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# Information Bulletin

NUMBER 133 • DECEMBER 2009

## **ALBERTA'S EXPORT EXPERIENCE UNDER FREE TRADE AGREEMENTS, 1989-2008: TWENTY YEARS OF FREE TRADE**

*Rolf Mirus*

*Nicholas Emter*

*Western Centre for Economic Research  
School of Business, University of Alberta  
Edmonton, Canada T6G 2R6  
[www.bus.ualberta.ca/CIBS-WCER](http://www.bus.ualberta.ca/CIBS-WCER)*



**Western Centre for  
Economic Research**

[www.business.ualberta.ca/wcer](http://www.business.ualberta.ca/wcer)  
with support from: The George M. Cormie Endowment

## Library and Archives Canada Cataloguing in Publication

Mirus, Rolf

Alberta's export experience under free trade agreements, 1989-2008  
[electronic resource] : twenty years of free trade / Rolf Mirus, Nicholas Emter.

(Information bulletin ; no. 133, Dec. 2009) Includes bibliographical references.

Electronic monograph in PDF format.

Issued also in print format.

ISBN 978-1-55195-979-5

1. Exports--Alberta. 2. Exports--Alberta--Statistics. 3. Free trade--  
Alberta. I. Emter, Nicholas, 1986- II. University of Alberta. Western Centre for  
Economic Research III. Title. IV. Series: Information bulletin (University of  
Alberta. Western Centre for Economic Research : online) ; no. 133

HC117.A4M572 2009a

382'.6097123

C2009-907548-2

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## Executive Summary

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This report reviews Alberta's merchandise export experience since the start of the Canada-US Free Trade Agreement (CUSFTA) in January, 1989. The CUSFTA was subsumed into the North American Free Trade Agreement (NAFTA) in 1994 when Mexico joined. Free trade agreements with Israel (1997), Chile (1997), and Costa Rica (2002) followed. Consistent data on provincial exports are available for 1988, therefore 1988 serves as a reference year for a 20-year review. More detailed data at the product category and individual product level allow a 15-year perspective at a greater level of disaggregation.

During the period 1989 to 2008, exports for Alberta, the Western provinces, and for Canada as a whole were more volatile than their respective GDPs. Exports were significant contributors to Alberta's growth as well as business cycles.

- Alberta's exports to NAFTA-partners US and Mexico grew from \$9.3 billion in 1988 to \$97.7 billion (952%) in 2008. Alberta's exports to all other destinations grew from \$4.0 billion to \$12.9 billion (223%) during the same period.
- The phenomenal growth of exports to NAFTA-partners is not the result of a low Canadian dollar vis-à-vis the US. This follows from the fact that there was a similarly rapid growth of imports. For example, while Western Canada's exports grew more than four-fold, imports also tripled during 1994 to 2008.
- Almost all energy exports from Alberta are to NAFTA-partners. High prices for energy products, therefore, played a significant role in Alberta's export growth to the US and Mexico, especially in the last two years of our observation period. Energy Products accounted for 72.5% of total export receipts in 2008.
- Over the 20-year period, revenues from machinery and plastics exports became the second and third most important contributors, respectively, to Alberta's export success.
- Machinery exports were nearly \$4.5 billion in 2008, in contrast to only \$480 million in revenues in 1993. The NAFTA-share of these exports grew from 35% to nearly 60%. This is evidence of the positive effect of NAFTA for the development of a value-added manufacturing sector in Alberta.
- Alberta's exports of Plastics, Grains and Seeds, and Inorganic Chemicals grew over 400% between 1993 and 2008, gaining market share in North America and linking export success to NAFTA.
- NAFTA accounted for 88.7% of the value of Alberta's top 20 export categories in 2008, compared to 82.3% in 1993.
- Among the specific products that saw more than 700% increases in export value since NAFTA's inception are Polyethylene, Woodpulp, Ammonia, Rape and Colza (Canola) Seeds, Hydrocarbons, and Sulfur.
- The expansion of Alberta's energy sector led to concomitant growth of related (spin-off) exports of machinery products such as Pumps, Taps, Valves, Instruments, Dryers, Pulleys, Computers, and Engines.

- The contribution of the four Western Canadian provinces to total exports from Canada rose from 28.5% to 40.3% during the 20 years since 1989. This is significantly due to Alberta's exports which have grown almost nine-fold during these 20 years.
- Exports from Alberta to Mexico have enjoyed strong growth under the NAFTA; they grew 11-fold since 1993, with oilseeds, machinery, and meat being the product categories with the highest values.
- Exports to the more recent, smaller free trade partners Israel, Chile, and Costa Rica show considerable variability, with those to Israel and Chile exhibiting rising trends.
- Alberta's exports of manufactured goods and commodities have increased their market share in the US between 1993 and 2008, whereas energy products from Alberta have lost market share.

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## Conclusion

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The period of free trade from 1989 to 2008 coincided with a strong expansion of Alberta's exports. Our review shows that several factors contributed to this success. In addition to favorable trends in energy and commodity prices, the improved access to the US and Mexican markets that resulted from the CUSFTA and NAFTA are shown to be major causes of the positive development of Alberta's exports. In particular, the significant increase in manufacturing exports can be attributed to the free trade agreements because manufacturing products face higher tariffs in export markets than do raw materials and energy products. Alberta's manufacturing sector, therefore, emerges as a major beneficiary of freer trade. As a result, Alberta's economy has become more diversified into higher value-added export products. Even though this diversification is still related to the energy sector, it represents increased technological sophistication and human-capital intensity, and this is welcome.

Alberta's export success has made it more dependent on NAFTA markets and, therefore, more susceptible to economic downturns originating in the US, as recent experience has shown. Protectionism and difficulties at the US border are the challenges that now loom. Yet, the opportunities that freer trade brought and that led to Alberta's export success over the last 20 years have been a very good news story for all Albertans. The benefits of freer trade are, of course, much higher than just the additional export revenue and the related job creation. A full compilation of the benefits of freer trade would have to include the increased purchasing power of Alberta households that derived from access to lower priced imported products. That task, however, is beyond our mandated focus on exports.

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## Introduction

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The Canada-US Free Trade Agreement (CUSFTA) became effective on January 1<sup>st</sup>, 1989. It was subsumed into and superseded by the North American Free Trade Agreement (NAFTA) on January 1<sup>st</sup>, 1994 when Mexico became the third member ('amigo') in the alliance. These free trade agreements (FTAs) covered predominantly trade in goods, contained a number of provisions on trade in services, addressed direct investment, and provided a set of institutional provisions. At the time these agreements were considered the most comprehensive FTAs in existence.

In part, these FTAs represented a joint vision of what was desirable for the Uruguay Round of multilateral trade negotiations that was then underway: to expand markets; to provide a rules-based system; and to encourage investment, all for mutual benefit.

According to the CUSFTA, tariffs between Canada and the US were to be eliminated in three phases. For some products, an immediate zero-tariff was applied; for others, tariffs were reduced over five years in equal steps; and for the most sensitive products, the tariffs were phased out over ten years. In actual fact, some of these tariff reductions were accelerated by mutual agreement. By 1994, when a similar phase-in tariff reduction began with Mexico, there was free trade in goods between Canada and the US, provided the goods had been essentially produced in Canada and/or the US. The detailed requirements were laid down in the Rules of Origin (ROO) of the CUSFTA and later the NAFTA. This was necessary to prevent trans-shipment of third party goods from the lower to the higher tariff jurisdiction, with Canada having tariff levels that were on average almost double the US level in 1988.

The parties also agreed to apply the then new Harmonized System (HS) of product classification, and to continue certain pre-existing trade restrictions such as those on log exports, on unprocessed fish exports, and on trade in beer and malt beverages. Moreover, the provisions of the 1986 Memorandum of Agreement on Softwood Lumber remained in effect.

Canada agreed to terminate (by the end of 1997) its duty waiver program which had enabled some third party producers to import products on favorable terms if certain performance requirements were met. All told, the FTAs were consistent with the provisions of the General Agreement on Tariffs and Trade (GATT), to which Canada, the US and Mexico already were parties. The respective trade remedy laws against 'unfair' trade practices, like dumping and subsidization, were left untouched, but a bilateral dispute settlement process was agreed upon to allow for a review of national anti-dumping or countervail decisions (and permit so-called extraordinary challenges) by panels with members from both parties.

A significant step in the CUSFTA was the recognition of the growing importance of services trade. The importance was reflected in the provisions that facilitate the entry of business persons, with visa issue at the border upon presentation of the specified documentation. Also a detailed annex (to Chapter

13) specified the federal agencies and ministries that agreed to be covered for the purposes of government procurement contracts.

Both countries encouraged investment while exempting some sectors (e.g. Culture in Canada). The relevant chapter of the CUSFTA (16) asserts the principle of National Treatment, disdains performance requirements, and permits expropriation only if it is for a public purpose, with due process, on a non-discriminatory basis, and with payment of adequate compensation.

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## 1. Objectives and Limitations of this Review

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The objective of this report is to review the development of trade between Alberta and its free trade partners, primarily the US, over the 20 years since the conclusion of the CUSFTA. Trade with Mexico will be included in the review for the 15 years since the NAFTA became the successor to the CUSFTA. Our review will cover primarily the development of Alberta's exports of goods. That is, the focus will be on the overall growth of exports to the US, Mexico and the FTA-partners Chile, Israel, and Costa Rica. It is also of interest how Alberta's exports compare to those of other Western provinces and to Canada's total. We will then review which exports from Alberta were the most important and fastest growing, contrasting growth to CUSFTA/NAFTA with that to non-CUSFTA/NAFTA destinations. Further, this review will separate Alberta's exports into energy-products, non-energy commodities, and more manufactured products in order to assess the importance of the energy sector for Alberta's trade performance and to isolate developments in smaller sectors that otherwise get swamped by the size of the energy sector.

The focus on exports in this report is a limitation inasmuch as the benefits of trade consist of the sum of exports and imports, with each import making available foreign skills and endowments at an affordable price and each export rewarding Albertans for their skill and natural endowments with extra sales. We should therefore focus on the value of total trade between Alberta and the free trade partners if we want to assess the impact of the FTAs on the province. This approach is not as feasible, however, because many of the products Alberta imports are landed at ports/crossings outside the province and therefore are not well accounted for statistically as to their ultimate destination. This is reflected in the fact that British Columbia dominates the import statistics for Western Canada and leads us to rely on export data for most of this review.

In similar fashion, we will not be able to include Alberta's exports of services in our assessment. Services trade data are not available by province. For reference we will merely contrast the development of services trade under CUSFTA/NAFTA with merchandise trade for Canada as a whole. Foreign investment was welcome in Canada before the FTAs and faced few obstacles outside the protected cultural industries, air transportation, and financial services. Given that the Foreign Investment Review Agency (FIRA) and the National Energy Program (NEP) had become history by the time the CUSFTA was enacted, there are no strong a priori reasons to expect an impact from the FTAs. Data on foreign (direct) investment are also not available by province of destination. Consequently, foreign direct investment will not be a subject in this review.

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## 2. Exports and FTAs

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When markets become accessible on preferential terms, as is the case with FTAs, two effects result. Trade is created by the preferential access, and trade is diverted from traditional suppliers as a consequence of better terms becoming available to competitors inside the free trade zone. Alberta's exports should have received a boost by becoming available to US buyers without import duties, in part displacing US imports from other sources (diverting trade to Canada). Other things equal, Alberta exports to the US were expected to grow (faster) in comparison with exports from non-FTA members to the US. The implementation of an FTA suggests that the resulting shift in relative prices will temporarily accelerate exports to the trading partner but after a period of adjustment a new equilibrium is expected to be reached, with – among other variables – growth in relative GDP of the trading partners becoming a determinant of bilateral exports over the long haul.

Thus one question any review of FTAs faces is the length of the period during which stronger export growth can be expected with free trade partner(s). Given that the transition period for tariff elimination in the FTA with the US was 10 years, it is reasonable to consider at least the first decade as a transition period during which Alberta's and Canada's exports to the US could have been expected to grow faster than to those to other markets. Looking back we would expect that the growth rate over 20 years was larger for exports to FTA-members than to non-members. We would not expect exports to FTA-member countries to continue to grow faster, however. These conclusions are weakened by the fact that other factors will also influence Alberta's exports: GDP growth, exchange rate changes, and commodity prices all exert their influence and are difficult to capture even in sophisticated economic models.

One such modeling attempt, using the so-called gravity model, was undertaken by researchers at the Government of Canada's Department of Foreign Affairs and International Trade (DFAIT) to explain Canadian exports during 2000-2007.<sup>1</sup> For Canada's exports to 170 countries it was found that the variable FTA (=1 if YES and =0 if NO) was positive but not statistically significantly different from zero. This means that it could not be ascertained with confidence that the FTAs led to higher exports to the partner countries. While this finding may be due to the small number of FTAs that Canada had in effect during that period, it applies in any event to the aggregate of Canadian exports and during a more recent (sub)-period that did not include the early effects of the CUSFTA/NAFTA.

Notwithstanding these observations, economic theory leads us to expect the FTAs to have boosted Alberta's exports to the partner(s), which was, of course, the motivation for their negotiation. Alberta's exports to the US (and Mexico, Chile, Israel and Costa Rica) should have grown faster than the exports to non-FTA destinations. The more recent FTAs with Chile, Costa Rica, and Israel involve, however, small trading partners and were the result of political and investment considerations. They will, therefore, figure less prominently in our evaluation.

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<sup>1</sup> See: Cameron, R., and Sabuhoro, J.B. (2008). "Canada's State of Trade: Trade and Investment Update 2009". Department of Foreign Affairs and International Trade. Government of Canada.

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### 3. Alberta Exports to the US and Mexico under Free Trade

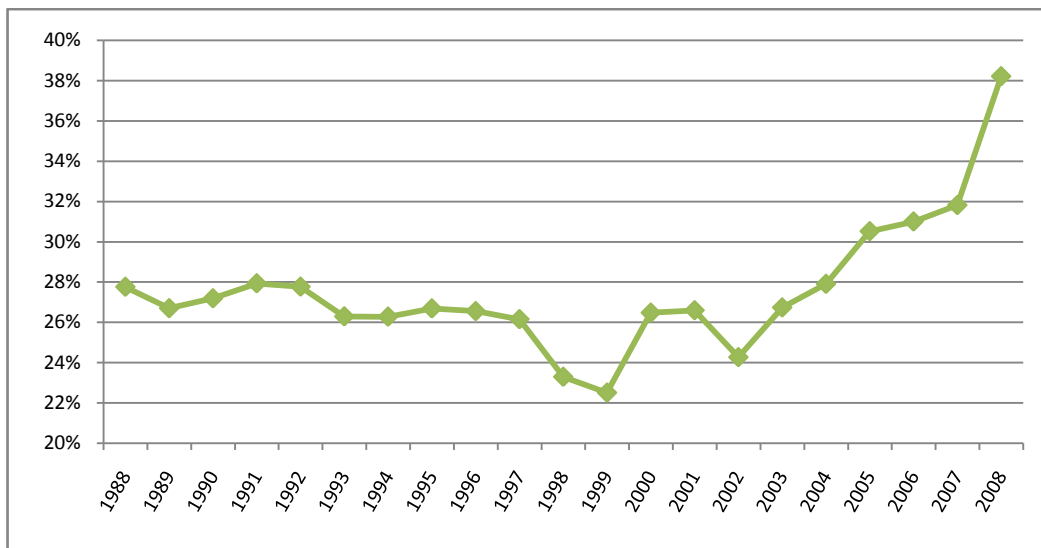
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With 1988, the last year before the CUSFTA, as our base year, we show in Figure 3.1(below) the development of Western Canada's export value as a share of Canada's total exports. Figure 3.1 (below) serves to make the point that Western Canada (Alberta, British Columbia, Manitoba, and Saskatchewan) has become a more significant exporter over the last 20 years. Figures 3.2-3.4 (below) show that the average annual growth rate of exports exceeded average GDP-growth and that CUSFTA/NAFTA exports grew on average 11.3% p.a. while total exports grew at 9% p.a.

That is to say, for the four Western provinces the US and Mexican markets yielded higher growth rates than overall exports, and the West's exports expanded significantly faster than Canada's total exports which on average grew by 6.9% p.a. during the observation period.

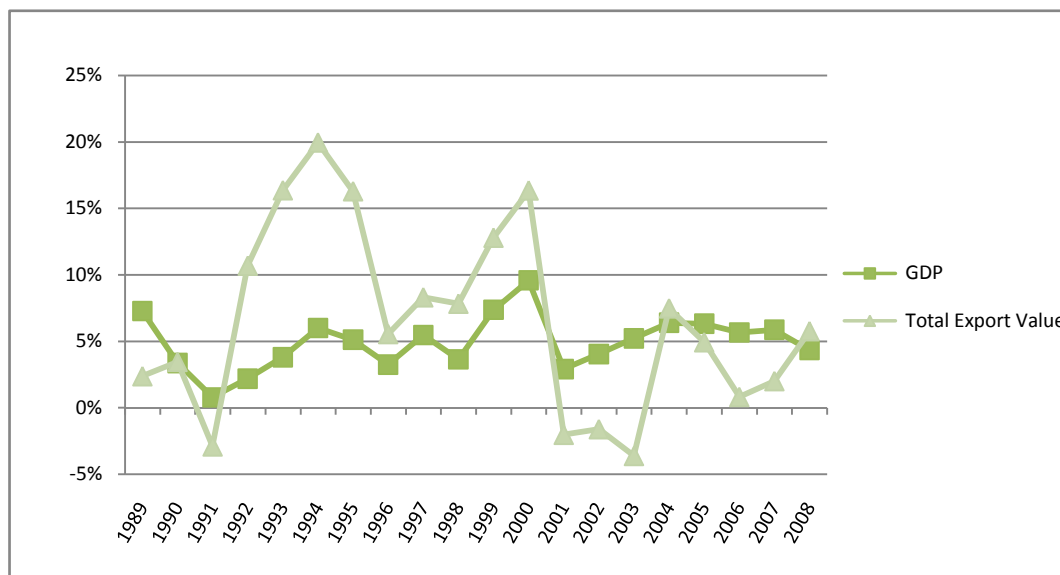
For Alberta, the two decades brought average annual GDP growth of 8.4%, with total exports growing on average by 12.7%. As expected CUSFTA/NAFTA exports grew faster at an average of 14.2% per annum. Export values were more volatile than GDP over these 20 years and CUSFTA/NAFTA exports exhibited slightly more fluctuations than total exports. Exporting was a higher risk-higher reward activity for Alberta and contributed to the province's economic cycles.

**Figure 3.1\*: Western Canada's Share of Total National Exports 1988-2008**



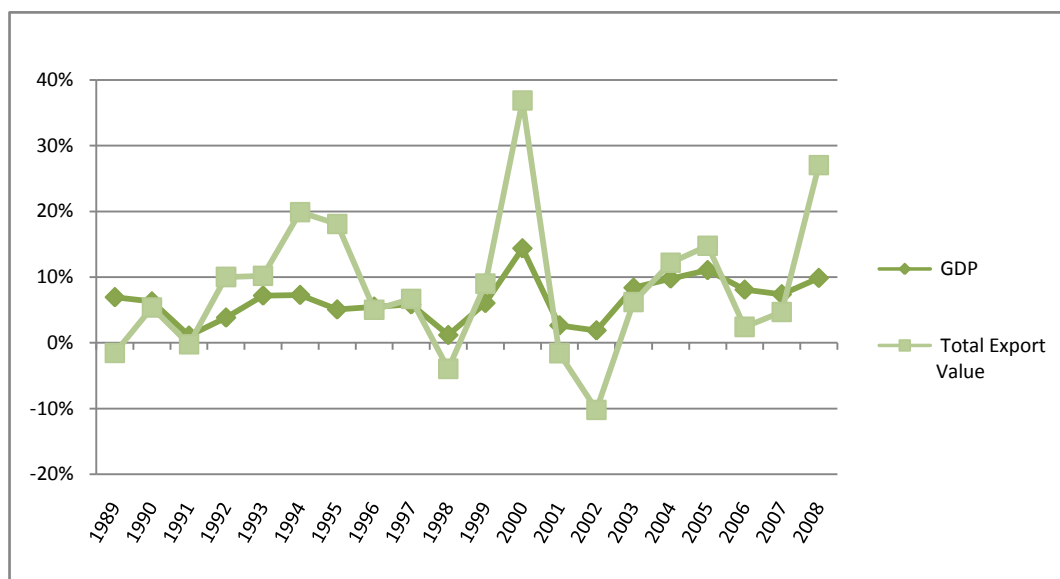
*\*Actual figures are included in Appendix 1a.*

**Figure 3.2\*: Canada's Annual GDP and Export Growth Rates**



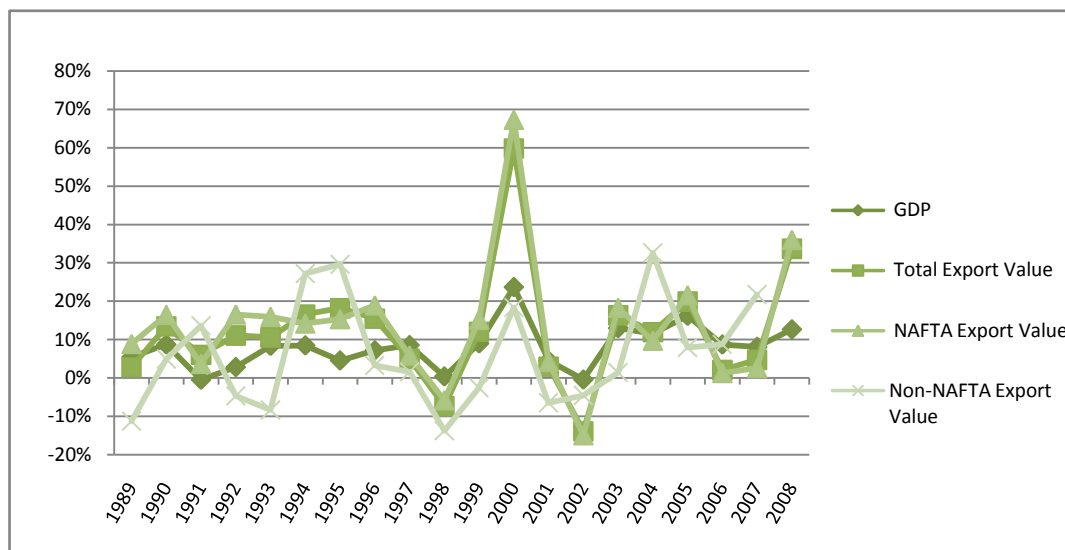
*\*Actual figures are included in Appendix 1b.*

**Figure 3.3\*: Western Canada's Annual GDP and Export Growth Rates**



*\*Actual figures are included in Appendix 1b.*

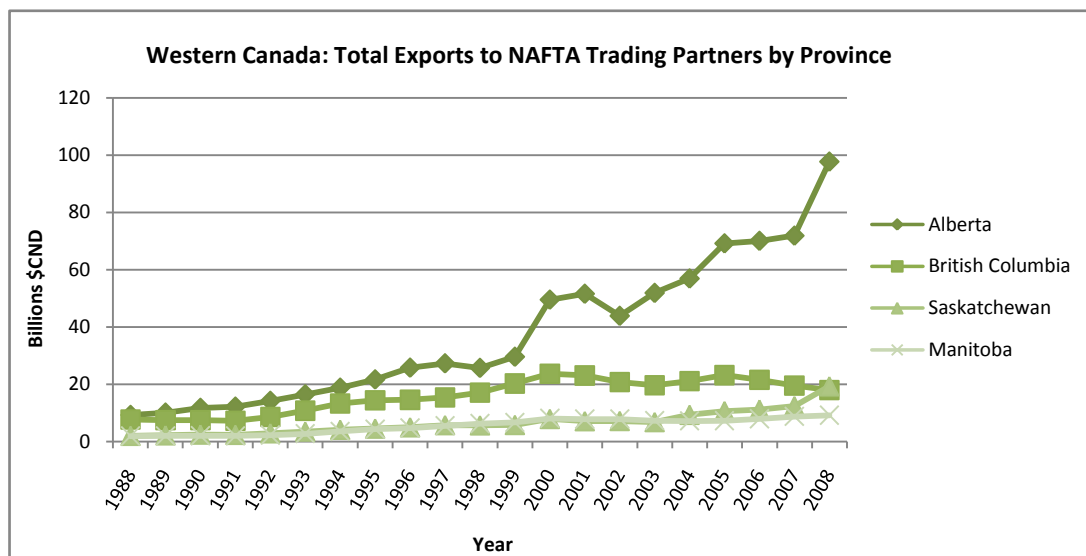
**Figure 3.4\*: Alberta's Annual GDP and Export Growth Rates**



\*Actual figures are included in Appendix 1b.

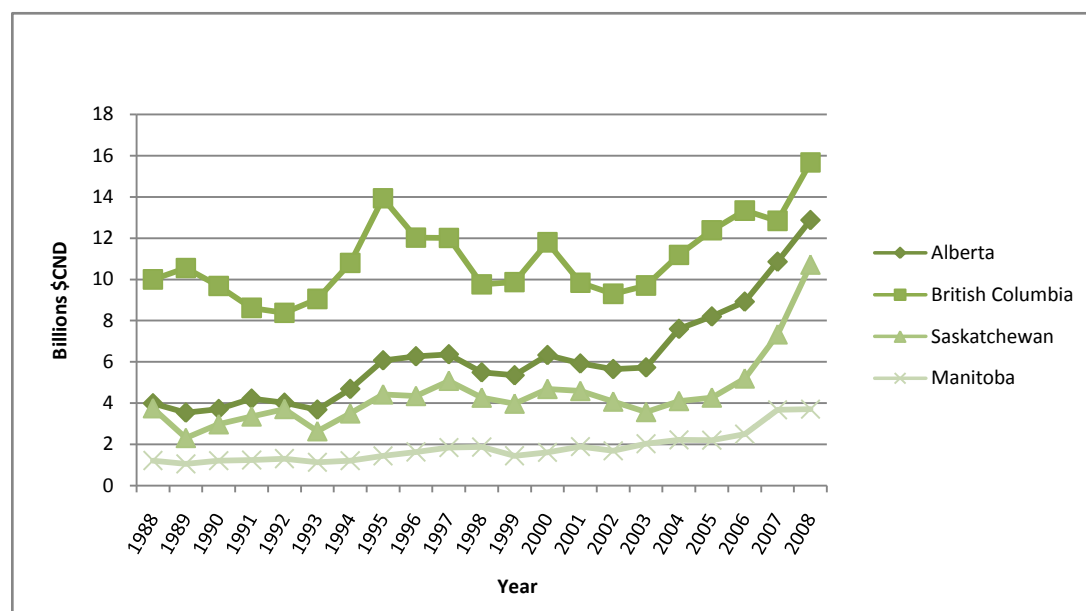
The growth of the value of Alberta's exports to the CUSFTA/NAFTA partners was 952% over the 20 years reviewed here. By contrast, Alberta's exports to non-CUSFTA/NAFTA countries grew at a much slower rate, 223%, over that same period. Alberta's total exports grew by 733%, much faster than Canada's overall exports (244%). Figure 3.5 (below) moreover shows that Alberta's exporters to CUSFTA/NAFTA partners were dominant among the four Western provinces, particularly in the second decade. The non-CUSFTA/NAFTA exports of Alberta were also the strongest of the Western four provinces (Figure. 3.6, below).

**Figure 3.5\*: Western Canada's Total Exports to NAFTA Trading Partners by Province**



*\*Actual figures are included in appendix 2. Exports to Mexico are included prior to the formation of NAFTA for the purposes of simplicity and to avoid a structural break in the trend line. Due to their relatively small value compared to exports to the US, the overall picture is not changed in any substantial way.*

**Figure 3.6\*: Western Canada's Total Exports to non-NAFTA Trading Partners**

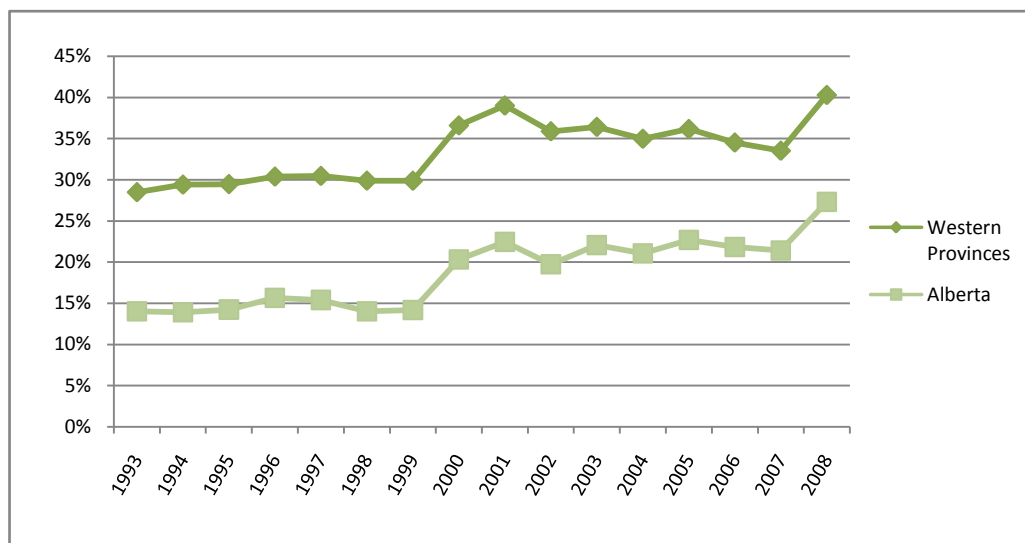


*\*Actual figures are included in appendix 2.*

The Western provinces' share of Canadian CUSFTA/NAFTA exports has grown from 28.5% in 1993 to 40.3% in 2008 (Figure 3.7, below), and these provinces were responsible for 46.0% of the total growth in CUSFTA/NAFTA exports over the period.

For Alberta, CUSFTA/NAFTA markets became ten times more important in 2008 than in 1988, while the non-CUSFTA/NAFTA markets became 'only' three times more important in terms of export value. The implications of these data trends are summarized in Figure 3.7 (below) which shows that Alberta's share of total CUSFTA/NAFTA exports has increased 98%, from 14.0% in 1993 to 27.3% in 2008. Alberta has been the major driving force behind Western Canada's rising share of total CUSFTA/NAFTA exports, which only grew 41% over the period. It can therefore be said that Alberta's merchandise exports show very strongly the expected boost from the FTAs that economic theory predicted. As well, it should be pointed out that, in the years leading up to the signing of the agreement in 1988, the provincial government was quite proactive in alerting exporters to the impending opportunities and challenges in the US market.

**Figure 3.7\*: Shares of Total Canadian Exports to NAFTA Trading Partners**



\*Actual figures are included in Appendix 3.

Looking back over the 20 years of free trade in North America (and including Mexico for the last 15 years), the expansion of exports was beyond expectations held at the time of negotiation. It must also be borne in mind that immediately after the CUSFTA became effective the world economy went into a downturn, with global GDP growth slowing from 3.7% in 1989 to a mere 1.5% in 1991 and world trade volume decreasing from growth of 8.1% to a more modest 4.3%. In hindsight it can therefore be said that both the CUSFTA and the NAFTA appear to have provided a much needed stimulus to Alberta's exports during a difficult time.

A closer look will now be taken at the top 20 export from Alberta in order to discern trends that may have been set in motion or were fostered by the FTAs.

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#### 4. Alberta's Top 20 Exports: CUSFTA/NAFTA vs. the Rest of the World

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Detailed data for exports typically rely on the required commercial invoices and customs forms for goods crossing the border. The Harmonized System (HS) is the commonly used organization of exports into 99 chapters of similar products. Our review relies on these data, with the number of digits in each chapter indicating the degree of product specificity. For example, HS 27 (chapter 27) covers Energy exports, HS 2701 represents Coal exports, and HS 2711 covers exports of Natural Gas and Liquefied Petroleum. At the six digit level of HS, exports are further delineated as regards to product characteristics. An example would be HS 901590 which describes the exports of parts and accessories for surveying.

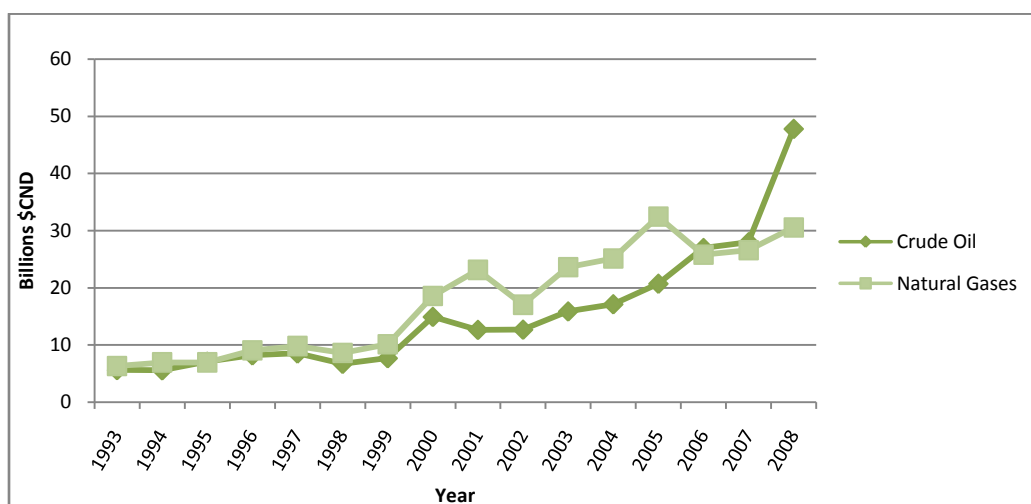
These data are available in consistent form only as of 1993, the year before NAFTA became effective. 1993, therefore, serves as our base year in this section. The benefit of 1993 as a base year is that it can serve as a genuine base year for trade with Mexico and the US, the drawback is that interpretation of NAFTA export trends since 1993 ignore the early years of free trade in North America under the CUSFTA.

Table 4.1 (below) shows the development of Alberta's top 20 exports at the two-digit level of aggregation during the 15 years since the inception of NAFTA. Energy (HS 27) swamps all other product categories. Alberta's exports of oil, gas, and coal clearly dominate, reaching 72.5% of total provincial exports in 2008 compared to 63.9% in 1993, with a NAFTA share in the total of 99.2% in 2008. Energy exports contributed almost 75% to the total growth of Alberta's exports during this period, a period that saw the export value of the province's top 20 products grow by 466.2%. Within HS 27, Crude Oil (2709) exports increased from \$5.6 billion in 1993 to 47.8 billion in 2008, with the corresponding figures for natural gas being \$6.3 billion and \$30.5 billion. Figure 4.1 (below) illustrates the growth of energy exports to the NAFTA partners; the spike in oil prices during 2007 and early 2008 is responsible for the surge in the value of crude oil exports during that period. In addition to favorable price developments during 2007 and 2008, we know that energy exports faced negligible obstacles in the US market. This part of Alberta's export success can, therefore, not be attributed to the FTAs, though an argument could be made that the FTAs improved investment climate, helping overcome the adverse effects of the National Energy Program on the energy sector..

**Table 4.1: Alberta's Top 20 Export Categories of 2008 (Millions \$CAD)**

HS	Description	1993		2008		Export Growth (%) 1993-2008	Contribution to Total Export Growth (%) 1993-2008	% NAFTA Share	
		Export Value	% of Total	Export Value	% of Total			1993	2008
27	Mineral Fuels	12,891.4	63.9	80,148.7	72.5	521.7	74.4	94.8	99.2
84	Machinery	481.8	2.4	4,445.2	4.0	822.7	4.4	35.2	59.3
39	Plastics	524.3	2.6	3,779.3	3.4	620.8	3.6	80.0	85.9
29	Organic Chemicals	721.0	3.6	2,564.7	2.3	255.7	2.0	54.4	63.0
10	Cereals	884.8	4.4	2,415.3	2.2	173.0	1.7	17.3	22.1
25	Salt, Sulfur, Earths, Stone,	171.5	0.9	1,947.7	1.8	1035.6	2.0	45.3	25.0
12	Misc. Grains, Seeds, Fruits	335.9	1.7	1,782.5	1.6	430.6	1.6	20.0	35.8
2	Meat	443.8	2.2	1,487.8	1.3	235.2	1.2	82.3	69.7
47	Woodpulp	412.9	2.0	1,429.0	1.3	246.1	1.1	31.4	54.7
73	Iron and Steel Products	77.6	0.4	885.2	0.8	1040.9	0.9	59.0	84.1
31	Fertilizers	218.8	1.1	823.5	0.7	276.4	0.7	92.7	91.3
75	Nickel and Products	56.8	0.3	784.1	0.7	1280.5	0.8	15.5	3.2
28	Inorganic Chemicals	136.3	0.7	771.9	0.7	466.2	0.7	83.2	91.5
85	Electrical machinery	372.7	1.8	747.3	0.7	100.5	0.4	70.9	52.9
90	Precision Instruments	136.9	0.7	644.7	0.6	370.9	0.6	38.6	57.0
1	Live Animals	551.8	2.7	627.8	0.6	13.8	0.1	99.7	98.0
15	Fats, Oils, Waxes	82.4	0.4	582.4	0.5	606.9	0.6	89.4	43.2
44	Wood	315.2	1.6	556.4	0.5	76.5	0.3	80.5	93.7
81	Base Metals, Cements	27.2	0.1	316.9	0.3	1066.3	0.3	0.4	1.9
11	Milling Products	61.8	0.3	302.7	0.3	389.4	0.3	1.8	5.3
<b>Top 20</b>		<b>18905.0</b>	<b>93.7</b>	<b>107043.1</b>	<b>96.8</b>	<b>466.2</b>	<b>97.4</b>	<b>82.3</b>	<b>88.7</b>
<b>Total Alberta</b>		<b>20168.0</b>	<b>100.0</b>	<b>110625.7</b>	<b>100</b>	<b>448.5</b>	<b>100.0</b>	<b>81.7</b>	<b>88.4</b>

**Figure 4.1\*: Alberta's Energy Exports to NAFTA Trading Partners 1993-2008**



\*Actual figures are included in appendix 4.

Other commodity-type products that are based on natural resources were also dominant in Alberta's overall export growth. Chapters 25, 73, 75, and 81 pertaining, respectively, to Minerals, Iron and Steel Products, Nickel, and

Base Metals/Cements all saw exports surge in excess of 1,000% during the observation period. Because these products typically serve as inputs in further stages of production, they tend to face relatively low customs tariffs in the countries of import. The NAFTA share of these products has increased significantly only in the case of iron and steel products, so that export success in these products is also not solely due to CUSFTA/NAFTA.

But there are some export success stories in unlikely chapters that are very encouraging and worthy of more detailed analysis. Focusing on high export growth with rising NAFTA share, we find major success stories in chapters 84, 39, 12, and 28, respectively pertaining to Machinery, Plastics, Grains and Seeds, and Inorganic Chemicals. While not as important in dollar value terms, all four show growth of over 400% with market share gains in North America, hence linking their success to the FTAs.

During the 15 years since NAFTA's inception in 1994 the NAFTA-share of the top 20 Alberta export product categories has risen from 82.3% to 88.7%. Notwithstanding the booming Asian demand for raw materials, the FTAs and a vigorous US economy combined to increase the importance of the US market for Alberta, a finding that needs to be tempered by recognizing the big role of energy exports to the US in the overall picture. Energy exports depend, of course, on the pipeline infrastructure that is in place. Diversification of Alberta's export markets for energy will require foresight and investments in appropriate infrastructure, but that topic is beyond the scope of the present review.

## 5. Alberta's Major Commodity-Based and Manufactured Exports

By 2008, a number of Alberta's non-energy commodity-based exports figure prominently in the provincial export picture in terms of their value. Focusing on the top 10 of these at the HS four-digit level of detail, Table 5.1 (below) reveals that certain products of the petrochemical, forestry, agriculture, and oil and gas industries now account for hundreds of millions of dollars in annual export revenues. It also shows that, with the exception of live animal shipments which were significantly restricted as a result of the BSE crisis and have not yet recovered to previously attained levels, there were very high growth rates for a number of these products, with Polyethylene, Woodpulp, Ammonia, Rapeseed, Hydrocarbons and Sulfur all showing growth rates in excess of 700% over the last 15 years.

**Table 5.1: Top 10 Commodity Exports Based on 2008 Values (Millions \$CAD)**

2008 Rank	HS	Description	1993	1998	2003	2008	% Change 1993-2008
1	3901	Polyethylene	361.5	359.1	1,446.4	2,933.9	711.6%
2	201	Beef Fresh/Chilled	238.7	779.5	936.3	828.3	247.0%
3	3102	Nitrogenous Fertilizers	199.4	388.8	287.4	746.9	274.6%
4	4703	Chemical Woodpulp, Soda or Sulfate	72.3	501.1	425.1	705.7	876.0%
5	2814	Ammonia	82.2	148.5	199.4	662.7	706.3%
6	102	Bovines	528.7	696.8	196.3	558.1	5.6%
7	1205	Rape of Colza Seeds	39.2	127.9	74.6	557.8	1,321.5%
8	2901	Acyclic hydrocarbons	0.3	77.6	207.4	555.7	18,260.0%
9	2902	Cyclic hydrocarbons	0.9	124.8	427.3	536.0	61,928.0%
10	2503	Sulphur	45.3	43.3	51.4	436.4	864.4%

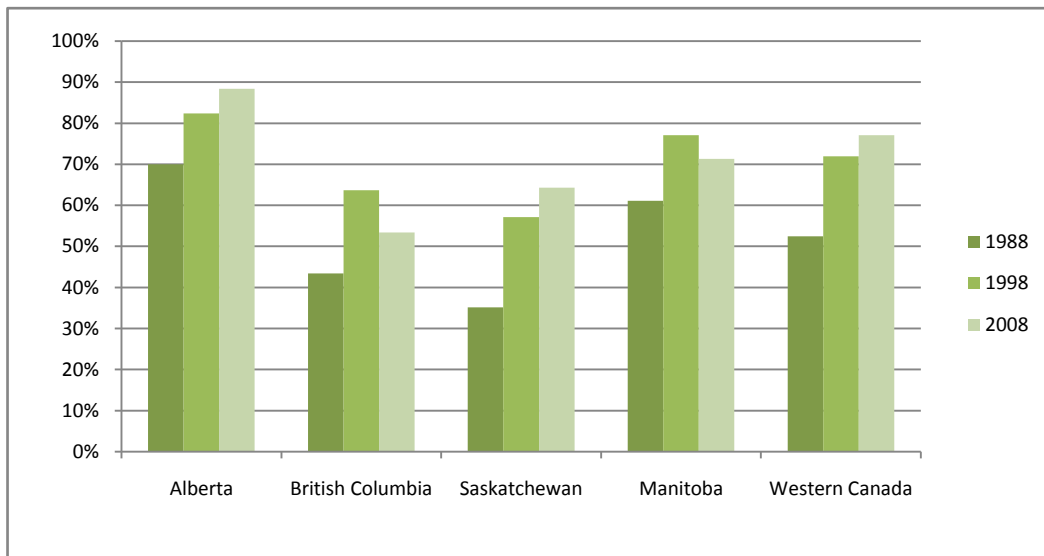
A positive development, namely strongly growing exports in certain HS chapters, emerged, as shown above in Table 4.1. Particularly pleasing is the rise of exports in HS 84 which covers Machinery Products, but exports in HS 85 and 90 have grown strongly. In 2008, the products in HS 84 occupied the second position after energy in value terms among the HS chapters for Alberta exports. For that reason a closer look is warranted at the types of products in this emerging Alberta manufacturing cluster. Table 5.2, below, lists the products that we surmise are attributable to a nascent Alberta manufacturing industry. Their export growth rates, albeit from small bases in 1993, and their 2008 export values indicate diversification in the direction of expertise that is ancillary to the oil and gas sector, globally applying techniques, processes and components that have proven successful in the local context. The product descriptors gleaned from the four-digit HS classification are suggestive of this: Pumps, Machinery, Taps, Instruments, Dryers, Pulleys, Computers, and Engines can be connected to the energy sector. As a group these exports have grown ten-fold in the last 15 years. Not unexpectedly, growth was slightly higher (50% over the entire 15 year period) for the NAFTA-destinations than for non-NAFTA trading partners. Secure access under FTAs and proximity combined for export success in North America.

**Table 5.2: Top 20 Manufactured NAFTA Exports Based on 2008 Values (Millions \$CAD)**

<b>2008 Rank</b>	<b>HS</b>	<b>Description</b>	<b>1993</b>	<b>1998</b>	<b>2003</b>	<b>2008</b>	<b>%Change 1993-2008</b>
1	8431	Parts for Machinery	28.0	158.8	138.2	658.1	2252.2%
2	8413	Pumps and Liquid Elevators	11.6	58.9	97.1	256.4	2,111.4%
3	8430	Machinery for Moving, Grading, Excavating	2.2	38.1	37.7	239.7	10,913.9%
4	8479	Special Machinery Appliances	4.0	35.2	63.7	212.2	5,168.3%
5	8412	Engines and Motors	18.1	47.1	96.0	196.6	984.0%
6	8411	Gas Turbines/Jeet Propellers	6.4	21.4	81.8	168.8	2,546.6%
7	8481	Taps and Valves for Pipes	10.5	47.2	95.8	163.0	1,452.9%
8	8414	Air and Vacumm Pumps	6.2	52.7	54.2	147.5	2,287.5%
9	8421	Machinery and Apparatus for Liquids and Gases	4.9	15.7	18.6	136.3	2,661.7%
10	9015	Surveying Instruments	3.6	48.2	60.1	135.6	3,650.3%
11	8517	Telephone Sets	116.6	256.5	341.7	104.9	-10.0%
12	8428	Machinery for Lifting, Handling, Loading	1.8	14.0	26.4	87.9	4,679.0%
13	9027	Instruments and Apparatus for Chemical/Physical Analysis	6.0	17.5	43.1	71.1	1,081.4%
14	8419	Dryers and Temperature Changing Apparatus	9.2	25.7	48.2	58.6	5,38.5%
15	8537	Boards and panel for Fuses and Circuit Breakers	0.6	26.8	23.7	46.0	7,405.4%
16	8483	Transmissions and Gears	1.1	7.5	23.7	42.8	3,849.0%
17	8425	Pulleys, Hoists, Winches, and Jacks	4.0	4.7	2.8	40.8	919.9%
18	8471	Computers and Peripherals	15.9	30.3	45.4	38.8	144.4%
19	9026	Instruments and Apparatus for Measuring Liquids/Gases	2.6	13.2	25.1	33.9	1,229.4%
20	9403	Furniture other than Medical	17.5	8.0	29.4	31.1	77.0%
<b>Total Top 20 Manufactured NAFTA Exports</b>			<b>253.3</b>	<b>919.4</b>	<b>1,323.2</b>	<b>2,839.1</b>	<b>1,020.9%</b>
<b>Total Manufactured NAFTA Exports</b>			<b>603.4</b>	<b>2,793.9</b>	<b>3,032.6</b>	<b>3,888.2</b>	<b>544.4%</b>
<b>Total NAFTA Exports</b>			<b>16,483.0</b>	<b>25,723.8</b>	<b>51,908.7</b>	<b>97,749.7</b>	<b>493.0%</b>

Strong growth of export products that are related to our most competitive industries is a welcome development for the Alberta economy. There is certainly evidence in the data that NAFTA-partners were better customers for Alberta during the period. If there is a downside to this success story it is the fact that Alberta has become more dependent on the US and Mexican markets. For British Columbia and Manitoba, this dependency has recently decreased, as Figure 5.1 (below) illustrates.

**Figure 5.1\*: NAFTA Exports as Proportion of Total Exports**



*\*Actual figures are included in appendix 3.*

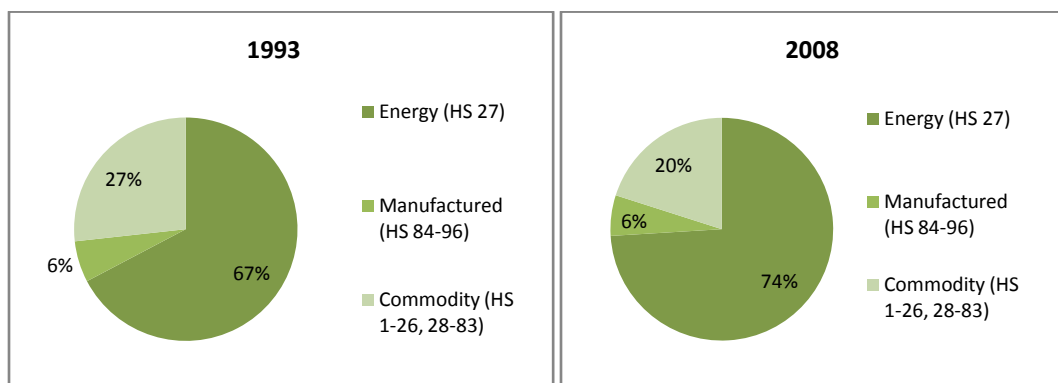
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## 6. Alberta's Global Export Composition by Product Type

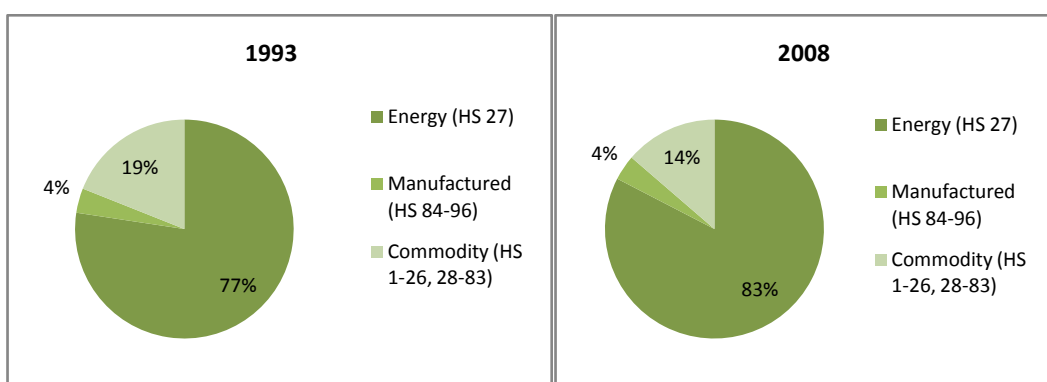
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To determine whether structural changes in the composition of exports are noticeable to NAFTA and non-NAFTA markets, Alberta's exports were divided into three groups, namely energy products, commodity-based processed products, and manufactured products. This grouping is coarse and not based on any widely applied standard definition, but used here to focus on the manufacturing sector. We consider HS 84-96 exports as more typically manufacturing products than HS 1-26 and HS 28-83 exports which tend to cover primary agricultural products, the output of extractive industries, and processed products, whereas HS 27 clearly involves energy exports. On the basis of this division and for total exports from the province, we observe in Figure 6.1 (below) that in the global context energy exports gained in prominence (67% to 74%), that commodity-based exports shrank in relative importance (27% to 20%), and that manufacturing exports held their own (at 6%). With almost all energy exports from Alberta going to the US, these conclusion also apply to exports to the NAFTA partners (see Figures 6.2 and 6.3, below).

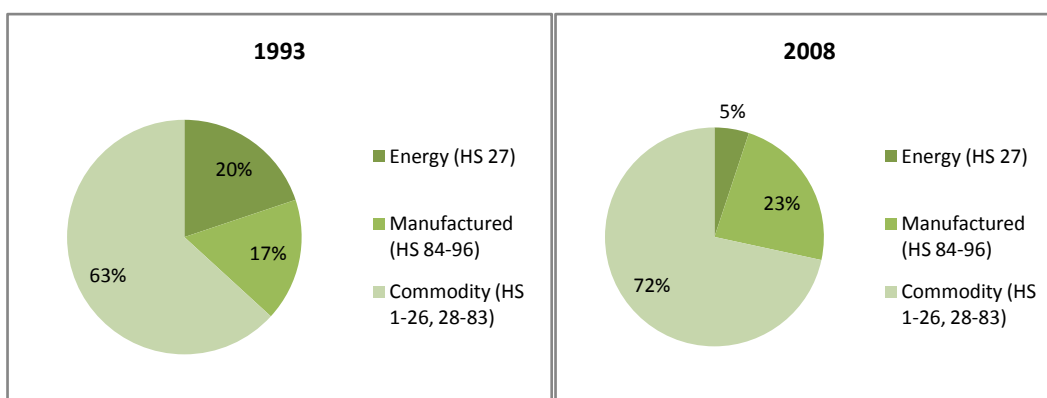
**Figure 6.1\*: Alberta's World Export Composition**



**Figure 6.2\*: Alberta's NAFTA Export Composition**



**Figure 6.3\*: Alberta's non-NAFTA Export Composition**



*\*Both the world and NAFTA export compositions for Alberta are based on the top 25 2-digit HS exports for the province. Given the relatively small values of remaining exports (less than 0.2% of total exports) this provides a very reasonable proxy.*

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## 7. Alberta's Exports to Mexico since 1993 (NAFTA)

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From a low level of merely \$85 million in 1993, Alberta's exports to Mexico climbed twelvefold to \$1,124 million in 2008. Despite this growth, they comprised still only 1.1% of the total exports to NAFTA partners; such is the importance of the US market for Alberta.

**Table 7.1: Alberta's Top Ten Exports to Mexico (Millions \$CAD)**

2008 Rank	HS	Description	1993	1998	2003	2008	%Change 1993-2008
1	12	Oil Seeds, Oleaginous Fruits	22.3	80.5	62.4	339.3	1,421.5%
2	84	Machinery	1.0	7.4	49.2	199.8	19,060.9%
3	2	Meat	4.7	10.7	115.0	157.8	3,278.3%
4	39	Plastics	0.1	8.1	19.6	110.2	86,229.6%
5	10	Cereals	23.4	56.5	48.5	74.1	216.3%
6	25	Salt, Sulfur, Earths, Stone	0.0	16.3	0.0	42.4	N/A
7	29	Organic Chemicals	0.0	0.0	23.4	36.1	N/A
8	47	Woodpulp	4.7	9.3	15.7	34.3	630.5%
9	85	Electrical Machinery	6.2	78.5	11.5	25.4	311.5%
10	11	Milling Products	1.1	0.5	13.2	16.1	1,366.1%
<b>Total Top Ten Mexico</b>			<b>63.5</b>	<b>267.8</b>	<b>358.4</b>	<b>1,035.5</b>	<b>1,529.8%</b>
<b>Total Exports Mexico</b>			<b>85.4</b>	<b>288.9</b>	<b>383.0</b>	<b>1,124.1</b>	<b>1,215.9%</b>

Notable, however, is the growth in the exports of Plastics (HS 39) and Machinery (HS 84). Due to relatively small initial values, these two categories of exports both grew well over 1,000 fold. Overall, exports from Alberta to Mexico have enjoyed significant growth, and Mexico has become a major market for Alberta.

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## 8. Alberta's Exports to Israel, Chile, and Costa Rica

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FTAs with Israel, Chile, and Costa Rica became effective in January 1997, June 1997, and November 2002, respectively. The development of Alberta's exports to these partners is shown in Figure 8.1 (below). These exports show considerable variability, with rising trends for Israel and Chile since 2003.

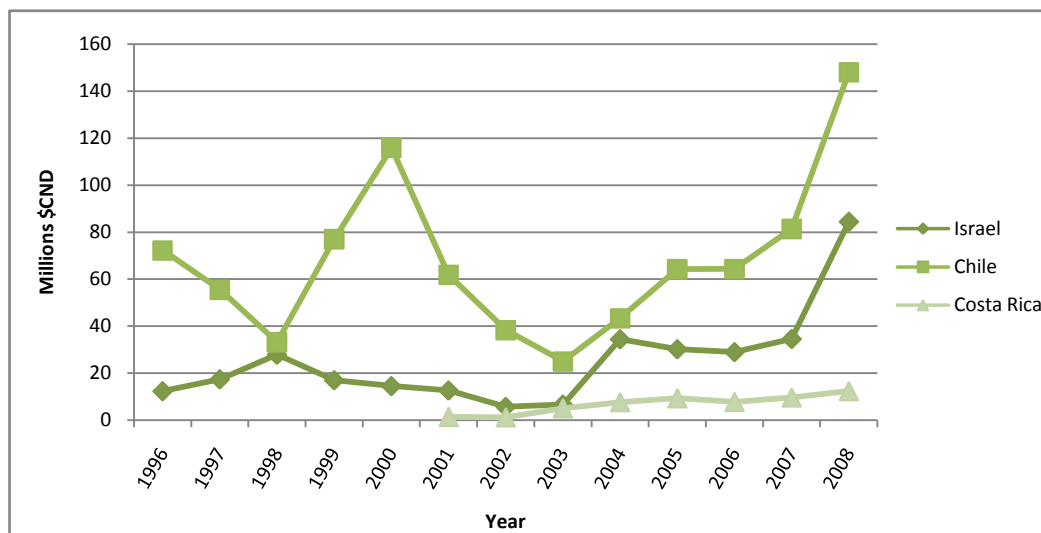
Exports to Israel of Minerals (HS 25) of \$4.8M in 1996 rose to become Alberta's top export at \$43.0 million in 2008, a growth rate of 796%. Interestingly, however, these were nonexistent over the period 2003-2007 when total exports to Israel were on the rise. Exports of Plastics (HS 39), which grew 275% from 1996 to \$12.0M in 2008, were the principal driver of growth from 2003-2007, and now stand as Alberta's third largest export to Israel. Energy (HS 27) exports also increased from a value of zero in 1996 to \$24.4M in 2008, to become the second most valuable export, but practically all of this growth occurred during the period 2007-2008. These three HS chapters constituted 94.1% of Alberta's export to Israel in 2008.

Similarly, a few notable HS chapters dominate Alberta's export trade with Chile. Minerals (HS 25), Energy (HS 27), and Plastics (HS 39), the first, fourth, and fifth largest export categories by their 2008 values, grew 446%, 958%, and 1,456%, respectively, since 1996. Exports of Iron and Steel (HS 72), which were negligible in 1996, became the third largest export in 2008 at \$19.3 million. Combined, these four categories accounted for roughly one-half of all exports to Chile in 2008.

Lastly, while trade with Costa Rica is quite small (less than 0.1% of total Alberta exports), two categories of exports, Milling Products (HS 11) and Plastics (HS 39), deserve attention. Ranked number one and two in terms of value in 2008, exports of the former grew 531% from 2001-2008, whereas the latter increased by 3,685% over the same period. Together, these product groups account for roughly one-half of all exports to Costa Rica from Alberta.

The composition of Alberta's exports to these FTA partners mirrors the province's trade with its NAFTA partners. Energy and commodities make up the greatest proportion of these exports.

**Figure 8.1\*: Alberta's Exports to other FTA Partners**



*\*Actual figures are included in Appendix 4.*

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## 9. US Market Share of Alberta and Western Canada's Exports

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China's inroads into the US market are frequently in the news. Do the gains of China come at the expense of Alberta exports or other Western Canadian exports? Have Alberta's exporters maintained their market share in the US? Table 9.1 (below) presents a snapshot of the developments regarding the US-market share of energy products, commodity-based exports, and manufacturing exports for Alberta and Western Canada as a whole. It is evident that for the period 1993-2008 Alberta has gained market share in manufacturing products (HS 84, 85) and commodity-based products (HS 28, 29, 39, 48, and 73), while surprisingly ceding market share in energy to competing suppliers. Yet Canada is still the largest energy supplier to the U.S. (USD \$75.2B in 2008). As Alberta's exports dominate those of the Western provinces, the market share results are similar for Western Canada as a region. While the US market share for Alberta's manufacturing exports is small, its significant growth is a very encouraging development. For this type of export, a 'thickening' of the border is a risk because the location of their production can be shifted to the US. Similarly, adverse exchange rate movements are a risk factor for these exports. On balance, the findings of this section strongly underscore the benefits that free trade has brought to Alberta's exporters and highlight the importance of an open border.

**Table 9.1\*: US Import Market Shares for Exports from Alberta and Western Canada**

Energy			
Western Canada		Alberta	
1993	2008	1993	2008
20.2%	18.5%	17.0%	15.3%

Manufactured Goods			
Western Canada		Alberta	
1993	2008	1993	2008
0.7%	1.0%	0.2%	0.4%

Commodities			
Western Canada		Alberta	
1993	2008	1993	2008
5.6%	5.6%	2.0%	3.7%

*\*US imports market shares for Western Canada and Alberta are derived using the top 20 2-digit HS export categories for each region and the top 25 (due to the highly diversified nature of US imports) 2-digit HS import categories for the US. In regards to energy, HS 27 values are used. For manufacturing, the sum of HS categories 84, 85, 87, 90, and 94 exports for each region are divided by the sum of US imports of these goods. The commodities included in the analysis are those that fall under HS 28, 29, 39, 48, and 73 categories.*

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## 10. Services Trade under the FTAs: Trends

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As had been indicated at the outset, while the CUSFTA and NAFTA did encourage trade in services, the data are not broken down according to province. Anecdotally one hears about the success of Alberta's consultancies and engineering companies in the US, especially during the period of weakness of the Canadian dollar. The aggregate data for exports and imports of commercial services for Canada show that the United States, on balance, was declining in relative importance both as a buyer (from 63.5% to 60.3%) and a seller (from 71.5% to 68.0%) over the years from 1993 to 2007.<sup>2</sup> The top commercial services, by 2008 values, that Canada provides to the U.S. are management, computer, information, architectural/engineering, and communication. Conversely, our largest commercial service imports from the U.S. are royalties and license fees, followed by management, financial, and business services. The flows of payments and receipts between Canada and the United States increased by 157% during that period, compared to a 172% increase in the total value of payments and receipts.

As the CUSFTA and NAFTA facilitated business travel, the issuance since 1994 of special NAFTA visas (TN Visas) among the partners was briefly analyzed. To the extent that such data are available (they are missing for 1997), the increasing issuance can be viewed as indirect evidence of growing business links and economic integration. We found that TN visas issued grew from 19,806 in 1994 to 88,382 in 2008, i.e. by 346%, outpacing total NAFTA export growth over the period of 165% by more than two to one.<sup>3</sup> While there was a serious decline in the rate of issuance of such visas for two years after September 11, 2001, the trend was generally upward and suggests that business travel has been facilitated by the FTAs and has grown at a rate roughly commensurate with the growth of overall exports from Canada to the NAFTA partners.

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<sup>2</sup> Commercial services trade figures are provided for the US only due to a lack of available data regarding commercial services trade with Mexico. Total services trade with Mexico is very small relative to that with the U.S., and thus has little bearing on the overall trend.

<sup>3</sup> Actual figures are provided in Appendix 5.

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## 11. A Brief Look at Western Canada's Imports under the NAFTA

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In concluding this review, one remaining point will be addressed. It could be suggested that Alberta's export success was due to the weakness of the Canadian dollar during most of the period under observation. If that had been the case, imports should have shown much smaller growth than exports, or even stagnation. Thus one way to address this issue is to analyze what has happened to imports during the period. As was previously stated, imports cannot reliably be attributed to individual provinces – B.C. showing very much larger imports than the other Western provinces – so total Western Canadian imports are resorted to as a proxy indicator variable. Total imports into Western Canada went from \$28.8 billion in 1993 to \$89.4 billion in 2008, a tripling during the 15 years since the start of NAFTA. This growth of imports contrasts to a more than quadrupling of exports from the Western provinces during the same period. This is reflected in an increase in the weight of the West in Canada's total exports from less than 30% to more than 40%. Allowing for the commodity price boom that primarily benefitted the West in growing export receipts, the growth rates of imports and exports reviewed here are sufficiently similar to suggest that trade was a two-way street. While Alberta's export growth was significantly aided by energy prices (and the weak Canadian dollar helped US-dollar denominated energy prices translate into higher export revenue in Canadian dollar terms), there is solid evidence that both imports and exports grew substantially and that exports to the NAFTA trading partners performed particularly well.

Western Canada's imports from non-NAFTA countries actually grew slightly faster than those from the NAFTA-partners, with the NAFTA-share declining from 65% in 1993 to 63% in 2008. The import data for Western Canada were introduced merely to refute the argument that the observed strong growth of exports under the FTAs was due to a weakening Canadian dollar. Since there was also strong growth of imports during the period of the FTAs, the argument loses much of its appeal.

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## 12. Conclusion

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The period of free trade from 1989 to 2008 coincided with a strong expansion of Alberta's exports. Our review shows that several factors contributed to this success. In addition to favorable trends in energy and commodity prices, the improved access to the US and Mexican markets that resulted from the CUSFTA and NAFTA are shown to be major causes of the positive development of Alberta's exports. In particular, the significant increase in manufacturing exports can be attributed to the free trade agreements because manufacturing products face higher tariffs in export markets than do raw materials and energy products. Alberta's manufacturing sector, therefore, emerges as a major beneficiary of freer trade. As a result, Alberta's economy has become more diversified into higher value-added export products. Even though this diversification is still related to the energy sector, it represents increased technological sophistication and human-capital intensity, and this is welcome.

Alberta's export success has made it more dependent on NAFTA markets and, therefore, more susceptible to economic downturns originating in the US, as recent experience has shown. Protectionism and difficulties at the US border are the challenges that now loom. Yet, the opportunities that freer trade brought and that led to Alberta's export success over the last 20 years have been a very good news story for all Albertans. The benefits of freer trade are, of course, much higher than just the additional export revenue and the related job creation. A full compilation of the benefits of freer trade would have to include the increased purchasing power of Alberta households that derived from access to lower priced imported products. That task, however, is beyond our mandated focus on exports.

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## Appendix 1a. Exports from Canada and the Western Provinces

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### Exports from Canada and the Western Provinces (Billions \$CAD)

Year	Western Canada Total Exports	Canada Total Exports	Western Canada Share of Total Exports
1988	39.8	143.5	27.8%
1989	39.2	147.0	26.7%
1990	41.3	152.1	27.2%
1991	41.2	147.7	27.9%
1992	45.4	163.5	27.8%
1993	50.0	190.2	26.3%
1994	60.0	228.2	26.3%
1995	70.8	265.3	26.7%
1996	74.4	280.1	26.6%
1997	79.3	303.4	26.2%
1998	76.2	327.2	23.3%
1999	83.1	369.0	22.5%
2000	113.7	429.4	26.5%
2001	111.9	420.7	26.6%
2002	100.5	414.0	24.3%
2003	106.7	399.1	26.7%
2004	119.7	429.0	27.9%
2005	137.4	450.2	30.5%
2006	140.7	454.0	31.0%
2007	147.3	463.1	31.8%
2008	187.2	489.9	38.2%
<b>Growth 1988-2008</b>	<b>369.8%</b>	<b>241.3%</b>	<b>37.7%</b>

*Total export figures for Western Canada are provided by TDO. Those for Canada are from CANSIM series V647593.*

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## Appendix 1b: National, Regional, and Provincial Growth in GDP and Export Values

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Canada			Western Canada				Alberta				
Year	GDP	Total Export Value	Year	GDP	Total Export Value	NAFTA Export Value	Year	GDP	Total Export Value	NAFTA Export Value	Non-NAFTA Export Value
1989	7.3%	2.4%	1989	6.9%	-1.5%	4.3%	1989	5.4%	2.8%	8.8%	-11.3%
1990	3.4%	3.5%	1990	6.3%	5.4%	9.1%	1990	8.7%	13.4%	16.4%	4.9%
1991	0.8%	-2.9%	1991	1.1%	-0.2%	0.2%	1991	-0.5%	6.0%	3.6%	13.6%
1992	2.2%	10.7%	1992	3.8%	10.0%	17.4%	1992	2.8%	11.1%	16.5%	-4.7%
1993	3.8%	16.4%	1993	7.2%	10.2%	19.8%	1993	8.3%	10.6%	15.9%	-8.3%
1994	6.0%	20.0%	1994	7.3%	19.9%	18.7%	1994	8.5%	16.6%	14.2%	27.2%
1995	5.1%	16.3%	1995	5.1%	18.1%	13.0%	1995	4.5%	18.2%	15.3%	29.6%
1996	3.3%	5.6%	1996	5.5%	5.0%	11.5%	1996	7.2%	15.5%	18.9%	3.2%
1997	5.5%	8.3%	1997	5.8%	6.7%	7.9%	1997	8.5%	5.0%	5.8%	1.6%
1998	3.7%	7.8%	1998	1.2%	-4.0%	1.4%	1998	0.4%	-7.3%	-5.8%	-13.8%
1999	7.4%	12.8%	1999	6.0%	9.0%	13.9%	1999	9.0%	12.0%	15.1%	-2.6%
2000	9.6%	16.4%	2000	14.4%	36.9%	43.0%	2000	23.7%	59.8%	67.3%	18.3%
2001	2.9%	-2.0%	2001	2.6%	-1.6%	0.5%	2001	4.5%	3.0%	4.2%	-6.5%
2002	4.0%	-1.6%	2002	1.9%	-10.2%	-11.0%	2002	-0.4%	-13.9%	-14.9%	-4.6%
2003	5.2%	-3.6%	2003	8.4%	6.2%	7.4%	2003	13.0%	16.3%	18.2%	1.4%
2004	6.4%	7.5%	2004	9.8%	12.2%	10.4%	2004	11.5%	12.0%	9.7%	32.6%
2005	6.3%	4.9%	2005	11.1%	14.8%	16.6%	2005	16.2%	19.9%	21.5%	7.9%
2006	5.7%	0.8%	2006	8.1%	2.4%	0.4%	2006	8.7%	2.1%	1.3%	8.8%
2007	5.9%	2.0%	2007	7.4%	4.7%	1.7%	2007	8.1%	4.7%	2.6%	21.7%
2008	4.4%	5.8%	2008	9.9%	27.0%	28.0%	2008	12.6%	33.7%	36.0%	18.6%
<b>Average Annual Growth Rate</b>	<b>5.2%</b>	<b>6.9%</b>	<b>Average Annual Growth Rate</b>	<b>6.8%</b>	<b>9.0%</b>	<b>11.3%</b>	<b>Average Annual Growth Rate</b>	<b>8.4%</b>	<b>12.7%</b>	<b>14.2%</b>	<b>6.9%</b>

Export growth rates for the above three regions are derived from Statistics Canada data that is available from the Trade Data Online (TDO) website. CANSIM series V687341 provides annual GDP figures for Canada, which are used to determine annual growth rates, whereas series V687647 provides the analogous data for Alberta. GDP growth rates for Western Canada are derived from the sum of provincial GDP figures for Alberta, British Columbia, Saskatchewan, and Manitoba, provided by series V687647, V687681, V687613, and V687579 respectively.

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## Appendix 2: NAFTA and non-NAFTA Exports

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**Total Exports to NAFTA Trading Partners (Billions \$CAD)**

Year	Alberta	B.C.	Sask.	Manitoba	Western Canada
1988	9.3	7.7	2.0	1.9	20.9
1989	10.1	7.5	2.2	2.0	21.8
1990	11.8	7.5	2.5	2.0	23.8
1991	12.2	7.2	2.4	2.0	23.8
1992	14.2	8.5	2.9	2.3	28.0
1993	16.5	10.8	3.5	2.7	33.5
1994	18.8	13.2	4.1	3.6	39.8
1995	21.7	14.4	4.5	4.3	44.9
1996	25.8	14.6	5.0	4.7	50.1
1997	27.3	15.4	5.8	5.5	54.0
1998	25.7	17.1	5.7	6.3	54.8
1999	29.6	20.3	5.8	6.7	62.4
2000	49.5	23.7	7.9	8.1	89.2
2001	51.6	23.1	7.1	7.8	89.7
2002	43.9	20.8	7.2	7.9	79.8
2003	51.9	19.6	6.8	7.3	85.7
2004	56.9	21.1	9.4	7.2	94.6
2005	69.2	23.2	10.7	7.3	110.3
2006	70.1	21.5	11.2	7.9	110.8
2007	71.9	19.6	12.4	8.8	112.6
2008	97.7	18.0	19.3	9.2	144.2
<b>% Change 1988-2008</b>	<b>952.2%</b>	<b>134.1%</b>	<b>851.7%</b>	<b>383.9%</b>	<b>590.4%</b>

**Total Exports to non-NAFTA Trading Partners (Billions \$CAD)**

Year	Alberta	B.C.	Sask.	Manitoba	Western Canada
1988	4.0	10.0	3.8	1.2	19.0
1989	3.5	10.6	2.3	1.1	17.5
1990	3.7	9.7	3.0	1.2	17.6
1991	4.2	8.6	3.4	1.2	17.4
1992	4.0	8.4	3.7	1.3	17.4
1993	3.7	9.1	2.6	1.1	16.5
1994	4.7	10.8	3.5	1.2	20.2
1995	6.1	13.9	4.4	1.4	25.9
1996	6.3	12.0	4.3	1.6	24.3
1997	6.4	12.0	5.1	1.8	25.3
1998	5.5	9.8	4.3	1.9	21.4
1999	5.3	9.9	4.0	1.4	20.6
2000	6.3	11.8	4.7	1.6	24.4
2001	5.9	9.8	4.6	1.9	22.2
2002	5.7	9.3	4.1	1.7	20.7
2003	5.7	9.7	3.6	2.0	21.0
2004	7.6	11.2	4.1	2.2	25.1
2005	8.2	12.4	4.3	2.2	27.0
2006	8.9	13.3	5.2	2.5	29.9
2007	10.9	12.8	7.3	3.7	34.7
2008	12.9	15.7	10.7	3.7	42.9
<b>% Change 1988-2008</b>	<b>222.7%</b>	<b>56.6%</b>	<b>185.5%</b>	<b>205.9%</b>	<b>126.6%</b>

Exports to Mexico are included from 1988-1993, prior to the formation of NAFTA. This allows for simple analysis, and due to their small values, does not affect the overall picture in any significant way. All provincial NAFTA and non-NAFTA export figures are provided by TDO.

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## Appendix 3: NAFTA Export Shares

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Year	Alberta	British Columbia	Saskatchewan	Manitoba	Western Canada	Year	Western Canada Share of NAFTA Exports	Alberta Share of Canadian NAFTA Exports
1988	70.0%	43.4%	35.1%	61.1%	52.4%	-	-	-
1989	74.1%	41.5%	48.8%	65.3%	55.5%	-	-	-
1990	76.0%	43.6%	45.4%	63.0%	57.5%	-	-	-
1991	74.3%	45.7%	41.5%	61.9%	57.8%	-	-	-
1992	78.0%	50.5%	44.0%	63.7%	61.6%	-	-	-
1993	81.7%	54.3%	57.2%	70.9%	67.0%	1993	28.5%	14.0%
1994	80.1%	55.1%	54.2%	74.8%	66.3%	1994	29.4%	13.9%
1995	78.1%	50.8%	50.7%	75.0%	63.5%	1995	29.5%	14.2%
1996	80.5%	54.8%	53.5%	74.3%	67.4%	1996	30.4%	15.6%
1997	81.1%	56.3%	53.1%	75.0%	68.1%	1997	30.5%	15.4%
1998	82.4%	63.7%	57.1%	77.1%	71.9%	1998	29.9%	14.0%
1999	84.7%	67.3%	59.5%	82.2%	75.2%	1999	29.9%	14.2%
2000	88.7%	66.8%	62.8%	83.4%	78.5%	2000	36.6%	20.3%
2001	89.7%	70.1%	60.9%	80.5%	80.1%	2001	39.0%	22.4%
2002	88.6%	69.1%	63.9%	82.4%	79.4%	2002	35.9%	19.7%
2003	90.1%	66.9%	65.7%	78.3%	80.3%	2003	36.4%	22.1%
2004	88.2%	65.3%	69.5%	76.6%	79.0%	2004	35.0%	21.0%
2005	89.4%	65.2%	71.4%	76.9%	80.3%	2005	36.1%	22.7%
2006	88.7%	61.8%	68.3%	76.2%	78.7%	2006	34.5%	21.8%
2007	86.9%	60.4%	62.9%	70.5%	76.4%	2007	33.5%	21.4%
2008	88.4%	53.4%	64.3%	71.3%	77.1%	2008	40.3%	27.3%
<b>Share Growth 1988-2008</b>	<b>26.3%</b>	<b>23.0%</b>	<b>83.2%</b>	<b>16.7%</b>	<b>47.0%</b>	<b>Share Growth 1993-2008</b>	<b>41.4%</b>	<b>95.0%</b>

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## Appendix 4: Alberta's Exports

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**Alberta's Energy Exports to US  
(Billions \$CAD)**

Year	Crude Oil	Natural Gases
1993	5.6	6.3
1994	5.6	7.0
1995	7.1	7.0
1996	8.2	9.1
1997	8.5	9.8
1998	6.7	8.6
1999	7.7	10.1
2000	14.9	18.6
2001	12.6	23.1
2002	12.7	17.0
2003	15.9	23.6
2004	17.1	25.1
2005	20.7	32.4
2006	26.9	25.8
2007	27.9	26.6
2008	47.8	30.5
<b>Growth 1993-2008</b>	<b>753.6%</b>	<b>384.1%</b>

**Alberta Exports to FTA Partners  
(Millions \$CAD)**

Year	Israel	Chile	Costa Rica
1996	12.4	72.2	-
1997	17.4	55.5	-
1998	27.9	33.2	-
1999	17.0	77.0	-
2000	14.5	115.9	-
2001	12.7	61.8	1.4
2002	5.7	38.4	1.3
2003	6.7	25.0	5.1
2004	34.5	43.3	7.7
2005	30.2	64.2	9.4
2006	29.0	64.4	7.8
2007	34.6	81.4	9.7
2008	84.4	148.0	12.4
<b>Period Growth</b>	<b>580.6%</b>	<b>105.0%</b>	<b>769.8%</b>

Alberta energy exports to the US are provided by TDO. Crude Oil and Natural Gases are both under the 2-digit HS category 27, and correspond to the 4-digit HS subcategories 2709 and 2711, respectively. Alberta exports to FTA partners Israel, Chile, and Costa Rica are also provided by TDO.

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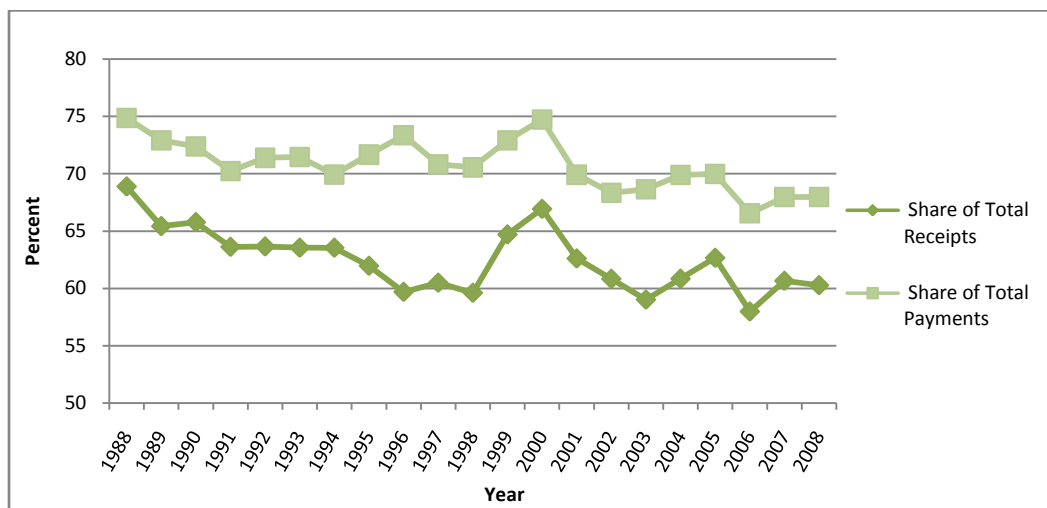
## Appendix 5: Services Trade

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### Canada: Commercial Services Trade (Millions \$CAD)

Year	Total Receipts	U.S. Receipts	Total Payments	U.S. Payments	U.S. Share of Total Receipts	U.S. Share of Total Payments
1988	7,963	5,485	10,722	8,027	68.9%	74.9%
1989	8,479	5,547	11,995	8,747	65.4%	72.9%
1990	9,061	5,959	12,554	9,086	65.8%	72.4%
1991	9,814	6,243	13,208	9,275	63.6%	70.2%
1992	11,080	7,052	14,050	10,031	63.6%	71.4%
1993	13,113	8,332	16,859	12,046	63.5%	71.5%
1994	15,492	9,843	19,602	13,706	63.5%	69.9%
1995	16,805	10,412	20,260	14,520	62.0%	71.7%
1996	19,357	11,553	22,381	16,420	59.7%	73.4%
1997	21,921	13,259	24,658	17,464	60.5%	70.8%
1998	25,882	15,426	28,041	19,784	59.6%	70.6%
1999	27,483	17,780	30,110	21,955	64.7%	72.9%
2000	31,101	20,813	32,366	24,187	66.9%	74.7%
2001	31,545	19,747	34,477	24,104	62.6%	69.9%
2002	34,246	20,829	36,903	25,218	60.8%	68.3%
2003	35,513	20,957	39,109	26,846	59.0%	68.6%
2004	35,765	21,758	39,284	27,459	60.8%	69.9%
2005	37,439	23,457	39,231	27,452	62.7%	70.0%
2006	38,395	22,259	39,653	26,389	58.0%	66.5%
2007	39,627	24,033	41,120	27,951	60.6%	68.0%
2008	39,974	24,091	41,484	28,200	60.3%	68.0%
<b>Growth 1988-2008</b>	<b>402.0%</b>	<b>339.2%</b>	<b>286.9%</b>	<b>251.3%</b>	<b>-12.5%</b>	<b>-9.2%</b>

### Canada: U.S. Share of Total Commercial Services Trade

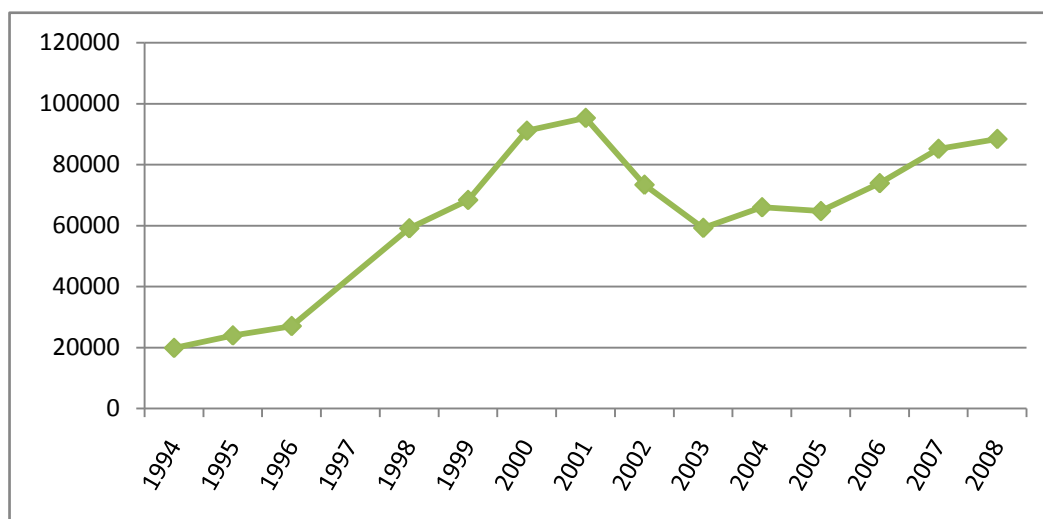


The figures for total commercial services receipts (payments) are from CANSIM series V149622 (V149655). The analogous figures for the U.S. are from series V149817 (V149916).

## Trade in Commercial Services

Year	TN Visas Issued in US
1994	19,806
1995	23,904
1996	26,987
1997	*
1998	59,061
1999	68,354
2000	91,082
2001	95,287
2002	73,360
2003	59,201
2004	65,970
2005	64,713
2006	73,880
2007	85,142
2008	88,382
<b>Growth 1994-2008</b>	<b>346%</b>

### NAFTA Professional (TN) Visas Issued in US\*

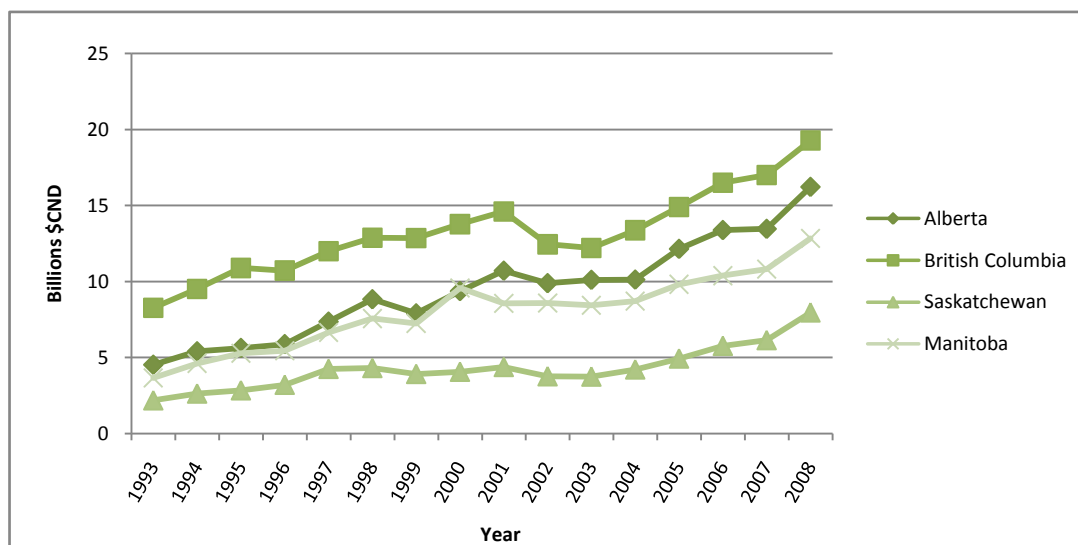


\*The figure for TN Visas issued in 1997 is suppressed for confidentiality.

## Appendix 6: NAFTA and non-NAFTA Imports

Year	Alberta		British Columbia		Saskatchewan		Manitoba		Western Canada	
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share
1993	4.53	82.7%	8.27	49.8%	2.19	90.8%	3.66	84.6%	18.64	64.7%
1994	5.41	81.4%	9.51	52.2%	2.63	90.8%	4.62	87.4%	22.16	67.1%
1995	5.63	79.6%	10.88	55.5%	2.84	89.8%	5.28	86.8%	24.63	68.6%
1996	5.88	78.4%	10.72	55.2%	3.21	88.9%	5.45	86.2%	25.25	68.6%
1997	7.36	79.6%	11.98	51.3%	4.25	92.7%	6.65	77.9%	30.24	66.2%
1998	8.83	81.8%	12.88	50.0%	4.31	93.3%	7.57	81.6%	33.59	66.6%
1999	7.90	76.5%	12.85	47.3%	3.92	92.3%	7.25	86.5%	31.92	63.7%
2000	9.37	77.5%	13.77	44.7%	4.06	92.7%	9.58	87.9%	36.78	63.2%
2001	10.71	78.6%	14.60	46.1%	4.38	90.9%	8.57	81.9%	38.26	63.2%
2002	9.89	76.3%	12.44	39.5%	3.77	90.8%	8.58	75.7%	34.68	57.8%
2003	10.11	76.3%	12.20	39.0%	3.74	90.2%	8.43	81.1%	34.49	58.4%
2004	10.13	74.2%	13.37	40.6%	4.21	90.3%	8.71	82.4%	36.41	59.0%
2005	12.15	73.8%	14.89	42.2%	4.93	88.1%	9.81	83.2%	41.79	60.4%
2006	13.39	72.3%	16.50	42.4%	5.77	89.2%	10.38	83.6%	46.03	60.3%
2007	13.46	72.7%	17.00	43.9%	6.14	88.2%	10.81	82.2%	47.42	61.3%
2008	16.23	73.3%	19.27	44.8%	7.96	88.2%	12.83	83.9%	56.29	62.9%
% Change 1993-2008	258.6%	-11.4%	133.1%	-10.1%	264.3%	-2.9%	250.3%	-0.9%	202.0%	-2.8%

### Western Canada: NAFTA Imports by Province



\*All figures are provided by TDO.

**Non-NAFTA Imports (Billions \$CAD)**

<b>Year</b>	<b>Alberta</b>	<b>British Columbia</b>	<b>Saskatchewan</b>	<b>Manitoba</b>	<b>Western Canada</b>
1993	0.94	8.32	0.22	0.67	10.15
1994	1.24	8.71	0.27	0.66	10.88
1995	1.44	8.72	0.32	0.80	11.28
1996	1.62	8.68	0.40	0.87	11.58
1997	1.89	11.37	0.33	1.89	15.48
1998	1.97	12.86	0.31	1.71	16.85
1999	2.43	14.32	0.33	1.13	18.20
2000	2.71	17.03	0.32	1.32	21.39
2001	2.92	17.04	0.44	1.89	22.29
2002	3.07	19.09	0.38	2.76	25.30
2003	3.15	19.07	0.41	1.97	24.59
2004	3.51	19.52	0.45	1.86	25.35
2005	4.31	20.40	0.66	1.98	27.36
2006	5.12	22.40	0.70	2.04	30.26
2007	5.05	21.71	0.82	2.34	29.92
2008	5.90	23.72	1.07	2.47	33.15
<b>% Change 1993-2008</b>	<b>524.8%</b>	<b>185.2%</b>	<b>382.5%</b>	<b>269.9%</b>	<b>226.7%</b>

*\*All figures are provided by TDO.*