NUMBER 49 • MAY 1998

THE ALBERTA AND WESTERN CANADA EXPORT EXPERIENCE UNDER THE FREE TRADE AGREEMENTS: 1988-1997

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Canadian Cataloguing in Publication Data

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The Alberta and western Canada export experience under the Free Trade Agreements: 1988-97

(Information bulletin ; no. 49)
ISBN 1-55195-047-2

1. Free trade--Alberta. 2. Free trade--Canada, Western. 3. Free trade--United States. 4. Alberta--Commerce--United States. 5. United States--Commerce--Alberta. 6. Canada, Western--Commerce--United States. 7. United States--Commerce--Canada, Western. I. Chambers, Edward J. II. University of Alberta. Western Centre for Economic Research. III. Title. IV. Series: Information bulletin (University of Alberta. Western Centre for Economic Research) ; no. 49.
HF1769-W48J36 1998 382-7’1’097123 C98-910552-0

EXECUTIVE SUMMARY

1. Over the 1988-97 period, Alberta merchandise exports to all foreign countries rose by $20.32 billion, an increase of 156%. This growth was, by a substantial margin, the strongest and most sustained of the western provinces. Of this growth, $17.97 billion, or 88%, resulted from increased sales to the U.S. market.
2. Alberta is the export leader in Western Canada. Global exports in 1997 rose by 8.3% over 1996 and now account for just over 44% of total western Canadian exports.
3. Since 1994's NAFTA agreement, Alberta's merchandise exports to both the U.S. and Mexico have increased by 46%, or, $8.5 billion and $100 million, respectively.
4. In Alberta, the top five export categories (energy, cereals, electrical equipment, organic chemicals and sawn lumber) accounted for 73% of the value of all exports in 1997. The next top fifteen export categories account for an additional 22% of export values. Data for Alberta, the other provinces and for the region is found in Figures 3 through 7 of this report.
5. Slightly more than three-fifths of the growth in total exports between 1988 and 1997 was directly attributable to the energy industry.
6. Greater access to the U.S. market for all provinces has been important to export growth. U.S. market share increased for the top twenty exports of each province. More than four-fifths of Alberta's top twenty exports now go to the U.S. market compared with some 70% in 1988.
7. All provinces showed an increase in export performance on a per employee basis. Exports per employed Albertan amounted, in 1997, to $22,875. The Western Canadian average was $17,810.
8. For Alberta, the weighted export price-index weakened by about 7% in 1997.
9. The group of value-added exports tracked in this annual series of export studies now accounts for over 10% of the value of total Alberta merchandise exports compared with only 4% in 1988.
10. Crude oil and gas exports, combined, accounted for $19.22 billion in export value in 1997, an increase of almost 8% over 1996. U.S. market share rose from 93.0% in 1988 to 97.0% in 1997.
11. During 1997 Alberta's exports of wood, pulp and paper products grew after a mixed performance in 1996. Exports of wood products rose by almost 11%, while the value of woodpulp exports increased by almost 33%. Paper and paperboard exports grew in value by almost 13%. The wood and woodpulp categories rose to take the 5th and 6th position, respectively, in Alberta's list of top twenty exports.
12. Meat exports rose by close to 29% reaching $944 million.
13. Machinery and parts exports leveled off in 1997 after rising by almost one-third in 1996. U.S. market share in this sector increased from 54.6% in 1988 to 64.8% in 1997.

14. Exports of electrical equipment and parts (mostly telecommunications equipment) stabilized in 1997 after doubling in the 1995-96 period. U.S. market share increased again in 1997 and now stands at over 85% which is a 20% increase since 1988.
15. The optical, measuring and precision instruments sector continued to grow with the value of shipments expanding by almost 14% in 1997. U.S. market share in this sector has declined slightly since 1988, from 40.5% to 37.1% in 1997.
16. Alberta exports to Mexico rose by 10.5% in 1997, but Mexico remains a small market for merchandise exports.
17. Alberta exports to Chile are small but growing. Since 1994, the export value has increased by $10.5 million, or 24%. Alberta's strengthened investment ties with Chile should induce subsequent exports.

INTRODUCTION

This Report is the latest in an annual series on Western Canada and the recent free trade agreements (both the FTA and NAFTA). The annual series reviews the merchandise exports of Alberta and other western Canadian provinces in the years since the FTA came into effect in 1989. Like previous reports, the year 1988 has been employed as a benchmark against which to assess growth in aggregate exports as well as in some 98 categories of shipments from the western provinces to the United States and to other parts of the world.

The North American Free Trade Agreement (NAFTA) superseded the FTA in 1994 and, as a consequence, Mexico became a partner in North American free trade. This year's annual report will summarize the experience of the last year and draw some comparisons with provincial export performance since 1988. In addition, there are updates of the top twenty exports (1997 ranking) for Alberta and the three other western provinces. The region's top merchandise exports are then charted so that their individual contribution to the value of global exports can be assessed. U.S. market shares over the 1988-1997 period are reported and brief examinations of the performance of selected Alberta exports are also provided. The report concludes with an overview of merchandise exports to Mexico and Chile.

This report does not include data on service exports, the sources of which remain very limited. This year we have included a section on export prices for Alberta (Figure 3) covering 84% of the province's exports. An aggregate price index weighted by current export values is provided for the four years 1994-1997. The index consists of energy, chemical, forestry, agriculture, food processing, and telecommunications components. Estimates of the effects of price and volume changes on export shipments in selected Harmonized System (HS) categories are contained in relevant sections of the report.

Currency values can also directly affect the competitiveness and producer profitability of Western Canadian exports, particularly with respect to price sensitive raw materials and commodity grade manufactures where the world price is quoted in U.S. dollars. Over the last two years movements in the Canadian $/U.S. $ annual average exchange rate have been small. In 1995 the rate fell by 0.45%; in 1996 the rate rose by 0.69%, while in 1997 the rate fell by 0.79%. Most of the 1997 rate decline was accounted for by changes in the fourth quarter of the year. The relative stability of recent annual average rates contrasts with 1994 when the dollar fell 6.2% against its U.S. counterpart.

THE FTA / NAFTA EXPERIENCE FROM 1988-1997: AGGREGATE EXPORT VALUES

The first section of this report contains data of the value of Alberta and other Western Canadian merchandise exports. Figure 2 shows that aggregate merchandise exports from Western Canada rose to $76.71 billion in 1997, an increase of 96.2% over the 1988 level of $39.11 billion. The increase in 1997 over 1996 for Western Canada as a whole was $5.9 billion, or 8.3%. This compares with an annual increase in 1996 of $3.18 billion or 4.7%.

Alberta's export values reflect an increase of 156.2% and 8.3% respectively over 1988 and 1996. In 1997, Alberta shipments of $33.33 billion were $6.8 billion higher than British Columbia's $26.57 billion. Alberta's share of total Western Canadian exports has been rising steadily since 1988 (see Figure 2.1) and only recently has shown signs of levelling-off at just over two fifths of the region's total, or 43.5%. Effectively, for every $100 shipped to foreign countries from western Canada, $43.50 originated in the province of Alberta. Given the current economic turbulence in Asia and by extension, British Columbia—which is much more reliant than the other western provinces on trade with Pacific Rim countries—we expect Alberta's share of the region's exports to grow even larger.

Figure 1 shows 1997 provincial exports converted to an index basis in order to allow an easy comparison of export growth rates. Merchandise export values in 1988 are set at 100 for each province. The Alberta index in 1997 stood at 256.2, a substantially higher margin than the index values for Saskatchewan (170.2), British Columbia (152.5), and Manitoba (240.9). The annual index for Alberta has exceeded that of the other provinces throughout the entire period.

Figure 1. Index of Provincial Export Values in 1997 (1988 = 100)

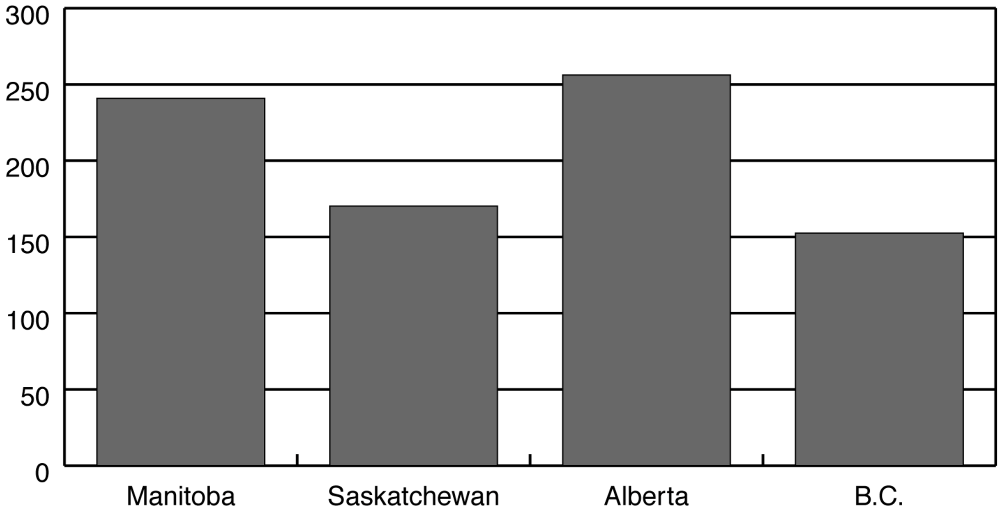

Figure 1.1 (below) shows the historical trend of the export value index for each western province. The consistent rise in Alberta is notable, but so too is the general improvement in western Canada's export performance. While the other provinces have had periods of slow or negative export growth, the overall record at the regional level is very positive. Alberta's share of the region's exports is also shown in Figure 2.1 (next page).

Figure 1.1. Index of Export Value by Province, 1988-1996 (1988 = 100)

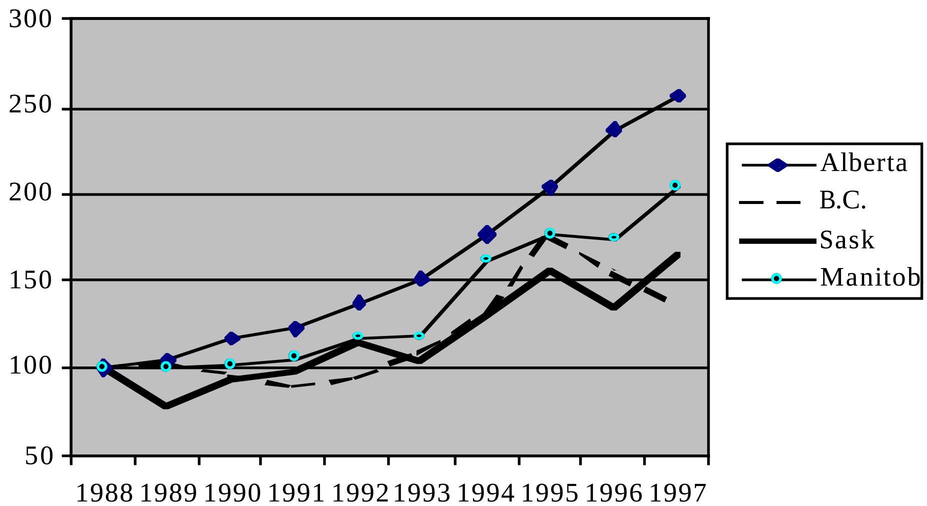

Figure 2.1. Alberta Exports as Percent of Western Canada's Exports

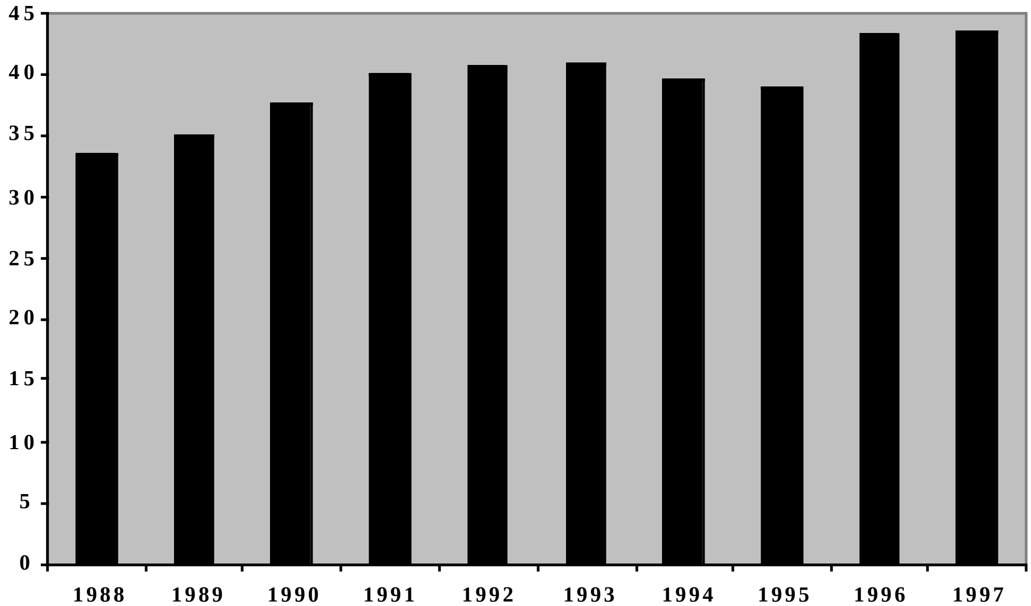

Figure 2. Dollar value of merchandise exports, western Canada and the four provinces, 1988-96 (values in $ billions)

Year	Alberta	B.C.	Sask.	Manitoba	W. Canada
1988	13.008	17.419	5.767	2.916	39.110
1989	13.490	17.802	4.490	2.929	38.711
1990	15.191	16.650	5.401	2.969	40.211
1991	16.029	15.300	5.691	3.079	40.099
1992	17.884	16.358	6.586	3.430	44.258
1993	19.688	18.996	5.981	3.435	48.100
1994	23.008	22.812	7.442	4.730	57.992
1995	26.543	26.934	8.778	5.439	67.694
1996	30.783	25.197	8.908	5.986	70.874
1997	33.330	26.566	9.804	7.008	76.708

From TIERS

Figure 3. Comparison of total exports from the provinces and shares to the U.S. market 1988, 1996, and 1997 ($ millions)

Province	'88 Total Exports	'96 Total Exports	'97 Total Exports	Growth 1988-97	'88 U.S. Market Share %	'96 U.S. Market Share %	'97 U.S. Market Share %
AB	13,009	30,783	33,330	20,321	69.5	83.7	81.0
Ex HS 10*	11,758	29,422	31,650	19,892	76.4	83.7	81.4
BC	17,419	25,196	26,566	7,778	42.7	54.8	54.8
Ex HS 10	17,384	25,165	26,521	7,813	42.7	54.8	51.9
MB	2,909	5,972	7,008	4,099	58.1	74.9	76.3
Ex HS 10	2,250	5,342	6,235	3,985	74.3	81.5	82.9
SK	5,760	8,905	9,804	4,044	33.8	53.7	55.5
Ex HS 10	2,890	6,250	7,073	4,183	65.3	70.4	70.1
Total West	39,097	70,856	76,708	36,242	51.4	67.6	67.3
Ex HS 10	34,282	66,179	71,479	35,873	52.6	65.4	70.9

From TIERS and the Western Centre for Economic Research

*HS 10 (cereals) is excluded because it is a significant category that goes largely to non--U.S. markets and has a supply driven volatility resulting from changes in climatic condition.

Another way of looking at Western Canada's export performance is provided in Figure 4. Here we measure the export intensity by province on a per employed person basis. By this measure Alberta is leading the other provinces with exports valued at $22,875 per employed person, with Manitoba showing the sharpest year over year improvement. British Columbia is the only western province showing a negative performance over the last three years.

Figure 4. Western Canadian Export Performance on a Per Employee Basis

Province	1995	1996	1997
Alberta	19,332	21,786	22,875
British Columbia	15,286	13,951	14,454
Manitoba	10,439	11,380	13,026
Saskatchewan	19,082	19,323	20,684

Western Canada	16,446	16,847	17,810

From TIERS and Statistics Canada, Economic Observer*(1998)*

GREATER ACCESS TO THE U.S. MARKET

The aggregate share of merchandise exports flowing from Western Canada to the U.S. remains high at just over 67%. Table 2 provides a comparison of total exports from the provinces to the U.S. Totals are also shown for exports excluding grains, a volatile, supply driven category particularly significant to the three prairie provinces. Excluding grains, aggregate Alberta exports increased by $19.9 billion, or 169%, over 1988 levels. The increase over 1996 amounted to $2.2 billion or almost 18.9%. Exports from Alberta, excluding grains, as a share of Western Canadian exports were 44.3% in 1997 compared with 34.3% in 1988.

Figures 5–8 summarize market shares for the top twenty exports of each province and for Western Canada as a whole. The increased importance of the U.S. market resulting from improved access under the trade agreements is quite apparent. The U.S. as a destination for Alberta's top twenty rose from 70 to almost 82%. Notable increases have been recorded for the other provinces as well, so that, in 1997, well over one-half of the value of the top twenty exports for each province went to the American market.[1]

WESTERN CANADA'S TOP 20 EXPORTS: THEIR CONTRIBUTION TO EXPORT GROWTH

Total Western Canadian merchandise exports remain dominated by the energy, forestry and agricultural industries as shown in Figure 5. In the table, the contribution of the top 20 merchandise exports in western Canada (ordered by 1997 HS value) is displayed, together with their share of regional exports in 1997, their contribution to the growth in export values between 1988 and 1997, as well as their U.S. market shares. Figure 5 reveals that 63.0% of the total value of western Canadian merchandise exports in 1997 was accounted for by the first five rank order HS two digit categories. Another 25.9% were accounted for by the next fifteen. For the region, just over 11% of 1997 exports were recorded in all other HS classes. If the growth in exports between 1988 and 1997 is considered, then the top twenty in 1997 accounted for 88.8% of the total, and the top five – energy, sawn lumber, cereals, woodpulp and paper-- accounted for some 54.3% of the growth with energy alone making up over 33% of the total increase.

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1 A small portion of the increased U.S. market share is probably a result of transshipment to third markets - most notably Mexico - using American facilities

Figure 5. Western Canada's top twenty exports and their share in export growth ($ millions)

HS Category	97 Export value	As % of '97 Total	88 Export value	$ Growth	% Growth share	% U.S. Share 1997	1988
27) Mineral fuels, oils	**25,132**	32.8	13,011	12,121	33.4	89.9	80.1
44) Sawn lumber	**10,976**	14.3	5,125	5,851	16.1	69.7	59.3
10) Cereals	**5,229**	6.8	4,829	400	1.1	18.5	3.2
47) Woodpulp	**4,451**	5.8	3,933	518	1.4	32.4	31.8
48) Paper and paperboard	**2,496**	3.3	1,673	823	2.3	71.2	68.5
84) Machinery, engines	**2,383**	3.1	960	1,423	3.9	74.8	77.3
31) Fertilizers	**2,156**	2.8	1,429	727	2.0	64.2	55.4
85) Electrical equipment	**2,032**	2.6	1,652	380	1.0	80.0	75.7
12) Oilseeds, misc. grains	**1,935**	2.5	995	940	2.6	19.2	9.8
87) Vehicles, parts	**1,505**	2.0	514	991	2.7	90.0	87.4
29) Organic chemicals	**1,497**	2.0	1,036	461	1.3	53.2	44.4
01) Live animals	**1,437**	1.9	448	989	2.7	99.5	98.9
02) Meats	**1,279**	1.7	324	955	2.6	73.3	75.9
39) Plastics	**1,209**	1.6	723	486	1.3	80.2	65.4
94) Furniture	**798**	1.0	124	674	1.9	75.6	81.5
26) Ores, slag, ash	**788**	1.0	1,035	-247	-0.7	5.2	1.3
03) Fish	**786**	1.0	779	7	0.0	52.2	27.6
28) Inorganic chemicals	**776**	1.0	244	532	1.5	79.3	84.4
76) Aluminum	**701**	0.9	629	72	0.2	24.8	20.5
07) Edible vegetables, roots	**577**	0.8	138	439	1.2	23.9	14.5
Total top twenty	**68,143**	**88.8**	**Growth of Top Twenty**	**28,789**	**88.8**	**Top 69.1 Twenty**	**70.0**
All other exports	**8,564**	**12.2**	**Growth all Exports**	**7,453**	**12.2**		
Total exports	**76,708**		**Total Export Growth**	**36,242**		**Total 68.6 Exports**	**69.5**

Figure 6 shows Alberta's top twenty exports rank ordered by 1997 export value, together with their contribution to the dollar value over the period 1988 to 1997. The top five export categories accounted for 73.0% of total export values, and the remaining fifteen for 21.9% . All other HS categories amounted to 5% of export values. Apart from energy (crude oil, natural gas and coal) whose dominance remains striking, the most notable feature of the Alberta table is the continuing importance of HS 85 (communications equipment and parts) which has retained its third place rank in terms of value. Plastics (HS 39) dropped out of the top five ranked categories and was replaced there by sawn lumber (HS 44).

Alberta's U.S.market share increased for 15 of the top 20 exports when 1988 (the year prior to the introduction of the FTA) is compared to 1997. As expected, the more important categories in terms of total export value have benefitted markedly from the greater access to the U.S.. With the exception of lumber (HS 44) the U.S. market share for the top five has increased substantially.

The U.S. market share experience for Alberta's top twenty exports falls into five categories. Taking the period from 1992 to 1997 – which coincides with the current American cyclical expansion – and using the criteria of market share level, market share trend and variability in share, the categories can be described as follows:

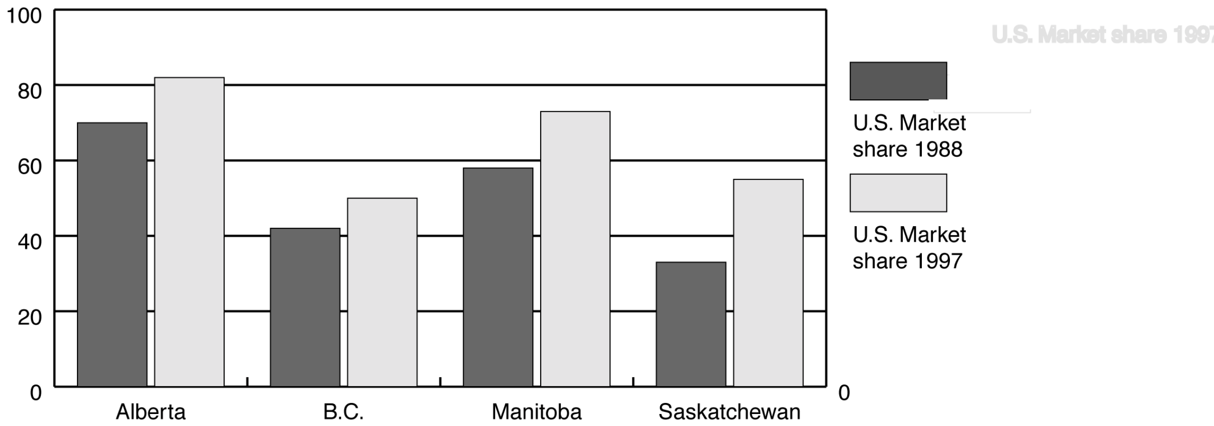
1. Consistently over 90% to the U.S. market: live animals; energy; paper and paperboard products.
2. Upward trend in U.S. market share: machinery and equipment; electrical and telecommunications equipment.
3. Volatile U.S. market share: fertilizers; woodpulp; sulphur; oilseeds, cereals; malts and starches.
4. Stable U.S. market share: meats; sawn lumber; inorganic chemicals; plastics; precision / measuring instruments; man-made staple fibres.
5. Downward trend in U.S. market share: nickel.

Figure 6. Alberta's top twenty exports and their share in export growth (value in $ millions)

HS Category	97 Export value	As % of '97 Total	88 Export value	$ Growth	% Growth share	% U.S. Share 1997	% U.S. Share 1988
27) Mineral fuels, oils	**19,221**	57.7	6,874	12,347	60.8	97.1	93.0
10) Cereals	**1,680**	5.0	1,251	429	2.1	16.9	4.8
85) Electrical equipment	**1,203**	3.6	113	1,090	5.4	85.4	64.9
29) Organic chemicals	**1,157**	3.5	892	265	1.3	57.0	45.1
44) Sawn lumber	**1,063**	3.2	229	834	4.1	84.8	92.4
47) Wood pulp	**1,062**	3.2	385	677	3.3	40.7	94.9
02) Meats	**944**	2.8	159	785	3.9	78.8	67.9
39) Plastics	**841**	2.5	622	219	1.1	76.2	61.8
01) Live animals	**738**	2.2	282	456	2.2	99.1	98.4
84) Machinery, boilers, e	**685**	2.1	172	513	2.5	64.8	54.6
12) Oilseed, misc. grains	**613**	1.8	296	317	1.6	17.7	8.8
31) Fertilizers	**400**	1.2	196	204	1.0	94.1	62.2
25) Sulphur	**370**	1.1	803	- 433	-2.1	21.4	13.2
94) Furniture, bedding	**297**	0.9	33	264	1.3	87.5	87.5
75) Nickel	**277**	0.8	21	256	1.3	78.0	43.3
28) Inorganic chemicals	**259**	0.8	94	165	0.8	6.9	89.2
81) Other base metals	**225**	0.7	7	218	1.1	84.6	17.8
48) Paper and paperboard	**206**	0.6	8	198	1.0	5.8	96.9
90) Optical /photo/instrum	**194**	0.6	34	160	0.8	99.7	40.5
55) Man-made staple fibr	**187**	0.6	51	136	0.7	37.1	1.6
Total top twenty	**31,622**	**94.9**	**Growth of Top Twenty**	**19,100**	**94.0**	**U.S. Share Top Twenty**	
All other exports	**1,708**	**5.1**	**Growth all Exports**	**1,221**	**6.00**	**81.7** [$31,614]	**55.6**
Total exports	**33,330**		**Total Export Growth**	**20,321**		**Total** 81.0	**51.5**

Figure 6.1 shows that in Saskatchewan, the top three 1997 exports (cereals, energy and potash) accounted for two-thirds, and the top five accounted for almost four-fifths of total export values. Saskatchewan now has 14 HS categories that are worth more than $100 million, up from 12 in 1996. The top twenty exports from the province brought about more than 97% of the export growth over the period. Nine of Saskatchewan's top twenty exports showed an increase in U.S. market share, however, only four exhibited a significant climb as the other five categories were almost exclusively shipped to the U.S. prior to the trade agreements.

Figure 6.1. West Canada U.S. Market Share 1988 and 1997 (% by province)

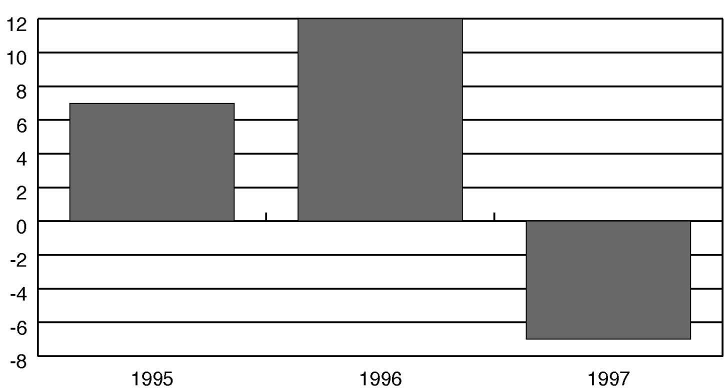


AGGREGATE PRICE CHANGE IN ALBERTA EXPORTS

We have constructed an export price index for the following categories of Alberta exports: crude oil, natural gas, wheat, oilseeds, lumber, woodpulp, paper and paperboard, livestock and meat products, fertilizers, organic and inorganic chemicals, and telecommunications equipment. Current export values are used as weights. When this weighting system is employed, changes in index values from period to period represent both changes in weights as well as changes in price.

The current weight indexes (see Figure 7) reflects the price volatility inherent in the structure of Alberta's export sector. Last year the export price index fell by 7.0% which compares with almost an 11.7% increase in the 1996 and a 6.9% increase in 1995. The index itself covered 84% of Alberta's exports in 1997.

Figure 7. Percent Change in Alberta Export Prices 1995-97



Source: CANSIM and Western Centre for Economic Research

Figure 8 shows British Columbia's top twenty exports. In 1997, these twenty categories amounted to 91.2% of total export values and the top three exports equaled almost three fifths of total shipments. Although these numbers remain unchanged from 1996, energy exports have replaced paper and paperboard exports in the number 3 position. The most notable change from 1996 to 1997 was the increased dependence on the top twenty exports for the growth in total export values. In 1996 growth in the top twenty accounted for just over 82% of the total, in 1997 that number jumped to 90%.

During 1997, British Columbia's U.S. market share dropped slightly from last year's post-FTA record of 54.8%, to 51.9%. While B.C. remains the province least dependent on the American market, traditionally important exports -- wood products, fish and a variety of minerals -- are more likely to go to the U.S. than they were prior to the FTA. For example, both sawn lumber (HS 44) and fish (HS 03) have greatly increased their market share since 1988.

Figure 8. British Columbia's top twenty exports and their share in export growth
(value in $ millions)

HS Category	97 Export value	As % of '97 Total	88 Export value	$ Growth	% Growth share	% U.S. Share 1997	1988
44) Sawn lumber	**9,521**	35.8	4,951	4,570	22.7	66.8	57.2
47) Woodpulp	**3,133**	11.8	3,362	- 229	-1.1	28.2	23.1
27) Mineral fuels, oils	**3,017**	11.4	2,096	921	4.6	34.6	27.3
48) Paper and Paperboard	**1,892**	7.1	1,538	354	1.8	63.8	66.0
84) Machinery, boilers, eh	**996**	3.7	376	620	3.1	72.8	74.7
26) Ores, slag and ash	**777**	2.9	1,035	- 258	-1.3	3.8	0.9
03) Fish and shellfish	**747**	2.8	570	177	0.9	51.0	24.6
76) Aluminum and articles	**614**	2.3	594	20	0.1	16.1	16.6
85) Electrical equipment	**611**	2.3	78	533	2.7	65.5	70.0
87) Vehicles and parts	**494**	1.9	264	230	1.1	78.7	82.8
79) Zinc and articles there	**423**	1.6	399	24	0.1	71.9	68.5
29) Organic chemicals	**336**	1.3	138	198	1.0	40.1	36.8
94) Furniture, bedding	**270**	1.0	54	216	1.1	47.3	71.5
73) Articles of iron and st	**262**	1.0	105	157	0.8	88.4	92.6
90) Optical and precision	**243**	0.9	70	173	0.9	67.4	63.2
28) Inorganic chemicals	**218**	0.8	45	173	0.9	79.3	74.7
39) Plastics and articles t	**215**	0.8	50	165	0.8	84.9	75.7
48) Natural/cultured pearls	**178**	0.7	89	89	0.4	89.3	90.0
25) Salt; sulphur; earth	**157**	0.6	182	- 25	-0.1	69.3	23.3
61) Art of apparel	**135**	0.5	15	120	0.6	93.2	93.2
Total top twenty	**24,239**	**91.2**	**Growth of Top Twenty**	**8,228**	**90.0**	**U.S. Share Top Twenty**	
All other exports	**2,327**	**8.8**	**Growth all Other Exports**	**919**	**10.0**	**50.1 [$13,024]**	**41.8**
Total exports	**26,566**		**Total Export Growth**	**9,147**		**Total 51.9**	**42.7**

Manitoba's export performance in 1997 was very strong as the province posted a 14.6% increase in export values over 1996. The diversification of its provincial economy is made evident by Figure 8. Manitoba has 16 HS chapters that top the $100 million mark whereas the substantially larger, neighbouring economy of Saskatchewan has only 14. Manitoba's top five categories account for just under half of the provincial total and within that group various sectors, agriculture, energy and manufacturing were all represented. Shipments from the top five brought about 45% of the growth in exports over the 1988-97 period. Like the other western provinces, Manitoba's U.S. market share has climbed steadily since 1988 and the implementation of the FTA, from 58.2% to 74.0%. Its relatively diversified economy has strengthened U.S. market share in the following areas: vehicles, cereals and seeds, machinery, copper, and wood products.

Figure 9. Manitoba's top twenty exports and their share in export growth
(value in $ millions)

HS Category	97 Export value	As % of '97 Total	88 Export value	$ Growth	% Growth share	% U.S. Share 1997	1988
87) Vehicles, roll stock	**856**	12.2	196	660	16.1	98.4	96.1
27) Mineral fuels, oils	**849**	12.1	111	738	18.0	100.0	100.0
10) Cereals	**773**	11.0	666	107	2.6	23.2	3.8
12) Oilseed, misc. grain	**486**	6.9	238	248	6.1	24.2	21.2
84) Machinery, boilers, e	**483**	6.9	359	124	3.0	92.1	88.4
88) Aircraft, space parts	**286**	4.1	89	197	4.8	87.6	96.7
48) Paperboard	**237**	3.4	109	128	3.1	85.8	96.1
74) Copper and articles t	**222**	3.2	5	217	5.3	100.0	91.7
94) Furniture and bedding	**219**	3.1	33	186	4.5	96.4	98.1
75) Nickel and articles th	**218**	3.1	1	217	5.3	3.7	83.6
44) Wood and articles th	**183**	2.6	52	131	3.2	96.5	9.2
85) Electrical equipment	**166**	2.4	63	103	2.5	95.4	94.3
02) Meat and edible offa	**156**	2.2	73	83	2.0	49.2	86.7
15) Animal and vegetable	**152**	2.2	81	71	1.7	94.4	57.1
39) Plastics and articles t	**134**	1.9	51	83	2.0	95.5	93.0
07) Edible vegetables and	**110**	1.6	53	57	1.4	15.5	9.3
23) residues from food	**90**	1.3	16	74	1.8	77.2	83.5
20) Prep of fruit and nuts	**87**	1.2	12	75	1.8	99.9	25.7
72) Iron and steel	**80**	1.1	40	40	1.0	96.2	95.9
62) Art.'s of apparel	**79**	1.1	9	70	1.7	99.4	97.2
Total top twenty	**5,866**	**83.7**	**Growth of Top Twenty**	**3,609**	**88.2**	**US Share Top Twenty**	
All other exports	**1,142**	**16.3**	**Growth all Other Exports**	**483**	**11.8**	**74.0** ($4,262 m)	**58.2**
Total exports	**7,008**		**Total Export Growth**	**4,092**		**Total** 76.3	**58.2**

Figure 10 shows that in Saskatchewan, the top three 1997 exports (cereals, energy and potash) accounted for two-thirds, and the top five accounted for almost four-fifths of total export values. Saskatchewan now has 14 HS categories that are worth more than $100 million, up from 12 in 1996. The top twenty exports from the province brought about more than 97% of the export growth over the period. Nine of Saskatchewan's top twenty exports showed an increase in U.S. market share, however, only four exhibited a significant climb as the other five categories were almost exclusively shipped to the U.S. prior to the trade agreements.

Figure 10. Saskatchewan's top twenty exports and their share in export growth
(value in $ millions)

HS Category	97 Export value	As % of '97 Total	88 Export value	$ Growth	% Growth share	% U.S. Share 1997	1988
10) Cereals	**2,731**	27.9	2,877	- 146	-3.6	17.8	2.3
27) Mineral fuels, oils	**2,046**	20.9	729	1,317	32.2	100.0	100.0
31) Fertilizers	**1,684**	17.2	1,169	515	12.6	56.2	53.0
12) Oilseed, misc. grain	**793**	8.1	337	456	11.1	17.2	6.4
07) Edible vegetables and	**275**	2.8	15	260	6.4	5.0	14.6
47) Pulp of wood, cellulos	**251**	2.6	176	75	1.8	49.2	54.3
28) Inorganic chemicals	**244**	2.5	78	166	4.1	77.5	92.0
01) Live animals	**226**	2.3	45	181	4.4	99.9	98.5
84) Machinery, boilers	**219**	2.2	53	166	4.1	77.4	90.2
44) Wood and articles of	**209**	2.1	24	185	4.5	99.5	99.1
48) Paper and paperboard	**162**	1.7	19	143	3.5	99.9	99.4
85) Meat and edible offal	**125**	1.3	57	68	1.7	87.8	93.3
90) Optical and precision	**118**	1.2	4	114	2.8	98.2	98.7
11) Products of milling	**114**	1.2	10	104	2.5	14.5	41.5
39) Residues from food	**85**	0.9	3	82	2.0	58.8	20.9
23) Animal and veg. fats/	**82**	0.8	12	70	1.7	93.4	27.4
38) Miscellaneous chem.p	**70**	0.7	11	59	1.4	92.0	99.7
72) Iron and steel	**67**	0.7	59	8	0.2	99.8	99.6
85) Electrical machines	**51**	0.5	6	45	1.1	77.1	93.3
87) Vehicles/rolling stock	**50**	0.5	22	28	0.7	96.7	98.7
Total top twenty	**9,602**	**97.9**	**Growth of**	**3,896**	**96.5**	**U.S. Share**	
			Top Twenty			**Top Twenty**	
All other exports	**202**	**2.1**	**Growth all**	**141**	**3.5**	**55.6**	**34.2**
			Other Exports			**[$5,293]**	
Total exports	**9,804**		**Total Export**	**4,037**		**Total**	
			Growth			**55.5**	**33.9**

ENERGY AND PLASTICS EXPORTS

Figure 11 shows that the value of 1997 commodity exports from the energy sector increased by 8.4% over levels of the previous year. Natural gas exports rose in value by more than 14% while crude oil exports rose by 4%. Coal exports held steady after a sharp drop in 1996, but are expected to fall again in 1998 as a result of the Asian crisis. In 1997 the crude oil annual average price index fell by 10% while the natural gas export price index rose by 8%. Thus shipments of both crude oil and natural gas rose in volume. On the other hand, the decline in the value of polyethylene shipments, which accounts for the overwhelming share of plastic exports, reflects slightly reduced prices.

Figure 11. Exports of energy and plastics: selected categories 1996 and 1997
(value in $ millions)

HS Category	96 exp value	97 exp value	% change 96-97
2711 Natural gas	8,593.2	9,805.7	14.1
2709 Crude oil	8,162.9	8,485.9	4.0
2701 Coal	552.0	563.0	2.0
Total of the above	17,307	18,292	5.7
Total HS 27 exports	17,733	19,221	8.4
3901 Polyethylene	961.9	653.3	-32.1
3903 Plastic plates, sheets	27.8	9.0	-67.7
3920 Polystyrene	19.8	36.2	82.8
Total of the above	1,010	699	-30.8
Total of HS 39 exports	1,100	841	-33.5

Source: TIERS and the Western Centre for Economic Research

EXPORTS OF WOOD, PULP AND PAPER PRODUCTS

Figure 12 contains data for 1997 and the previous year on export values of wood, pulp and paper products. The table portrays improved export results for Alberta's forest products industry in 1997. Shipments of wood products rose sharply over 1996 levels. Sawn lumber export values exceeded those of 1996 by almost 13%, while paper shipments exceeded 1996 levels by some $23 million, an increase of slightly less than 13%. The growth in the value of sawn lumber shipments represents both price and volume increases as the index of sawn lumber export prices rose 9% in 1997.

Figure 12. Exports of wood, pulp and paper: selected categories, 1996 and 1997
(values in $ millions)

HS Category	96 exp value	97 exp value	% change 96-97
4407 Sawn lumber	665.4	750.0	12.7
4410 Particle board	199.5	196.6	-1.5
Total of the above	864.9	946.6	9.4
Total HS 44 exports	960.3	1,063	10.7
4703 Chemical woodpulp	627.7	876.1	39.6
4705 Semi-chemical pulp	162.1	164.2	1.3
Total of the above	789.8	1040.3	31.7
Total HS 47 exports	802.0	1,062.4	32.5
48 Paper and paperboard	183.1	206.3	12.7

Source: TIERS and Western Centre for Economic Research

Despite the fact that the woodpulp export price index fell by 11% in 1997, woodpulp export values rose sharply in 1997, accounted for by increased volumes. However, low demand in Asia could affect Alberta exports significantly in the next year; the U.S. market share for this category stood at nearly 41% in 1997, down from 95% in 1988. Increased volumes of paper and paperboard shipments, a result of more capacity coming on stream in recent years, has accounted entirely for the increase HS 48 export values which rose despite a price decline of 9%.

MEAT PRODUCTS

Figure 13, showing export values for meat products in 1996 and 1997, depicts another large jump in exports of Alberta's processed meats. Beef exports increased in value by almost 40%. The export price index for meat products rose by slightly less than 3% in 1997 so that the observed increase in shipment value was almost entirely volume based. Overall, the value of Alberta's meat shipments have increased at a rapid rate over the past five years, from $221 million in 1991, to the 1997 total of $944 million. This growth of $723 million compares with a growth over the same period in export values for the other three provinces, combined, of $170 million. An increase in the U.S. market share has undoubtedly helped Alberta where meat exports are concerned: in 1988 the U.S. share was 68%, in 1997 it was nearly 79%.

Figure 13. Exports of meat products: selected categories, 1996 and 1997
(value in $ millions)

HS Category	96 exp value	97 exp value	% Change 96-97
201 Beef	414.8	575.3	38.7
203 Pork	140.5	165.2	17.6
206 Edible livestock offal	64.0	68.1	6.4
Total of the above	619.3	808.6	30.6
Total HS 02 exports	739.0	944.4	27.8

Source: TIERS and Western Centre for Economic Research

VEGETABLE PRODUCTS AND OILSEEDS

Figure 14 summarizes the 1997 export record of selected oilseed and vegetable export categories. Shipments of vegetable products rose again in 1997. The value of dried legume shipments rose by nearly 20%. This success was partially offset by lower values for potato shipments. Good crop conditions for canola helped increase the volume of oilseed shipments, while average annual export prices rose by 4%. The U.S. market share of HS 07 exports was 37.3% in 1996 and 33.2% in 1997, while the American share of HS 12 exports was 18.2% in 1996 and 17.7% in 1997.

Figure 14. Exports of vegetable and oilseeds: selected categories 1996 and 1997
(value in $ millions)

HS Category	96 exp value	97 exp value	% change 96-97
713 Dried legumes	67.5	80.2	18.8
701 Potatoes	21.2	15.9	-25.0
Total of the above	88.7	96.1	8.3
Total HS 07 exports	91.2	99.2	8.0
1205 Canola	370.7	443.8	19.7
1207 Other seeds	19.5	17.9	-9.2
1204 Linseed	13.2	20.0	51.5
1209 Sowing seeds	29.3	44.1	50.5
Total of the above	432.7	525.8	21.5
Total HS 12 exports	500.0	613.8	22.8

Source: TIERS and Western Centre for Economic Research

MACHINERY AND PARTS

Figure 15 shows that the value of Alberta exports of machinery (HS 84) remained at 1996 levels in 1997. In the machinery and mechanical equipment category the value of exports rose slightly over the year. The U.S. market share of HS 84 exports was 61.0% in 1996 and 64.8% in 1997, an increase in market share spread across almost all of the selected categories in the table.

Figure 15. Exports of machinery, mechanical appliances and boilers: selected categories, 1996 and 1997 (value in $ millions)

HS Category		96 exp value	97 exp value	% change 96-97
8431	Parts for lift, move machinery	88.7	116.6	31.5
8479	Special mach, appl.	77.9	70.2	-9.0
8412	Hydraulic engines and parts	69.5	85.8	23.5
8473	Parts for office machinery	68.1	18.0	-264.3
8481	Taps, valves for boilers	47.9	59.3	23.8
8419	Electric dryers and distillers	43.0	34.3	-20.3
8430	Moving, grade, bore mach.	38.3	54.3	41.8
8421	Centrifuges and filtering machines	37.8	22.2	-41.3
8413	Pumps	31.9	40.9	28.2
Total of the above		503.1	501.6	0.3
Total of HS 84 exports		682.1	685.2	0.5

Source: TIERS and the Western Centre for Economic Research

ELECTRICAL EQUIPMENT AND PARTS

The growth in this export group since 1988 has been significant. It ranks third—after energy and cereals—in the hierarchy of Alberta export values. As Table 13 below reveals, there was a slight decline in export from 1996 to 1997, which follows the striking success of 1996 which saw a 56% increase in export values over 1995. The export price index for telecommunications equipment declined by less than 1% in 1997.

Exports of telephone sets and related equipment accounted for one-third of exports in HS 85 while shipments of transmission equipment for radio and TV accounted for almost half of the 1997 total. Trade data indicates that both the volume of telephone shipments and their unit price fell in 1997.

This is an industry which has clearly benefited from the trade agreements. In 1988 the American market share was 65% of total shipments of $113 million. In 1997 the American market share was 85%—a slight decrease over the historical high of 86% in 1995—and total export shipments amounted to $1,203 million.

Figure 16. Exports of electrical equipment: selected categories, 1996 and 1997
(value in $ millions)

HS Category		96 exp value	97 exp value	% change 96/97
8517	Telephone sets	544.8	343.6	-37.0
8525	Transmiss. equip. rad/TV	483.9	590.9	22.1
8529	Antennae for rad/TV	33.2	76.6	230.1
8520	Telephone answering machines	29.9	24.7	-17.4
8526	Radio Navigation aids	19.4	20.4	5.2
8524	Tapes, software	15.9	20.0	25.8
8537	Boards and panels	15.7	19.4	23.6
Total of the above		1142.8	1095.6	-4.2
Total of HS 85 exports		1231.2	1203.2	-2.3

Source: TIERS and the Western Centre for Economic Research

OPTICAL, MEASURING AND PRECISION INSTRUMENTS

This is another category with a high value-added content, and one that has enjoyed sustained growth over the past number of years. Data for 1997 compared with 1996 are shown in Figure 17 below. In 1997, exports of all items in this class rose by just under 14%, compared with 11% growth in 1996. The U.S. market share of HS 90 exports was 37.6% in 1996 and 37.1% in 1997.

Figure 17. Exports of optical, measuring instruments: selected categories 1996 and 1997
(value in $ millions)

HS Category	96 exp value	97 exp value	% change value
9021 Orthopedic appliances	55.0	55.5	0.1
9030 Oscill. electr. testing	33.2	32.3	-2.8
9015 Geograph. measure instr.	21.5	33.8	57.2
9027 Phys/chem test equip.	15.0	18.0	20.0
9026 Flow check instr.	12.3	12.2	.-8
9031 Other meas/check equip.	11.4	19.6	72.0
9032 Auto control instr.	7.8	10.4	33.3
Total of the above	156.2	181.8	16.4
Total of HS 90 exports	170.7	194.2	13.8

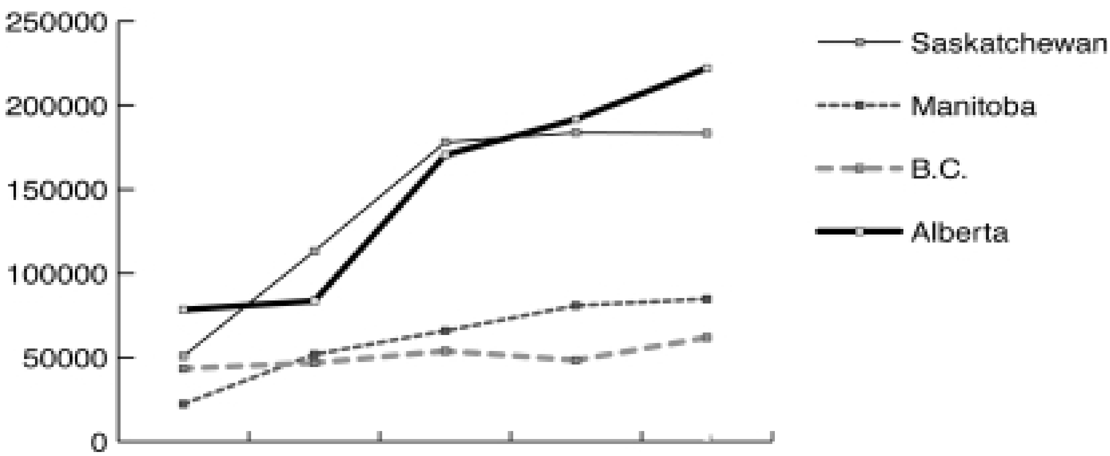
Source: TIERS and the Western Centre for Economic Research

Orthopedic appliances continue as the largest single item in terms of export value in this sector. In recent years, however, the growth of electrical testing equipment (9030), specialized measuring and checking equipment (9031) and geographic measuring instruments (9015) continued to be strong.

EXPORTS TO MEXICO

Figure 18 summarizes the exports of each of the four western provinces to Mexico in selected years from 1988 to 1997. Over this period exports have increased from $193 million to $551 million with the increase in 1997 over the previous year amounting to 10.5%. The Alberta share of Western Canadian shipments is currently just over 40%, an increase of almost 3% over 1996. Western Canadian exports, as a share of total Canadian exports to Mexico, rose to 43.3%, up from 42.5% in 1996, the highest level in any of the five years considered. British Columbia is the only one of the four provinces where shipments to the Mexican market have been flat since the FTA.

Figure 18. Provincial exports to Mexico, 1988-1997



Source: Tiers and the Western Centre for Economic Research

ALBERTA MERCHANDISE EXPORTS TO MEXICO

Figure 19 (below) reports the top ten Alberta merchandise exports to Mexico in each 1988, 1993, 1995 and 1997. Between 1995 and 1997, Alberta exports to Mexico rose by 29.7%, which is some 11% greater than the growth for Western Canada as a whole. Mexico remains a small market – less than 1% of Alberta exports. Casual observation suggests, however, that Mexico is a market of relatively greater significance with respect to the export of Alberta's services.

In general, the profile of the top ten exports in 1997 looks very much like that of previous years, with shipments of oilseeds, cereals and dairy products (powdered milk) amounting to just over three-fifths of the total value of exports. An important trend that continued through 1997 was the increasing sales of provincially-produced communications equipment, which now contributes 18% of the value to Alberta's exports to Mexico.

Figure 19. Top ten Alberta exports to Mexico 1988, 1993, 1995 and 1997 ($000's)

CATEGORY	HS	88 Exports ($value)
Salt; sulphur; earth and stone; plaster	25	37,438
Oil seed, misc. grain, seed, fruit	12	21,950
Cereals	10	10,166
Live Animals	1	3,117
Fertilizers	31	2,451
Meat & Edible Offal	2	971
Animal / vegetable fats, oils	15	863
Machinery, boilers, mech appl, engines	84	485
Elec mchy equip parts; sound recorders	85	304
Special transaction-trade	99	124
Sub-total of top 10 exports		*77,870*
Total Exports to Mexico (HS 01-99)		**78,411**
Mexico as percent of Alberta's total		**0.60%**
Canadian Total to Mexico		**490,460**
Percent of Canadian Total		**15.99%**

CATEGORY	HS	93 Exports ($value)
Cereals	10	23,421
Oil seed, misc. grain, seed, fruit	12	22,300
Mineral fuels, oils, prod of distillates	27	10,388
Dairy products; eggs; honey	4	6,994
Pulp of wood; cellulosic mat; waste	47	4,696
Meat & Edible Offal	2	4,670
Elec mchy equip parts; sound recorders	85	4,600
Live Animals	1	1,507
Optical, photo, cine, meas, precision	90	1,243
Products mill ind; malt; starches; gluten	11	1,097
Sub-total of top ten exports		*80,916*
Total Exports to Mexico (HS 01-99)		**83,573**
Mexico as percent of Alberta's total		**0.42%**
Canadian Total to Mexico		**798,793**
Percent of Canadian total		**10.46%**

CATEGORY	HS	95 Exports ($value)
Oil seed, misc. grain, seed, fruit	12	69,416
Cereals	10	26,419
Dairy products; eggs; honey	4	18,154
Salt; sulphur; earth and stone; plaster	25	13,273
Mineral fuels, oils, prod of distillates	27	12,832
Pulp of wood; cellulosic mat; waste	47	12,520
Animal / vegetable fats, oils	15	4,513
Fertilizers	31	4,084
Plastics and articles thereof	39	2,964
Elec mchy equip parts; sound recorders	85	2,236
Sub-total of top 10 exports		*166,410*
Total Exports to Mexico (HS 01-99)		**170,322**
Mexico as percent of Alberta's total		**0.64%**
Canadian Total to Mexico		**1,106,890**

CATEGORY	HS	97 Exports ($value)
Oil seed, misc. grain, seed, fruit	12	74,033
Cereals	10	41,008
Elec mchy equip parts; sound recorders	85	39,170
Salt;sulphur;earth and stone; plaster	25	15,131
Dairy products; eggs; honey	4	13,184
Mineral fuels, oils, prod of distillates	27	11,009
Pulp of wood; cellulosic mat; waste	47	9,446
Plastics and articles thereof	39	4,701
Optical, photo, cine, meas, precision	90	4,144
Meat & Edible Offal	2	1,660
Sub-total of top 10 exports		*215,080*
Total Exports to Mexico (HS 01-99)		**220,927**
Mexico as percent of Alberta's total		**0.66%**
Canadian Total to Mexico		**1,272,600**

Percent of Canadian total	**15.39%**	**Percent of Canadian total**	**17.36%**

WESTERN CANADA'S AND ALBERTA'S MERCHANDISE EXPORTS TO CHILE

Figure 20 displays the relatively small but sharply rising level of Alberta's merchandise exports to Chile. The similarities between the two resource intensive economies means that Alberta will be able to take full advantage of new opportunities to export the products of its specialized manufacturing and service industries. Representative examples of the type of shipments that Alberta currently sends to Chile already include a strong proportion of machinery for resource extraction / processing and precision instrumentation. Although these higher-value, processed exports do not constitute a major portion of all exports, it is expected that their value will continue to rise as a percentage of the total shipments bound for Chile.

Figure 20. Value of Alberta's merchandise exports to Chile, 1988 and 1993-1997
(value in $ millions)

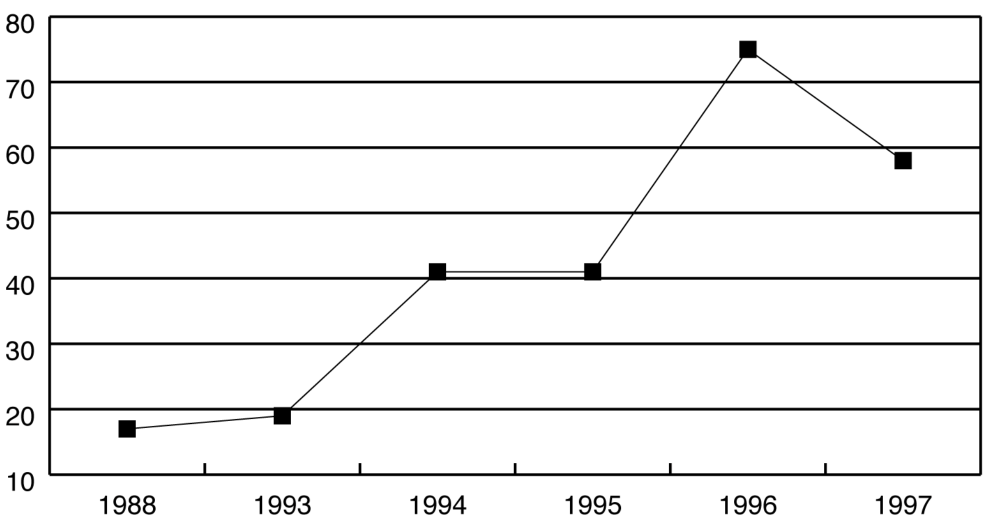
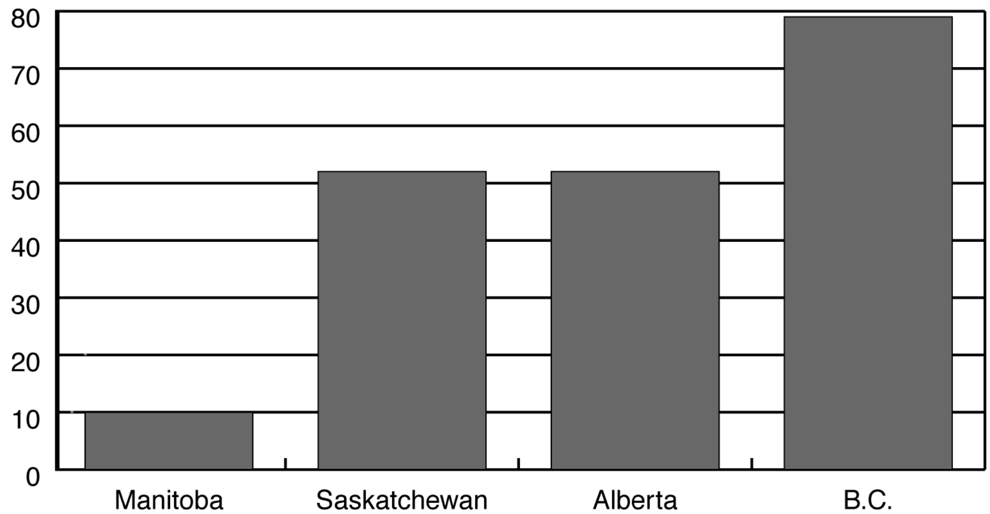


Figure 20 displays the value of provincial exports to Chile. British Columbia ships $78 million worth of merchandise to Chile and a significant portion of that supplies the Chilean mining industry. Both Alberta and Saskatchewan export $53 million worth of merchandise to Chile and the value of these shipments is characterized by agricultural commodities.

Figure 21. Provincial merchandise exports to Chile, 1997 (values in $ millions)



CONCLUSION

Alberta's economy continues to benefit from export-led growth and the exisiting free trade agreements continue to prove that open markets benefit Alberta's sophisticated, competitive economy. The broadening of commercial ties between the province, the region and the globe has helped Albertans better realize their export potential. Greater access to the American market remains the most important dynamic driving Alberta's export performance. In 1997 Alberta exported over $262 of merchandise for every $100 shipped in 1988. The FTA and NAFTA have provided a market oriented and competitive atmosphere for Alberta manufacturers and, as a result, the value-added content of provincial exports has risen.

By combining the value-added sectors the WCER has been tracking over the last nine years, namely meat processing, paper and paperboard, machinery, electrical equipment, precision instruments, aircraft and parts, and furniture, we have observed that the value of these exports rose from $537 million in 1988, to $3,463 million in 1997. That is an aggregate increase of 545% (which compares with an increase of 156% in total exports and 180% in energy exports). In other words, the group of value-added exports listed above account for over 10% of the value of total Alberta merchandise exports compared with only 4% in 1988.