tasks instead of activities. The difference between *activities* and *tasks* is primarily an issue of aggregation. For example, an activity such as legal services may be separated into distinct tasks, such as the provision of high-value legal advice or the execution of

5 In these models, gains from trade can result from reduced costs arising from economies of scale, from more efficient use of resources, from reducing distortions as one moves closer to perfect competition and from increased product variety.

6 Notwithstanding that within the economics canon, the term "global value chains" is rarely used, *offshoring, outsourcing, trade in tasks* etc. are considered for the present purposes to fall within the rubric of GVCs.

lower-value administrative duties.[7] The implication here is that more routine tasks can be moved abroad while higher-value tasks will be performed domestically. An additional difference between the Feenstra and Hanson and the Grossman and Rossi-Hansberg models centres on the role of the firm itself. In the former, trade is assumed to be conducted at arm's length (i.e. outsourcing) while in the latter it can be interpreted as a transaction within the firm (i.e. offshoring). Antras (2003, 2005) provides an important link between the two by enhancing our understanding of how firms decide where to locate various activities and whether or not to exert direct control (i.e. the decision to perform the activity within the firm or to source it from outside the firm). While these models rely mostly on the H-O framework, Baldwin (2011) incorporates trade in tasks into the economic geography framework of new trade theory developed by Krugman and how this relates to Canada's place within North America.

Thus, while some may argue that with the rise of global value chains, comparative advantage no longer applies, it is clear that, as with prior innovations, each new theory builds on the previous rather than replaces it. The modern structure of trade supports this assertion. As would be expected under the classical models, Canada exports resource and resource-based products because Canada has been "endowed" with significant natural resources such as oil, natural gas, minerals and forests, as well as land and water for producing agricultural products. By contrast, countries with an abundance of cheap labour tend to export labour-intensive products. The gradual shift in production location of labour-intensive products (e.g. textiles, clothing and toys) from advanced economies like the United States to economies like Hong Kong and subsequently to developing economies like China and then increasingly to emerging economies in South-East Asia, seems to support the outcome predicted by classical trade theory. The agglomeration of industries predicted by new trade theory can also be observed, for example, in the auto sector in Southern Ontario, the aerospace sector near Montreal and similar industrial clusters across Canada and around the world. This in turn is augmented by new new trade theory which can explain the observable differences in success between firms within industries and why some firms thrive in certain industries despite apparent odds and can even evolve into global champions. As Globerman (2011) points out, adding the concept of GVCs to theories of trade does not render comparative advantage irrelevant. On the contrary, trade occurring at an increasingly finer level raises the potential for gain. Similarly, if there are gains from economies of scale, then being able to aggregate specialized activities (think for example of the rise of firms specializing in HR activities, operating call centers or providing IT support) may allow for increased gains from scale. In this way, GVCs actually magnify rather than diminish comparative advantage and its associated trade gains.

The Drivers

Declining cost of transportation and communications technologies are widely believed to have driven the rise of GVCs. While this may be the case, little work has actually been undertaken to test this or to understand the drivers of GVCs more generally. This is an important gap for a number of reasons, but possibly most critically, if it is not known what drove the rise of GVCs, it will not be possible to know if the trend will

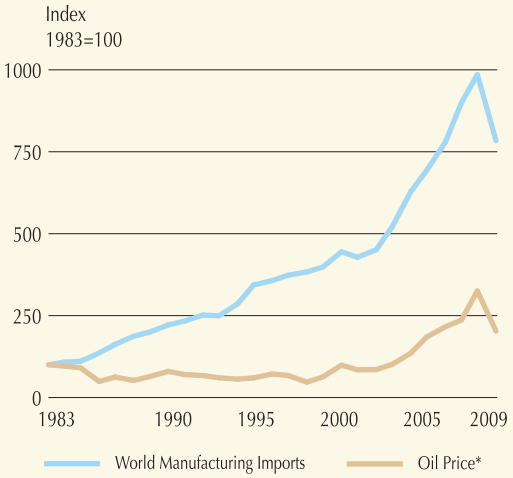
7 This special feature refers to *activities*. Distinguishing between *tasks* and *activities* is important but beyond the scope of this article.

continue, stagnate or even reverse and what role, if any, policy can play in shaping the evolution of GVCs.

One component of the GVC and transport cost story is the price of oil. As international transport is a heavy user of oil, there is potentially a link between oil prices and the costs of international trade. After peaking in the late 1970s and early 1980s, the price of oil fell steadily to a low of about US$15 per barrel in 1998. In nominal dollars, this fall was modest but in real terms it was significant. It has been argued that an important driver of the growth of GVCs was this fall in oil prices. This trend was of course followed by a sharp rise over the 2000s to peak at nearly US$ 150 prior to the global financial crisis.

There is, however, little empirical evidence that links the decline in oil prices during the 1980s and 1990s to increased trade and the rise of GVCs. One of the few studies that is consistent with this view is that of Bridgman (2008) which finds that high oil prices can explain a large part of the slowdown in trade growth from 1974 to 1985. Indeed, there is much more evidence which fails to find that oil prices play an important role in the growth of trade or of GVCs. Furthermore, as oil prices increased by nearly ten-fold from trough to peak over the 2000s, there was no decline in international trade or slowing of the growth of GVCs. Although Hillberry (2011) points out that there was a switch from air to ocean transport for some goods during this period, he also notes that the shift was much less pronounced for intermediate inputs, suggesting that GVCs are less subject to oil price movements than are finished goods. In fact from 2000 onwards trade and oil prices moved in the same direction: world manufacturing imports, which excludes oil and natural resources (both of which saw their price increase over this period), grew quickly while oil prices were rising sharply.

Oil Prices and Global Trade



*U.S. dollars per barrel, near month Cushing future on NYMEX.

Data: WTO and U.S. Department of Energy.

A simple explanation exists for the lack of evidence supporting the link between higher oil prices and lower trade values. Calculations based on Statistic Canada's input-output tables reveal that for the air transportation and the truck transportation sectors, 22 percent and 25 percent, respectively, of purchased inputs (excluding wages, taxes and subsidies) were spent on fuel.[8] While these are fairly sizable sums, the share of transportation among other industries' inputs is surprisingly small. For example, in Canada's vehicle manufacturing industry, 0.3 percent of purchased inputs (excluding wages, taxes and subsidies) was spent on transportation. Of that, rail transport accounted for just over half and truck transport for about a third. For electronic products manufacturing, just under 0.9 percent of costs were spent on transportation, with more than 70 percent on air transport. Multiplying these small shares of total costs spent

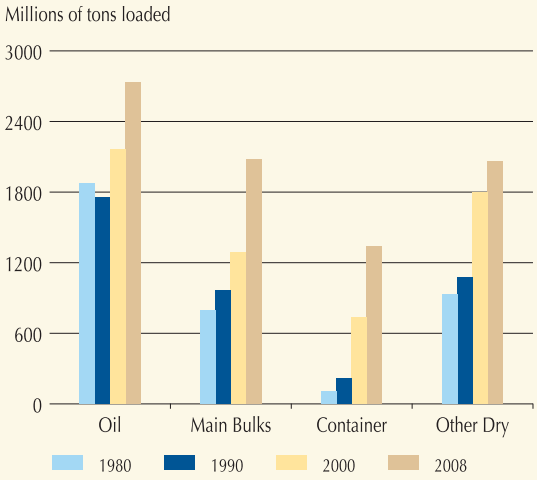
8 Author's calculations based on 1997 data from symmetric (industry by industry) I/O tables provided by Statistics Canada using purchaser prices in current Canadian dollars.

on transportation by the 2007 share of the relevant transportation sector's use of fuels, we see that oil prices account for an extremely small share of the total cost of inputs for most goods.

These estimates derive from statistics for Canada's domestic and international trade combined. The share of transport in total costs can be much larger for international trade as one would expect given that the distance travelled would be much larger on average and may involve more modes of transportation which adds to the cost. For the United States, transportation costs as a percentage of total input costs for international trade were found to be about 4 percent in 2004 (Hummels, 2007). If fuel costs account for between one fifth to one quarter of total transportation costs, fuel costs will account for only about one percent of the cost of the final good.[9] This should not be interpreted, however, to mean that oil prices do not have an impact on international trade or on GVCs. Higher oil prices could indeed have a large impact on certain sectors and markets. Those items with the highest shipping cost-to-value ratio, and the most distant markets, would likely be the most impacted. As noted earlier, rising oil prices have likely already had an impact on choice of transportation modes. Significantly higher oil prices may not stop the growth of GVCs, but it could affect their configuration and operation.

Declining costs of transportation, and of sea transport as a result of containerization specifically, has been suggested as a potential driver for the rise of GVCs. The growing volume of goods shipped by container internationally appears to coincide with the rise of the GVC, which is why the two are often associated. From 1990 to 2008, the volume of goods shipped by container increased

International Seaborne Trade



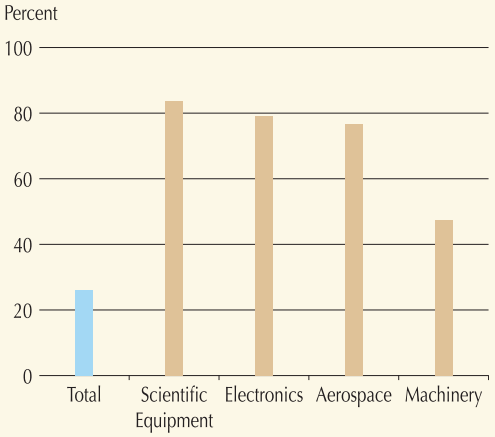
Data: UNCTAD, Review of Maritime Transport, 2010.

from just over 200 million tons to 1.3 billion tons, a more than six-fold increase. The volume shipped by other means also increased but not by nearly as much. The volume share of goods shipped by container increased from 5 percent in 1990 (and from almost nothing in 1970) to 16 percent in 2008.

But, the fact that containerized shipping emerged at the same time as GVCs, does not, in and of itself imply causation. An important element of the argument linking containerization to the rise of GVCs is a decline in sea freight costs. Detailed work by Hummels (2007) finds only a modest decline in sea freight transport costs due to containerization after the mid 1980s, after having risen sharply from the late 1970s. This modest decline in costs does not appear to be sufficient to explain the rapid rise of trade and of GVCs. However, Hummels does find that the largest impact of the innovation in containerized shipping may not have been reduced costs in the traditional sense, but rather a reduction in international shipping times. Regardless of whether or not cost savings are expressed in conventional terms,

9 Based on 2007 near-peak fuel costs. Long-term elevated fuel prices could drive technological innovations or other adaptations aimed at saving fuel and lowering costs, e.g. reducing speed or decommissioning older vessels.

Share of Canadian Exports by Air to Non-U.S. Destinations*, 2008



* By Value.
Data: Statistics Canada and Transport Canada.

the net economic effect is that faster shipping times yield lower transportation costs—because "time is money." Hummels (2001, 2007) also shows that while containerization use increased, the use of air transportation to ship goods was also rising dramatically as its price declined. The share (by value) of Canadian trade that occurs by air has increased substantially. In 2008, more than one quarter of Canadian exports (by value) to non-U.S. destinations occurred by air. And, this is somewhat understated due the high proportion of resources in Canadian exports, which are generally shipped by sea. The share is substantially higher for more manufactured products, with those sectors that posted the fastest growth in trade in intermediate goods also showing a particularly high use of air transport. The evidence therefore suggests that speed of transport has played an important role in the global fragmentation of production, at least with respect to intermediate goods. Evidence has yet to be established for such a link with respect to services, although services involving the movement of people primarily by air would certainly witness a similar effect.

The case for the role of information and communications technologies (ICTs) is equally complex. The special feature included in the 2007 State of Trade report also provided information on telecommunications which illustrated a dramatic fall in telecommunications costs with a particularly sharp decline in recent years. Hillberry (2011) investigates the relationship between telecommunications and information technologies and GVCs. His model is based on that of Jones and Kierzkowski (1990) in which these services are treated as complements to imported intermediate inputs. By linking those sectors that make use of ICT services through input-output tables he is able to compare the usage of ICT services with resulting fragmentation of production. Hillberry, however, is not able to find convincing empirical evidence that ICTs drove fragmentation of production.

Interestingly, Hillberry does find that the entrance of new countries into the global economy, and of formerly communist countries in particular, seems to be an important factor driving the fragmentation of production. He hypothesizes that what may have been most important was the unique characteristics of these countries, namely their relatively low wages but high levels of education, especially in technical fields. But he also notes that this effect had largely run its course by 1996.

Although their transition from closed to open economies was less demarcated, the opening of such economies as India or Brazil would have likely played a similar role in the rise of GVCs. In these cases, as well as for the formerly communist countries, the removal of tariff and non-tariff barriers are an important component of "opening". Baier and Bergstand (1999), for example, find that reductions in tariff rates were three to four times as important for the growth of global trade as were declining transport costs. Tariff

rates are particularly important for GVCs as tariffs can potentially be magnified as they are applied to both inputs as well as the final output. Other barriers to trade (i.e. non-tariff measures and regulatory requirements) are likely to be just as important and would also extend to services.

To summarize, very little systematic empirical work has been performed to assess the drivers of the growth of global value chains and more work is definitely needed on this important topic. The work to date suggests that containerized shipping may have played a role, but developments in air transport were most important for the fragmentation of goods production and would likely play an important role for services as well. Given that air transport is the most expensive way to ship goods and that trade did not appear to be overly impacted by the rise in oil prices over the 2000s, rising oil prices will likely not be the critical factor in determining the continued growth of GVCs. Although ICTs and the declining costs of telecommunications are often cited as a driver for the growth of GVCs, there is currently little hard evidence to support this belief. There is some evidence that formerly communist countries entering the global economy during the past decades was an important factor behind the rise of GVCs, but that effect has mostly dissipated. Declining tariff rates and more general market opening likely played an important role as well. This last, being directly under the control of policymakers, may prove to be the most important.

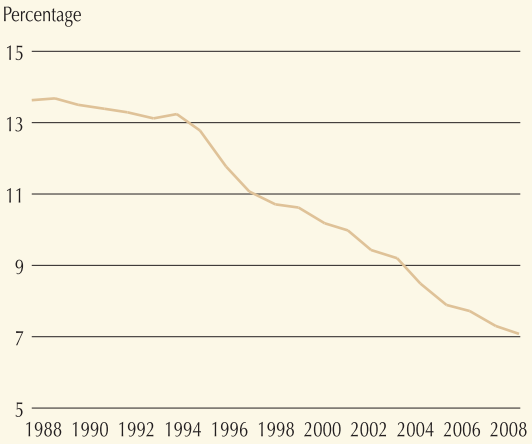
Canada and GVCs

No reliable method exists to measure global value chains (GVCs) or to determine how a country such as Canada fits in. Indirect methods must be relied upon instead, such as using existing measures of international commercial engagement, from data presented in the United Nations BEC, and from input-output tables.

Making use of existing sources of data, for Canada, it can be seen that trade (exports plus imports) increased about 50 percent faster than nominal GDP over the 1990 to 2008 period.[10] This result indicates the

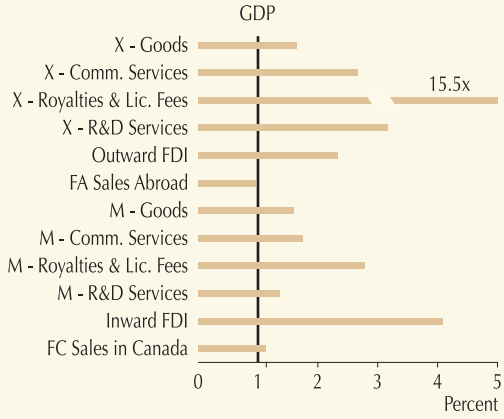
10 The recent global economic crisis is excluded here. That said, the general trends remain the same when data for 2009 and 2010 are included.

Global Average Applied Tariff Rates on All Products



Data: World Bank.

Growth In Global Value Chains in Canada Growth Relative to Canadian GDP, 1990-2008



* For FA Sales and FC sales, period is 1999-2008.

Data: Statistics Canada.

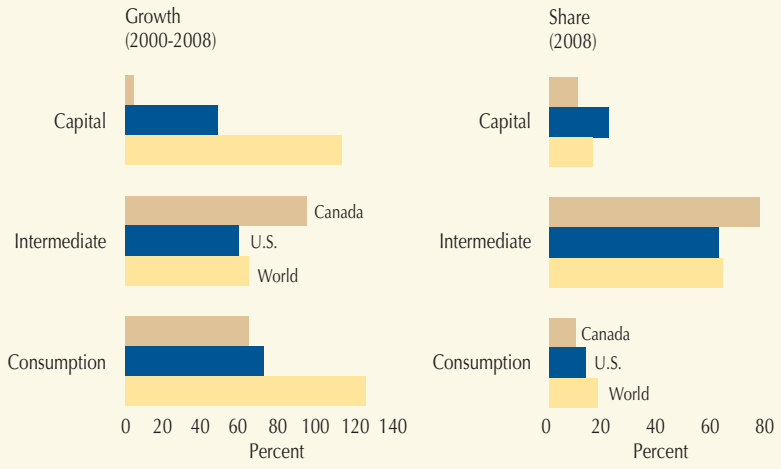
increased importance of international markets to Canada's economy. Trade in commercial services increased even faster, which likewise illustrates their growing importance. Inward and outward FDI stocks also increased faster than goods trade which supports the idea that international commerce is replacing the increasingly-dated concept that international transactions are mostly about trade. The growing importance of "intellectual" trade is reflected in the burgeoning international flow of royalties, licence fees and R&D innovation. In this regard, Canada is preeminent, an important harbinger for its continued economic success.

The United Nations Broad Economic Classification (BEC) system[11] can be used to evaluate broad trends in global value chains. The data are readily available for a wide range of countries but provide only a simple breakdown of capital and goods (intermediate and final). Because it is limited to goods, using the BEC data will miss the more dynamic changes occurring in services trade. That said, goods still account for the bulk of Canada's international trade.

A simple measure of comparative advantage is to compare the level of exports and imports in a given year with a net surplus representing a sign of comparative advantage. Based on the BEC classification system, by this measure Canada is a large net exporter of intermediate goods and net importer of both capital goods and consumer goods, the latter being the stronger. Furthermore, Canadian exports of intermediaries are growing faster than imports while the reverse is true for both consumption and capital goods, implying that the demonstrated comparative advantage in intermediaries is getting stronger. Comparing Canada to the world supports the view that Canada specializes in intermediates. By contrast, the United States, with its large overall deficit in merchandise trade shows a deficit in all three goods categories (services trade, for which the United States posts a surplus, is not included). But, the smallest deficit is in capital equipment. Capital equipment also accounts for a larger share of U.S. exports than the world average, potentially suggesting an advantage in that category.

11 Available at http://comtrade.un.org/db.

Exports by Type



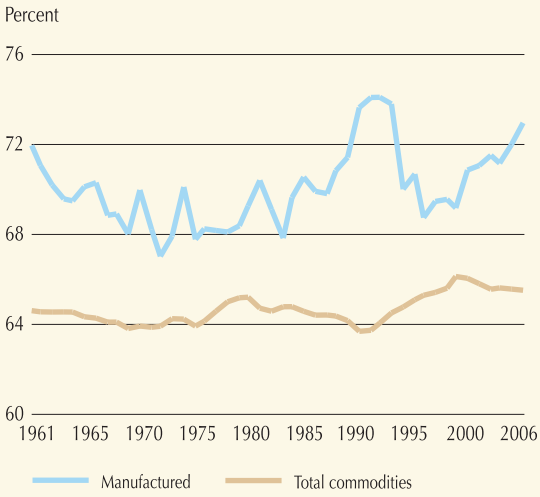
Data: UN Comtrade.

Broad statements like this, however, are of limited value. It is not surprising, for example, to find that Canada has an apparent advantage in intermediates, which includes resources. It is also not a surprise that this advantage seems to be strengthening given the rise in resource prices over the past number of years. A more informative measure of Canada's participation in global value chains involves the use of data presented in input-output tables, which provide estimates of the proportion of intermediate goods used as inputs in production. Such tables also break down intermediate inputs into *imported* and *domestically produced* goods. One disadvantage of these tables is the implicit assumption that a given imported input and its domestically produced equivalent are used in equal proportion in production (i.e. as an input in a manufacturing process) and in consumption (i.e. as a consumer good).

In terms of the share of imports that are intermediate inputs, a strong trend towards GVCs is not observed. There is a modest increase for the economy as a whole over the 1990s, but this amounts to an increase of only two percentage points, and then falls back somewhat since. For manufactured imports, the share at the end of the series is only modestly higher than at the beginning. Thus, according to this measure, imports of final products are growing at about the same rates as intermediate inputs. This corresponds to trends observed in the BEC data which shows intermediates growing about as fast as capital and finished goods.

Another method to measure Canada's participation in GVCs involves determining the share of intermediate inputs that are imported (as opposed to the composition of imports as in the previous discussion). Here we see exceptionally strong growth. For the

Share of Imports that are Intermediate Inputs



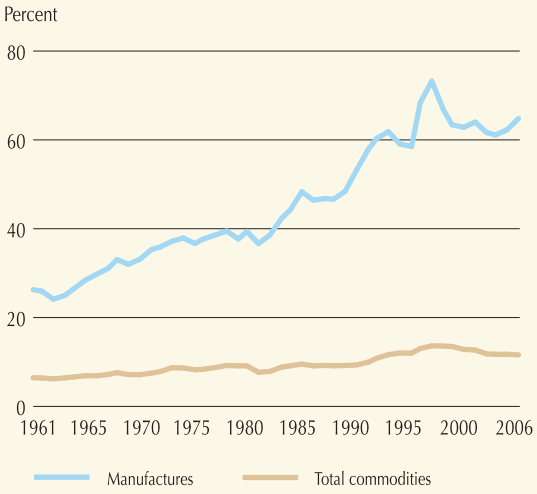
Data: Statistics Canada.

total economy the share of imported intermediate inputs in total intermediate inputs nearly doubles from 6.5 percent in 1961 to 11.6 percent in 2006. This is a fairly substantial increase considering the huge value of intermediate inputs in the economy and the many that would be considered non-tradable. For manufactured intermediate inputs the increase is even more pronounced, growing from 24.1 percent in 1963 to a peak of 73.2 percent in 1998 before falling back to 64.8 percent in 2006.

Input-output tables can also be used to examine Canada's economic performance with respect to imports of intermediate services inputs. In professional services we see one of the strongest gains with less than 7 percent of intermediate inputs being supplied from abroad in the early 1960s[12] to a peak of 21.3 percent in 1998—a three-fold increase—followed by a sharp decline in the 2000s. The share of professional services in total inputs increased even more dramatically, from 1.2 percent in the early 1960s to 5.7 percent in 2006—a nearly five-fold increase. This creates a somewhat more

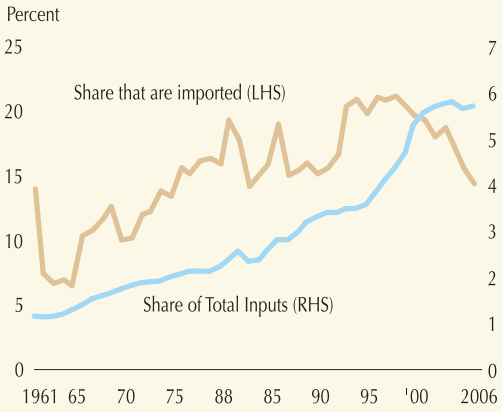
12 A figure of 14.1 percent is obtained for 1961, but quickly falls suggesting that there may be a data issue with the first period in the series.

Share of Inputs that are Imported



Data: Statistics Canada.

Professional Service* Inputs



* Engineering, scientific, accounting, legal, advertising software development and misc. services to business.

Data: Statistics Canada.

nuanced interpretation of GVCs. Firms used to perform these activities within the firm. As they begin to purchase them from outside, these activities are no longer captured under manufacturing but under services; this also helps to explain the growing share of the service economy in most western economies. It wasn't only the growth of services, but the shift of some activities from being performed within the firm to outside the firm. But once an activity can be purchased from outside the firm it can also be purchased internationally through either offshoring or outsourcing.

Offshoring and Outsourcing in Canada[13]

The concepts of offshoring and outsourcing are intimately related to GVCs. In other words, *global value chain* is the "noun" that represents a globally interconnected network of activities, while *offshoring* and *outsourcing* are the "verbs" that describe the movement of activities as the GVCs are formed and the trade flows these activities generate.

Offshoring is essentially the movement abroad of an activity that continues to be performed within the ownership structure of the firm. For example, a manufacturer closing an assembly plant in Canada and opening another plant in a foreign country is engaged in offshoring. By contrast, inshoring occurs when an activity that was once performed abroad is moved into Canada. Outsourcing occurs when the activity is purchased from a supplier outside the ownership structure of the firm. For example, a call centre is closed in Canada and a contract awarded to a firm that supplies call centre services from a foreign location. Like offshoring, outsourcing has its opposite—insourcing—which occurs when a firm replaces a foreign supplier with a domestic supplier.

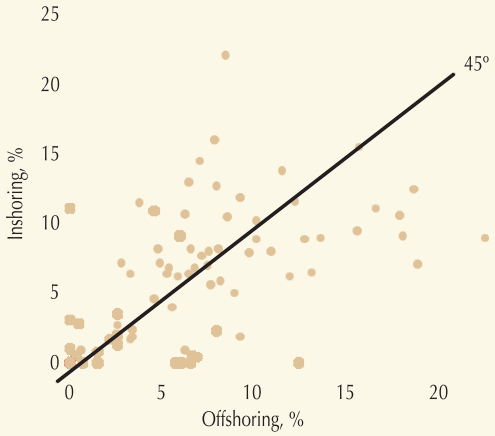
Although there has been a great deal of attention given to offshoring and outsourcing in the media and in policy circles, it turns out that both of these trends are relatively subdued. Possibly even more importantly, the trends appear to be much more circular than is commonly thought; a roughly similar number of activities appear to be moving into Canada as out.

13 Outsourcing will refer to offshore outsourcing.

Global Circulation of Business Activities

Data: Statistics Canada – SIBS Survey.

Offshoring and Inshoring in Canadian Manufacturing (percent of firms by industry)



Data: Statistics Canada – SIBS Survey.

Between 2007 and 2009, only 1.9 percent of companies located in Canada (including foreign companies) offshored a business activity. In the manufacturing sector, the rate was 5.2 percent— more than twice as great, but still small. More striking, however, is that the movement is circular: nearly the same proportion (1.8 percent) of firms located in Canada and 5.0 percent of manufacturers moved activities into Canada (i.e. inshored).[14]

Within individual industries, there is a high degree of correlation between offshoring and inshoring. This suggests that some industries are simply more footloose than others and as a result are more likely to move activities both out of Canada as well as into Canada.

Within the manufacturing sector, these industries include those producing electronics and related products, such as household appliances, telephone apparatus and radio and television broadcasting equipment, as well as transportation equipment, and some specialized machinery.

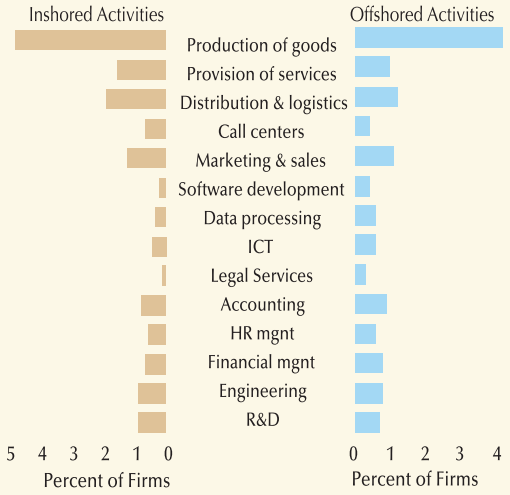
The number of industries for which there is net offshoring (percent of firms indicating that they offshore is greater than the number that inshore) only slightly outweighs the number of industries for which there is net inshoring. Within manufacturing the number of firms moving activities into Canada is greater than those moving activities out of Canada in motor vehicle, broadcasting equipment, communications equipment, pharmaceuticals as well as a number of resource processing sectors. The reverse is true (net offshoring) mainly in electronics producing industries.

Larger firms[15], are far more likely to move activities…both in and out of Canada. From 2007 to 2009, 17.6 percent of large manufacturing firms relocated activities out of Canada while 12.1 percent moved activities into Canada, compared to only 3.5 percent

14 The data do not allow us to know the actual value of what was offshored or inshored or the employment associated with those movements and therefore we cannot know to what extent the scale of one is greater or less than the other.

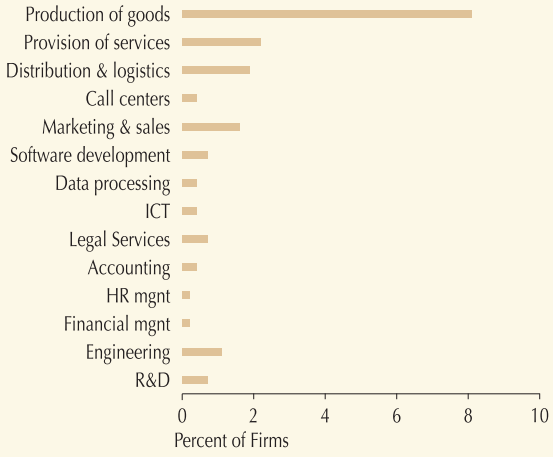
15 Large firms are those with more than 500 employees, while medium employ between 100 and 500 and small firms less than 100.

Inshoring and Offshoring of Business Activities In Manufacturing



Data: Statistics Canada – SIBS Survey.

Outsourcing of Business Activities In Manufacturing



Data: Statistics Canada – SIBS Survey.

and 3.1 percent, respectively, for small firms. While large firms were much more likely to offshore activities compared to inshoring activities (17.6 percent compared to 12.1 percent), small firms were more likely to do the reverse (3.1 percent for offshoring compared to 3.5 percent for inshoring). In terms of numbers, small firms carry significant weight, but much less so when values are considered.

A key aspect in the conceptual framework of global value chains is the idea of activities. While firms are usually organized by industries (such as the electronics industry) there can be a great deal of variation with respect to how firms organize themselves within an industry. For example, one firm may choose to be an integrated producer with most activities taking place within the firm and within the home country while a competitor may focus on a few key activities and offshore or outsource much else. The Survey of Innovation and Business Strategy (SIBS) identifies 14 business activities (see chart) that are integral to the operation of most firms.[16] Understanding the "footloose" nature of these fourteen activities (i.e. whether or not they are likely to be inshored or outshored) is crucial to understanding how GVCs work, and Canada's global business operations within them.

Of these fourteen activities, the most footloose activity (the activity most likely to be offshored or inshored) is the production of goods. In terms of offshoring, the production of goods was nearly four times as likely to be offshored as the next most footloose activity, distribution and logistics. For inshoring, production of goods was about three times as likely to be inshored as the next most common activity. Overall, firms are more likely to inshore than offshore provision of services as well as distribution and logistics, call centers and R&D, which may suggest that Canada has a comparative advantage in these activities. On the other hand, net offshoring is observed in data processing, ICT, legal and accounting services, among others. Calculations of net inshoring or offshoring must be interpreted with caution as we only have

16 The list of business activities is consistent with that used by Eurostat and by Michael Porter in "The Competitive Advantage of Nations."

Top Motivations for Offshoring or Outsourcing* - Manufacturers

Motivation	% of Respondents
Non-Labour Costs	69.7
Labour Costs	63.7
Access to New Markets	41.7
Delivery Times	34.5
Access to Knowledge	34.0
Logistics	29.6
Focus on Core Business	28.8
New goods or services	28.6
Following comp or clients	28.4
Tax or Financial	20.3
Lack of Labour	18.0
Other	2.9

* Those indicating medium or high motivation.

Data: Statistics Canada – SIBS Survey.

figures of the number of firms having offshored or inshored and not the scale of the activities being moved.

Outsourcing involves buying a good or service from abroad that may have at one point been produced internally or contracted out to a Canadian company.[17] Not surprisingly, this is far more common than offshoring as it does not involve equity ownership of operations abroad. Overall, 4.1 percent of firms outsourced between 2007 and 2009, but the share was much higher for manufacturers, of which 10.1 percent outsourced over that period. By comparison, only 1.9 percent of firms and 5.2 percent of manufacturers offshored over the same period.

For manufacturers, the most common activity to be outsourced is the production of goods, followed by provision of services, distribution & logistics and marketing and sales. These results also reveal information about the types of activities that companies tend to like to do themselves abroad and those that they are willing to buy at arms length. For manufacturers, legal services are far more likely to be purchased at arms length as indicated by the relatively high share in outsourcing (0.7 percent) compared to offshoring (0.3 percent). This is a reassuring result given the known preference for frequently hiring outside legal counsel, particularly in foreign markets. There is also a strong preference for contracting the provision of services, production of goods, and software development. By contrast, companies are more likely to retain financial management, HR and accounting services in-house.

Firms participating in the SIBS survey that either outsourced or offshored activities indicated that by far the most important reason for doing so was cost. Reduction of non-labour cost was indicated as the most important factor while reduction of labour costs was ranked second. This was the case for manufacturers and non-manufacturers alike. Although substantially less important than costs, access to new markets was cited by manufacturers as the third most important factor while non-manufacturers ranked access to specialized knowledge and technologies

17 Once again "outsourcing" refers to offshore or foreign outsourcing.

Top Obstacles when Offshoring or Outsourcing* - Manufacturers

Obstacles	% of Firms
Distance to producers	55.5
Identifying providers	54.9
Language or cultural	45.1
Tariffs	43.9
Foreign legal or admin	41.3
Lack of mgmt expertise	37.4
Cnd Legal or Admin.	33.4
Distance to customers	32.7
Concerns of employees	32.0
Lack of financing	30.5
Tax	25.0
International standards	24.5
Social Values	20.4
IP	8.3

* Those indicating medium or high motivation.

Data: Statistics Canada – SIBS Survey.

third. Both groups indicated that lack of available labour, and taxes or other financial incentives were not particularly important factors. These results show that, and as one might expect, the most important factor driving firms to outsource is indeed costs. This also supports the view that it is predominantly pull factors that drive offshoring and outsourcing: the emergence of large supplies of low-cost labour, as well as large and growing markets are driving offshoring and outsourcing, rather than push factors that make Canada an unappealing location from which to do business. Again, this would be consistent with the earlier findings that these movements are part of a circular flow and not a one-way exodus.

Roughly one fifth of firms surveyed indicated that they encountered obstacles when conducting offshoring or outsourcing. Interestingly, the proportion was about the same for small firms compared to the average. For respondents overall, foreign legal or administrative obstacles were identified as being most significant, followed by language or cultural barriers and distance to producers. For manufacturers (shown) the priorities were somewhat different. Distance to producers was identified as the most important barrier followed by difficulties in identifying potential or suitable suppliers and language or cultural barriers.[18] For both manufacturers and non-manufacturers alike, identifying suppliers and dealing with language and cultural issues and foreign legal or administrative issues were identified as being significant, which supports the role of the Canadian trade commissioner service (TCS) in overcoming these obstacles. Tariffs also rank among the top obstacles for manufacturing firms, suggesting the need for continued tariff reductions. Interestingly, concerns about offshoring and outsourcing conflicting with social values, concerns of employees and IP

18 Importance of obstacles are based on combining high and medium responses. There are some instances, however, where a response was marked high for a significant share of respondents without a correspondingly large medium share which lowers the overall score for that response. Specifically, for all industries, Canadian legal or administrative barriers would be ranked first based on high responses alone, while tariffs would have been ranked second for manufacturers. This may indicate that while these obstacles were not as widespread, for the firms that faced them, they were extremely important.

concerns were all identified as least important for both groups, which may point to the ability of firms to address those issues themselves.

Conclusions

Global production is increasingly being governed by global value chains (GVCs). The rise of GVCs has been driven by both technological as well as policy developments. While improvements in ICT and falling costs of transportation and telecommunications have likely played an important role, solid empirical support is still lacking. Only the important role of air transportation has been well established and even here a greater understanding is required, particularly for services trade. Among the policy drivers, the integration of new participants into the global economy has been found to be an important driver as has the related declining tariff rates and other barriers to trade.

There is good reason to believe that all participants, including Canada, are benefiting from the emergence of global value chains. Trade at a more fragmented level and in services magnifies the potential gains from trade. Indeed, Canadian companies and workers can benefit as some low-skilled activities are offshored, which increases the productivity and competitiveness of Canadian companies and translates into more and better paying jobs for Canadians. This is supported by the data, which show that as some activities are offshored, others are inshored.

The extent to which Canada can prosper within this rapidly changing global economic landscape will depend on Canada's ability to create an economic environment that attracts and retains high-valued activities that will ensure a high and improving standard of living for all Canadians.

References

Alajääskö, Pekka, (2009) " Features of International Sourcing in Europe in 2001-2006" Eurostat, Statistics in focus 73/2009.

Antras, Pol (2005), "Property Rights and the International Organization of Production", *American Economic Review, Papers and Proceedings*, 95 (2), pp. 25-32.

Baier, Scott L. and Jeffrey H Bergstrand (1999), "The growth of world trade: tariffs, transport costs, and income similarity" Journal of International Economics 53 (2001) 1-27.

Baldwin, Richard (2011), "Integration of the North American Economy and New-paradigm Globalization", in Aaron Sydor (ed) Global Value Chains: Impacts and Implications, Forthcoming.

Baldwin, Richard (2009), "Integration of the North American Economy and New-paradigm Globalization" Policy Research Initiative WP049.

Bridgman, Benjamin (2008), "Energy prices and the expansion of world trade," *Review of Economic Dynamics* 11(4), October: 904-916.

Caves, Richard E. (1971), "International Corporations: The Industrial Economics of Foreign Investment," *Economica*. 38: 1-27.

De Backer, Koen and Norihiko Yamano (2011), "International Comparative Evidence on Global Value Chains", in Global Value Chains: Impacts and Implications, Forthcoming.

Dunning, John H. (1997), "Trade, Location of Economic Activity and the MNE: A Search for an Eclectic Approach," in Bertil Ohlin, Per Ove Hesselborn and Per Magnus Wijkman (eds.), *The International Allocation of Economic Activity*, London: Macmillan, 1977.

Feenstra, Robert (1998), "Integration of Trade and Disintegration of Production in the Global Economy", *Journal of Economic Perspectives*, Fall, pp.31-50.

Globerman, Steven (2011) "Global Value Chains: Economic and Policy Issues", in Global Value Chains: Impacts and Implications, Forthcoming.

Grossman, Gene and Esteban Rossi-Hansberg (2008), " Trading Tasks: A Simple Theory Of Offshoring", *American Economic Review*, 98 (5), pp. 1978-1997.

Helpman, Elhanan, Marc J. Melitz and Stephen R. Yeaple (2004), "Export Versus FDI with Heterogeneous Firms," *American Economic Review* 94(1), March: 300-316.

Helpman, Elhanan (1984), "A simple theory of international trade with multinational corporations," *Journal of Political Economy* 92(3): 451–471.

Hillberry, Russel H (2011), "Causes of International Production Fragmentation: Some Evidence", in Global Value Chains: Impacts and Implications, Forthcoming.

Hummels, David (2007), "Transportation Costs and International Trade in the Second Era of Globalization," *Journal of Economic Perspectives* 21(3), Summer: 131–154.

Hummels, David (2001), "Time as a Trade Barrier" Unpublished paper, Purdue University.

Jones, R.W. and H. Kierzkowski (1990), "The Role of Services in Production and International Trade: A Theoretical Framework" in R.W. Jones & A.O. Krueger (Eds), *The Political Economy of International Trade: Essays in Honour of R.E. Baldwin*, Oxford.

Krugman, Paul (1981), "Intra-industry Specialization and the Gains from Trade", *Journal of Political Economy*, 89(5), October: 959-973.

Krugman, Paul (1980), "Scale Economies, Product Differentiation and the Pattern of Trade", *American Economic Review*, 70(5), December: 950-959.

Krugman, Paul (1979), "Increasing Returns, Monopolistic Competition, and International Trade", *Journal of International Economics*, 9, November: 469-480.

Porter, Michael E. (1998), "The Competitive Advantage of Nations", Free Press.

Sydor, Aaron (2007), "The Rise of Global Value Chains", *Canada's State of Trade: Trade and Investment Update – 2007*, Ottawa: Minister of Public Works and Government Services Canada: 47-70.

Treffler, Daniel (2008), "Policy Responses to the New Offshoring: Think Globally, Invest Locally", Ottawa: Industry Canada Working Paper Series, Nov. 25, 2008.