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Regional Industrial Expansion

Gouvernement du Canada
Expansion industrielle régionale

Competitiveness Profiles

Vol. 4

Canada

NOTE

The attached draft Competitiveness Profiles were developed in 1985/86 by the Department of Regional Industrial Expansion as a preliminary assessment of the current competitive position of various industries covered by the activities of the Department. They will be revised, updated, and augmented, in terms of sectors covered, on the basis of on-going consultations with industry.

TABLE OF CONTENTS

VOLUME IV

Paints and Coatings Industry
Petrochemicals
Pharmaceuticals & Medicines
Plastics Products Industry
Plastics and Rubber Machinery Industry
The Primary Glass Sector (Glass Containers and Flat Glass)
Primary Iron and Steel
Power Generation Equipment Sector
Pulp and Paper Equipment Sector
Publishing
Railway Freight Car Industry
Retail Trade
Shipbuilding, Ship Repair, and Marine Equipment
The Space Industry
Specialty and Other Vehicles
Softwood Lumber Industry
  Wood Shingles and Shakes
Sound Recordings
Sporting Goods Industry
Synthetic Resins Sector
Telecommunications Equipment
Textiles
Toilet Preparations
Toys and Games Industry
Wholesale Trade
Wire and Wire Products

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE (REVISED)

PAINTS AND COATINGS INDUSTRY

(PLEASE SUBSTITUTE FOR PREVIOUS DOCUMENT)

DECEMBER 31, 1986

DRAFT - PROJET

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE

PAINTS AND COATINGS INDUSTRY

1. Structure and Performance

a) Structure

This sector comprises establishments engaged primarily in the manufacture of various coatings such as paints, varnishes, lacquers, shellacs, oil stains and thinners (hereinafter referred to as the coatings sector). The sector is divided into two sub-sectors, described as "trade coatings" and "industrial coatings", sharing respectively about 48% and 52% of the value of shipments.

Trade coatings, often referred to as architectural coatings in the United States, include interior and exterior house coatings which are sold through wholesale-retail outlets and are purchased by the general public, painters and building contractors. Industrial coatings include those used by manufacturers of automobiles, appliances and machinery, furniture, packaging, as well as industrial maintenance, road markings, and automotive and machinery refinish coatings.

In 1985, the sector consisted of 148 establishments, employed approximately 7,000 people and shipped goods valued at $1,218 million. Of these establishments, 78 per cent or 115 employed less than 50 people and accounted for 19 per cent of the shipments in 1972 and 29 per cent in 1983. Fifty per cent of shipments originated from firms employing 100 or more in 1983, down from 60 per cent in 1972. Domestic shipments accounted for 87 per cent of the apparent domestic market in 1985 which was $1,372 million. The industry is domestically oriented with exports representing less than 2 per cent of shipments.

A large proportion of the industry is foreign-controlled. Of the twelve largest coatings manufacturers, two are Canadian-owned, three are British-controlled and the remaining companies are subsidiaries of American firms. It is estimated that these twelve firms account for over 50 per cent of shipments.

The majority of the activities of the sector is concentrated in Ontario and Quebec where 85 per cent of shipments originate. There has been some shift in the regional distribution of the sector in the period 1972-83, Ontario accounting for 62 per cent of the shipments in 1983 compared to 57 per cent in 1972. Most of the large manufacturers of industrial coatings are located in Southern Ontario and the large trade paint producers have established in metropolitan centers across the country. Regional manufacturers of trade paints exist across the country serving local markets in competition with national firms.

There is very little vertical integration in the sector. Most coatings manufacturers purchase their supplies from chemicals companies which may manufacture or import them. The degree of material content imported varies with the type of coatings. In the case of some special coatings, up to 50 per cent of the materials used may be imported. It is estimated that overall about 25 per cent of materials used by the sector is imported. Some large manufacturers produce certain raw materials captively for their own use such as alkyd resins and acrylic and polyvinyl acetate resin emulsions, and some firms may import other raw materials from parent companies; however, these intra-corporate purchases do not represent significant characteristics of the industry as a whole.

In 1985, 92.8 per cent of Canada's imports originated from the United States and 83.2 per cent of exports were shipped to that country. Comparative figures for 1978 were 89.5 per cent and 73.4 per cent respectively. These statistics indicate an increasing trade dependency on the United States. Most trade activity involves specialties and

industrial coatings. Very little trade (architectural) coatings are crossing international borders. The sizeable increase in imports in recent years can be attributed largely to the restructuring of a large multinational company, which closed its Canadian industrial-coatings operation in 1982 and now ships certain types of coatings from the United States, increased imports by a large automobile manufacturer as a result of increased domestic auto production and the drop in the rate of exchange.

Coatings are marketed through several channels. In the case of trade coatings, over 40 per cent is sold under contractual arrangements by manufacturers to large chains such as Canadian Tire, The Bay, Sears, Beaver Lumber and others. Sales by small hardware and decorator centres account for 58 per cent of trade coating and the balance is marketed through company-owned stores. In general, industrial coatings are sold through distributors except for original equipment manufacturers who are supplied directly.

Transportation is an important element of cost, especially in the case of trade coatings. In some cases, freight can represent 10 per cent of selling price. Transportation costs are not as significant for industrial coatings, which are usually higher-margin products. Also, industrial coatings sold to OEM accounts are often shipped in bulk which reduces freight costs substantially.

b) Performance

In the 1972-85 period, annual real growth in the sector was nil compared to 2.2 per cent for all manufacturing industries. The slow growth in trade coatings is attributable to the broad acceptance of low-maintenance, pre-decorated products such as aluminum and vinyl siding, wallpaper and panels, and the reduction in housing starts. Industrial coatings have suffered as a result of the slower growth in automobile sales and car downsizing, the continuing penetration of plastics parts that require no painting in the appliance and electronics industry and the decrease in sales of farm machinery and implements.

Employment decreased from a high of 8,495 in 1973 to 6,291 in 1984, the number of production employees dropping by 3.8 per cent only. In the same period, the number of non-production workers fell by 41.3 per cent (or 2,073 employees). This reduction in employment can be directly attributed to steps taken to increase productivity. The large reduction in the non-production work force is the result of rationalization within the sector, the introduction of computerized office procedures and the increased proportion of paints sold through large chains, thereby reducing the size of manufacturers' field sales forces.

Prices for raw materials have continued to increase at a time when, generally speaking, the manufacturers have been unable to pass the full increase on to customers because of intense competition, particularly in trade coatings. One effect has been a mean annual decrease in value added per dollar of shipments of 1 per cent in the 1972-82 period.

According to Statistics Canada, the industry's average net profit after tax for the period 1976-83 was 3.5 per cent of sales. A survey made by the National Paint and Coatings Association in Washington indicated that, in the United States, profit after tax for the sector in the same period was 2.6 per cent of sales.

Productivity improvement in Canada has not kept pace with the United States industry. In the period 1972-82, the trend of value added per production worker in Canada showed no increase whereas in the United States, it increased by 2 per cent per year.

During the 1972-85 period, imports increased at an average annual rate of 16 per cent, to $173 million in 1985. Imports have been increasing at a more rapid pace in recent years, up 34 per cent in 1984 over 1983 and 31 per cent in 1983 over 1982. During the 1972-85 period, exports increased at an average annual rate of 35 per cent, to $19 million in 1985 from a base of only $2 million in 1972. By 1985, the trade deficit in coatings had increased to $154 million, from $21 million in 1972, representing a mean annual rate of increase over the 12-year period of 19 per cent.

It would appear that the problems faced by the Canadian sector such as increasing raw material costs, fierce price competition for trade coatings, poor profitability and low growth are very similar to those being encountered by the coatings industry in other industrialized nations.

2. Strengths and Weaknesses

a) Structural

Canadian coatings manufacturers generally operate on a much smaller scale than their United States counterparts. Canadian manufacturers produce batches which rarely exceed 3,000 gallons, whereas in the United States, batches of 10,000 gallons are common. The result is lower productivity in Canada.

A number of raw materials are imported, some of which are dutiable. This, combined with smaller-quantity purchases, results in raw materials costing an estimated 5 per cent more in Canada than in the United States.

A large portion of the industry is foreign-controlled. In general, these subsidiary plants are intended to serve the domestic market under relatively high tariffs and have little freedom to trade internationally.

Transportation costs, while impeding imports of trade coatings, have made it difficult for single-plant firms with a policy of national coverage to sell profitably in competition with regional manufacturers which serve local markets.

Research and development activities are limited in Canada. Most Canadian-owned firms do not have the resources to conduct extensive R & D work. In the case of foreign-owned establishments, most work is carried out at the parents' headquarter facilities. This has deprived Canada of the availability of exportable specialized coatings.

b) Trade Related Factors

Canada's duty rate on coatings, currently 9.9 per cent ad valorem, will be reduced to 9.2 per cent in 1987. This tariff, which was originally much higher, was an important factor in multinational firms' decisions to locate plants in Canada. The duty rates in the United States, Canada's only important trading partner in coatings, will be 3.1 - 10.0 per cent for benzenoid type coatings in 1987, and 0 to 3.1 per cent for non-benzenoid types. The EEC rate will be reduced to 10 per cent by 1987.

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c) **Technological Factors**

In most cases, the Canadian paint and coatings industry is probably not at a significant technological disadvantage with the rest of the world. Generally speaking, Canadian companies have access to modern technology, mainly through their parent firms or materials suppliers. As a rule, however, technological innovation in this industry generates only small net growth in demand. As almost all durable goods are already coated, new coatings technologies typically push out older coating technology with little expansionary effect on overall levels of demand.

3. **Federal and Provincial Programs & Policies**

Generally speaking, the paint and coatings industry has not made great use of government incentives. The industry, both in Canada and the United States, is preoccupied with federal and provincial (state) regulations concerning health, safety, environment, transportation and labelling. The Canadian industry works closely with the government departments involved through the Canadian Paint & Coatings Association. There are no government programs at either the federal or provincial levels which are specific to this industry.

4. **Evolving Environment**

The coating sector is expected to continue to grow at a rate below that of all manufacturing because of the increasing popularity of competitive systems, low housing starts and the downsizing of automobiles. In view of this situation, the industry will have considerable difficulty in attaining efficient scale of operation, competitive raw material costs and increased R&D activity, unless a consolidation and/or rationalization trend is established. There is evidence that such a trend is developing, one large manufacturer having acquired a number of smaller operations and another having disposed of certain divisions to concentrate on more specialized fields.

5. **Competitiveness Assessment**

In general, the Canadian coatings industry is domestically oriented and not internationally cost competitive. Contributing factors include lower productivity, higher material costs, and substantial foreign control of the sector which tends to limit the development in Canada of specialized coatings for the domestic and export markets. There is a limited number of Canadian firms producing specialized coatings, which account for a significant proportion of the Canadian exports of $19 million.

Prepared by : Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Original Signed By
R. H. McGEE
Original Signé Par

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: December 31, 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: Paints and Coatings Industry **SIC(s) COVERED:** 375 (1980 basis)

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Establishments	154	143	147	138	151	-	-
Employment	8,615	7,145	7,170	6,413	6,725	6,291	-
Shipments ($ millions)	259	747	880	835	975	1,081	1,218
Gross Domestic Product (Constant 1971-$ millions)	115	124	121	101	122	115	-
Investment ($ millions)	-	22	23	14	15	17	20
Profits After Tax ($ millions)	-	48	52	33	62	-	-
(% of income)	-	4.0	4.0	2.7	4.5	-	-

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Export ($ millions)	2	9	12	13	15	19	19
Domestic Shipments ($ millions)	257	738	868	822	960	1,062	1,199
Imports ($ millions)	18	86	98	85	111	149	173
Canadian Market ($ millions)	275	824	966	907	1,071	1,211	1,372
Exports as % of Shipments	0.7	1.2	1.4	1.6	1.5	1.8	1.6
Imports as % of Domestic Market	6.5	10.4	10.2	9.4	10.4	14.0	12.6

Source of imports (top 4)(%)	U.S.	E.E.C.	OTHERS
1981	89.5	8.9	1.6
1982	91.7	7.1	1.2
1983	92.9	6.4	0.7
1984	93.3	5.8	0.9
1985	92.8	6.5	0.7

Destination of exports (top 4)(%)	U.S.	E.E.C.	OTHERS
1981	80.0	4.8	15.2
1982	72.7	1.7	25.6
1983	82.6	2.2	15.2
1984	84.7	2.3	13.0
1985	83.2	3.8	13.0

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	3	27	52	6	12
Employment - % of total	2	29	53	5	11
Shipments - % of total	2	27	57	4	10

While more recent data are not yet available, the analysis in this paper is based on estimates and information obtained through other sources and industry consultations.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

4. MAJOR FIRMS

	Name of Establishment	Ownership	Location of major Plants	Type of Coating
1)	Bapco	(US-UK)	Ont.	trade
2)	Sico	Canadian	Que.	trade - some industrial
3)	PPG Industries	US	Ont.	mainly industrial
4)	International Paints	UK	Que.	trade - industrial
5)	Glidden	UK	Ont.	trade - industrial
6)	C-I-L	UK	Ont.	industrial
7)	Benjamin Moore	US	Ont.	trade - industrial
8)	Desoto	US	Ont.	trade
9)	Inmont	US	Ont.	industrial
10)	Du Pont	US	Ont.	industrial
11)	Color-Your-World	US	Ont.	trade
12)	Selectone	CANADIAN	Ont.	trade

It is estimated that these twelve firms account for more than 50 per cent of industry shipments.

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COMPETITIVENESS PROFILE

PETROCHEMICALS

1. STRUCTURE AND PERFORMANCE

Structure

Petrochemicals are organic chemicals manufactured from raw materials or "feedstocks" derived from crude oil and natural gas. The industry consumes about 4% of domestic crude oil and 30% of domestic natural gas. From these feedstocks are produced the first stage or primary petrochemicals, the most important of which are:

1. the olefins : ethylene, propylene, butadiene
2. the aromatics : benzene, toluene, xylenes
3. methanol

Although ammonia is produced from natural gas, it is not included in the statistics presented in this profile. Ammonia is not an organic chemical and is usually regarded as an agricultural chemical.

These first stage chemical products are then upgraded to intermediates (also petrochemicals) such as styrene, ethylene dichloride, and the large volume plastic resins which include polyethylene and polyvinyl chloride. The intermediates are the raw materials for a wide range of customer industries such as synthetic rubber, plastics processing, paints, inks, adhesives and synthetic textiles.

While customer industries can obtain their raw materials from domestic or foreign sources, the primary and intermediate producers are totally dependent upon one another and, unless both are competitive and profitable, their long term viability is jeopardized.

The petrochemical industry makes up over 60% of the chemical manufacturing industry in Canada. Its production capacity is located in four provinces (Alberta - 43%, Ontario - 42%, Quebec - 11%, British Columbia - 4%), spread over about 55 plant sites.

Direct employment in the industry is around 15,000. Petrochemicals help to sustain 50,000 jobs in upstream supply and support systems and a further 125,000 jobs in downstream processing industries. The downstream industries tend to locate close to markets so most of the downstream employment has been in Ontario and Quebec. The growth of the petrochemical industry in Alberta has not changed this.

Companies involved in the sector are, for the most part, large multinationals, the majority being foreign controlled. Polysar is a large Canadian owned multinational.

While there is a reasonable amount of domestic corporate integration between primary and intermediate petrochemical production and even down to customer industries in the oil-based sector, there is little in the gas-based sector.

Integration with the foreign parent (mainly U.S.) is much more important for the export dependent gas-based sector, with companies such as Dow, Union Carbide and Celanese marketing their products through their U.S. corporate operations.

Government ownership in the industry is limited. The federal government owns 11.8% of the Canada Development Corporation, owner of Polysar, a fully integrated synthetic rubber manufacturer. The Quebec government is a 50% partner, through Société générale de financement, in Pétromont, Quebec's ethylene producer.

The U.S. is, by far, Canada's most important petrochemical trading partner, taking about 60% of Canadian exports and supplying about 75% of imports.

Performance

Prior to 1967, the petrochemical industry in Canada existed to supply the domestic market and much of it was dependent upon protective tariffs. The National Oil Policy of the time reserved the Ontario market for domestic oil, which sold for about $1.25 per barrel more than the $2.50 per barrel international oil that was available in Montreal.

The 1967 Kennedy GATT round resulted in significant reductions in Canadian protective tariffs which, over the next few years, led to the shutdown of much of the Canadian industry, including the large Shawinigan, Quebec complex and a major part of the fledgling gas-based Alberta industry.

The first OPEC oil crisis of 1973 and the Canadian government decision to hold Canadian energy prices below world levels, gave Canadian petrochemical producers a feedstock cost advantage for the first time. From the mid-1970s, as a result of investment in world scale facilities and energy policies which continued the Canadian feedstock cost advantage over the main international competition, the sector's historical deficit in external trade was rapidly reduced. A trade surplus was achieved for the first time in 1979.

The worldwide recession that started in 1982 and falling energy prices outside Canada, caused the erosion or disappearance of Canada's feedstock cost advantage and, in spite of the start-up of additional world scale facilities, a trade deficit in petrochemicals was experienced in 1984.

The industry in total lost more than $700 million (before tax) in the three year period 1982-84 and the losses continued through 1985.

PETROCHEMICAL INDUSTRY STATISTICS

$ MILLIONS	1980	1981	1982	1983	1984
Gross investment	4,628	6,059	7,355	7,729	8,326
Long & short term debt	1,383	2,247	3,049	3,196	3,588
Profit (Loss)					
Before Interest and Taxes	918	569	(7)	41	228
After I, Before T	N/A	345	(244)	(250)	(218)
After I & T	426	198	(129)	(124)	(132)

2. STRENGTHS AND WEAKNESSES

a) Structural

Canada has an advantage in terms of energy resource availability, relative to most industrialized nations, particularly in natural gas. Since hydrocarbon consumption, both as raw material and as energy, represent up to 70% of the cost of production of petrochemicals, hydrocarbon availability and pricing are of critical importance to the industry.

The western sector of the industry is predominantly gas-based, while in the east, the feedstocks used have been mainly oil-based. The two main elements in the cost of production of petrochemicals relate to hydrocarbons and capital.

	%
Hydrocarbons (Raw material plus energy)	60 - 70
Capital (Initial plant cost plus maintenance)	25 - 35
Other	5
TOTAL	100%

An essential element in the development of the Alberta ethylene and derivatives industry was cost of service, take-or-pay contracts on the ethylene. In the expected environment of continuously increasing world energy pricing, this was intended to offer Alberta derivative producers an ever increasing feedstock cost advantage that would allow them to offset the disadvantages of higher capital costs and the freight and tariff penalties in serving export markets from landlocked Alberta.

Capital costs are higher in Canada than on the Gulf Coast for reasons of climate, lack of industry concentration and unionized labour.

Our relatively small, widely dispersed population, results in transportation cost penalties and a much higher export component of the output from Canadian world scale plants than for our major competition on the U.S. Gulf Coast.

Canada's well developed industrial base and highly educated and skilled workforce give it clear advantages over the energy rich developing nations trying to enter the petrochemical field.

b) **Trade Related**

Tariffs are a significant factor in petrochemical trade with rates generally increasing the more upgraded the product. Examples of rates for the large volume chemicals produced in Canada are:

Jan 1, 1987 Rates	Canada	U.S.	E.E.C.	Japan
Primary				
Ethylene	Free	Free	Free	5.8%
Methanol	10%	18%	13%	4.9%
Intermediates				
Styrene	7.5%	7.4%	6%	8%
Ethylene dichloride	10%	0.6¢/lb. + 3%	12%	5.8%
Ethylene glycol	10%	12%	13%	12%
Polyethylene	9.5%	12.5%	12.5%	28 yen/kg

Non-tariff barriers have not been significant in petrochemical trade. The industry, however, has expressed concern that growing protectionist pressures world-wide, could lead to the increased use of non-tariff barriers.

Some of the energy-rich LDCs with which Canada is now competing in export markets have General Preferential Tariff (GPT) status in many of the target markets. Application of volume quotas to GPT goods by the EEC, however, and a similar option for Japan, will reduce the potential disadvantage that Canadian exporters could suffer.

c) **Technological Factors**

A strength of the industry is that it has, in large part, modern plants which are world competitive in scale and technology. More than 2/3 of the industry's investments in Canada are less than eight years old. In addition, modifications in the order of $250 million per year are made on an ongoing basis to keep the technology up to date.

d) **Other**

In recent years, interest rates in Canada have been 0.5 to 1.0 percent higher, on average, than in the U.S. (the spread is greater in early 1986). Since capital costs for petrochemical facilities are higher in Canada than on the U.S. Gulf Coast, interest rates have an added impact upon the capital element of profitability.

Previously, while Canadian energy prices were below world levels, exchange rates impacted upon gross margin, since feedstocks were set relative to

energy pricing in Canadian funds and selling prices were set relative to U.S. Gulf Coast prices. Sales revenues increased as the Canadian dollar weakened while feedstock costs were unchanged. Under energy decontrol, exchange rates now have a relatively neutral effect upon margins.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

Federal

Much of Canada's petrochemical investment was made under a regulated energy environment which was aimed at keeping Canadian energy prices below world levels. This situation prevailed from 1973 until 1982 when, with a collapse in international energy prices the regulated Canadian system could not adjust and oil prices in Canada kept increasing until they exceeded international levels.

The Industry Task Force that reported to the federal government in February 1984, made several recommendations on energy pricing and taxation changes designed to make Canadian petrochemical raw material pricing more market-responsive and to reduce up front taxes.

When all of the elements of the March 1985 Western Accord on energy pricing have been implemented (January 1, 1989), most of the Task Force's energy recommendations will have been addressed. However, the industry will continue to be non-competitive in the medium term because of depressed international energy prices and the residual impacts of some of the taxes imposed by the previous regulated energy policy. The Petroleum and Gas Revenue Tax (PGRT), for example, will not be completely phased out until the end of 1988.

Provincial

Most of the new petrochemical investment has gone into Alberta. No special assistance was provided to the industry; in fact, the provincial "stepping out" policy that required new plants to locate away from the larger metropolitan areas resulted in significant capital cost penalties. Provincial royalties on oil and gas represent about 30% of well-head prices on these materials.

4. EVOLVING ENVIRONMENT

Much of the new petrochemical capacity that was built in the world during the late 1970s/early 1980s was located in energy-rich locations, since security of feedstock supply and feedstock costs were of prime concern.

With an easing in the concerns over energy supply and recent dramatic reductions in prices, it is likely that the increased petrochemical capacity that will be required by the early 1990s will locate according to traditional patterns, in the industrialized countries which are the markets for petrochemicals. Energy-rich LDCs may still be able to attract some investment if they are prepared to offer substantial discounts from international energy prices but it is likely that the LDCs will play only a minor role in the next round of capacity increases.

If the collapse of international oil prices results in increased growth in the industrialized world, the present world-wide overcapacity in petrochemicals will be used up more quickly than had been anticipated. Present product pricing is too low to justify new investment. If new capacity is to be put in place, product prices will have to improve. In that event, even if none of the new investment comes to Canada, the profitability of the existing Canadian industry should improve.

A collapse in international crude oil prices will further erode the gas-based industry's relative competitiveness, however, because the prices of gas-derived feedstocks on the U.S. Gulf Coast would tend to fall, while Alberta prices would not be able to adjust, due to residual federal energy taxes, provincial royalties, and cost of service contracts. The oil-based sector will benefit from the oil price drop since product prices are not expected to erode as quickly or as much as crude oil prices.

5. COMPETITIVENESS ASSESSMENT

Since Canadian capital costs are higher than those in the U.S., the heavily export-dependent Canadian industry can only be competitive internationally if it has a raw material cost advantage sufficient to offset capital, freight and tariff disadvantages.

The impacts of the 1982 recession on the petrochemical industry worldwide; depressed product prices, severe overcapacity and low international energy prices, persist. The feedstock cost advantage that the Canadian industry had enjoyed has been lost (oil-based) or greatly reduced (gas-based).

The industry lost more than $700 million (before tax) in the three-year period 1982-84 and losses continued in 1985. The collapse of international crude oil prices will further erode the competitiveness of the gas-based sector while improving the situation for the oil-based industry.

Oil-Based

Under decontrol, the oil-based sector will never recapture an advantage since the price of crude oil in Montreal, or in Sarnia, will be higher than that on the U.S. Gulf Coast by a $0.50 - 0.75 per barrel freight differential.

Feedstock flexibility to allow the use of natural gas liquids (NGL), as well as oil-based feedstocks, has been suggested for oil-based ethylene producers as a way to restore competitiveness. Polysar and Pétromont have been pursuing such a course. The government announced a $55.8 million contribution to Pétromont in December 1985, for conversion and modernization of plant facilities.

No large scale investments are expected in the oil-based sector, though individual projects are possible, e.g. a new ethylene customer for Pétromont; manufacture of the octane improver MTBE; a plant that will use excess Polysar propylene production.

Continued rationalization and shutdown of the older, smaller units is likely.

Gas-Based

Faced with a combination of long-term, take-or-pay, cost-of-service gas contracts, much of the gas-based sector is forced to operate at high rates, even though unprofitably. It will only return to profitability when international energy prices increase in real terms and/or there is a strengthening of product prices.

In an energy decontrol environment, however, the feedstock cost advantage in Alberta would be limited to the pipeline cost of shipping the feedstock to U.S. or eastern Canadian markets. Such an advantage would be insufficient to offset capital and freight cost disadvantages associated with Alberta petrochemical production.

PREPARED: RESOURCE PROCESSING INDUSTRIES BRANCH, DRIE

Assistant Deputy Minister

Date: March 24, 1986

FACT SHEET

NAME OF SECTOR: Petrochemicals SIC(s) COVERED: 373 & 3783

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984
Establishments	N/A	55	58	61	57	52
Employment	7,979	13,168	16,281	15,455	14,653	14,438
Shipments ($ million)	452	4,220	5,022	4,434	4,992	5,258
Gross Domestic Product (Constant 1971 $ million)						
Investment ($ million)	1,020	4,628	6,059	7,355	7,729	8,326
Profits After Tax ($ million)		426	198	(129)	(124)	(132)
(% of sales)		13.9	5.2	(3.7)	(3.2)	(3.4)

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984
Exports ($ million)	94	1,234	1,466	1,368	1,556	1,645
Domestic Shipments ($ million)	290	1,832	2,371	2,074	2,313	2,279
Imports ($ million)	249	1,171	1,226	1,043	1,475	1,693
Canadian Market ($ million)	539	3,003	3,597	3,117	3,788	3,972
Exports as % of Shipments	25	40	38.2	39.7	40.2	42
Imports as % of Domestic Market	46	39	34.1	33.5	38.9	43

Source of imports (top 4)

	U.S.	E.E.C.	Japan	Others
1981	77.1	15.8	1.6	5.5
1982	76.2	16.5	1.4	5.9
1983	75.7	15.0	1.4	7.9
1984	74.8	17.1	1.3	6.8
1985	71.0	19.4	1.7	7.9

Destination of exports (top 4)

1981	52.6	23.3	6.5	17.6
1982	52.8	20.2	5.8	21.2
1983	56.3	15.7	8.4	19.6
1984	57.8	14.0	9.5	18.7
1985	57.5	11.0	8.7	22.8

3. MAJOR FIRMS

Name	Ownership	Location of Major Plants
1. Polysar	100% Cdn.	Sarnia, Ont.
2. Dow	100% U.S.	Fort Saskatchewan, Alta. Sarnia, Ont.
3. Novacor Chemical	100% Cdn.	Joffre, Alta. Medicine Hat, Alta.
4. Union Carbide	75% U.S.	Sarnia, Ont. Montreal East, Que. Prentiss, Alta.
5. Du Pont	73% U.S.	Sarnia, Ont. Maitland, Ont.
6. Shell	79% Dutch	Sarnia, Ont. Montreal, Que. Scotford, Alta.

*While SIC 373 and 3783 include all petrochemicals, they also include non-petrochemicals. There is no statistical entity "Petrochemicals". Most data shown are from industry association.

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DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Competitiveness Profile

Pharmaceuticals & Medicines

1. STRUCTURE AND PERFORMANCE

(a) Structure

The Pharmaceuticals and Medicines industry in Canada manufactures a wide range of products for prevention or treatment of diseases in humans and in animals. The products can be broadly classified into the following major categories:

	$ Market Share in Canada
. Ethical drug products	
(a) prescription	45%
(b) non-prescription	25%
. Proprietary drug products	22%
. Veterinary products	6%
. Biological products	2%

Ethical drug products are not advertised to the public and are sold either by prescription or the recommendation of health professionals. The ethical drug products category is largely composed of specialty drugs developed by large international pharmaceutical firms and protected by strong patents internationally. These products normally provide the firm with a certain degree of exclusivity and pricing flexibility. Proprietary drugs are largely sold over-the-counter at drug stores and are broadly advertised to the public. Biological products include vaccines, hormone products and blood products and are used most often by health professionals. The industry is defined statistically by SIC 374 (Pharmaceuticals and Medicines). Total manufacturers' shipments exceeded $2 billion for the first time in 1984.

Distribution of pharmaceuticals is approximately 62 per cent through drug stores, 15 per cent through hospitals, with the remainder through a variety of other outlets (grocery stores, veterinarians and other professionals). Biologicals are purchased principally by provincial governments.

A number of large multinational companies dominate the industry world-wide, usually manufacturing the active ingredients for their drug products in their country of origin, important market locations, and more recently in certain countries offering favorable tax treatment. Concentration is increasing, accompanied by greater centralization of R&D as the expense and time required to bring new drug products to market increases.

The pharmaceutical industry in Canada consists of about 130 manufacturing establishments and, with the exception of the biological products subsector, is dominated by international companies. Only 15 per cent of the industry's $1.3 billion in assets are Canadian-owned, and concentrated mainly in smaller companies. Of the leading 30 pharmaceutical companies in Canada, only 2 are Canadian-owned. The remaining 28 are subsidiaries of foreign-owned multinational corporations. These account for close to 80 per cent of the Canadian market and the industry's assets. Such international firms as: American Home Products, Merck-Frosst Group, Ciba-Geigy and Johnson & Johnson are major forces in the Canadian marketplace, although no single group holds more than 7.5 per cent market share. Canadian-owned firms are strong in the production of generic drugs. The biological products subsector is largely Canadian-controlled with substantial participation by governments. It is concentrated in a very small number of firms, the most prominent being Connaught Laboratories which remains one of only five full line vaccine exporters in the western world.

Regionally, 84 per cent of the manufacturing establishments of the pharmaceutical industry sector are concentrated in the provinces of Ontario (50 per cent) and Quebec (34 per cent) with the balance mainly in Western Canada.

Only 14 per cent of the world's production is traded. There is considerable trade among European countries in both active ingredients and dosage products and there are significant exports from Europe to the Third World. Within North America, however, there is little trade in dosage products as both Canada and the U.S.A. import less than 10 per cent of their domestic needs. Instead, subsidiary companies import active ingredients, then formulate and package them for the local market. This is an important step, which accounts for over 60 per cent of the total manufacturing value added. The Canadian industry, therefore, exports scarcely more than 7 per cent of its shipments of which 30 per cent is directed to the U.S.A., 13 per cent to the EEC, and the remainder largely to Central and South America and to the Far and Middle East. More than two-thirds of the imports into Canada are active ingredients with almost half originating in the U.S.A.

The small biological subsector is an exception showing strong export performance in human vaccines. Trade in this subsector is increasingly affected by the large volume of centralized purchases by such organizations as UNICEF and Pan-American Health Organization (PAHO) which have resulted in fierce world competition and substantially depressed prices. A manufacturer can lose a major portion of its exports for one or two years by losing a single tender. Technology transfer to developing countries in exchange for long-term sourcing of bulk vaccines is becoming an important means of securing export sales. Financing packages (predominantly government-assisted) are becoming an important factor in this area.

(b) Performance

Investment in the pharmaceutical sector in Canada increased steadily to $100 million in 1982, but declined suddenly to $82.3 million in 1983. Growth in the rate of shipments by the industry increased by an average 12.3 per cent annually in the five years to 1979 and by 14.9 per cent in the five years ending in 1984. Employment in the industry grew only marginally from 14,649 employees in 1973 to 15,268 in 1983. The Gross Domestic Product of this industry sector increased by 43 per cent (real growth) from 1973 to 1983. This represents an average annual real growth of 5.3 per cent for the five year period (1973 to 1978); it was reduced to an average annual real growth of 2.1 per cent for the next five year period (1978 to 1983). Although this industry is generally considered recession resistant, it suffered some shrinkage in GDP during 1980 and 1982 which contributed to the low growth figure for the period 1978 to 1983. Canadian industry forecasts for 1986 are for 5 per cent real growth.

The overall financial health of the industry is good. After-tax profit on capital employed averaged 15 per cent over the five year period to 1982, an improvement over the previous five years. The pharmaceutical sector remains among the more profitable manufacturing sectors in Canada.

Expenditures on research and development reached $65 million in 1983, the equivalent of 3.5 per cent of shipment value. Canada's share of world-wide R&D is one of the lowest among the industrialized countries which generally spend between 8 and 15 per cent of the value of their pharmaceutical sales on R&D.

2. COMPETITIVE STRENGTHS & WEAKNESSES

(a) Structural

With no head offices of multinational companies, the Canadian industry reflects the truncated structure of branch plants. It conducts little R&D because of parent firms' preferences to centralize that

function at head office or in major market locations, and produces few active ingredients and concentrates almost exclusively on formulating dosage products. The Canadian industry thus lacks the base for developing innovative products or a strong export performance. Most industrialized nations, where the industry is highly integrated, export at much higher levels. Switzerland exports 67 per cent of shipments, the U.K. 42 per cent, Germany 27 per cent, France 25 per cent and the U.S. 12.6 per cent.

Canadian production facilities include both modern high-capacity units and older, more labour-intensive equipment. However, because the Canadian market is small, representing only 1.5 per cent of world consumption, and there are a large number of competing products in each of the various therapeutic classes, most production runs in Canada are short and most plants operate on no more than one shift. Most Canadian subsidiaries of multinational firms have territorial restrictions on exports.

The Canadian-owned generic sector is pursuing export opportunities, but because of its relatively small size it does not contribute significantly to the overall export performance.

The Canadian-owned biological subsector does not suffer from the limitations of a branch plant structure and remains a domestic strength. This subsector with its strong R&D performance and record of product innovation particularly in the area of human vaccines, has had a large measure of success in the export market, despite a population base which is too small to support a world competitive full line vaccine manufacturing operation.

(b) Trade Related Factors

Most products in dosage form entering Canada are subject to an MFN tariff of 10.4 per cent which will decline to 9.5 per cent by 1987. U.S. tariffs on dosage pharmaceuticals presently range between 3.3 per cent and 4 per cent and are scheduled to decrease to 3.1 per cent and 3.7 per cent respectively by 1987.

The MFN tariffs on pharmaceutical active ingredients entering Canada range from free to a high of 13.1 per cent; most are dutiable around 10 per cent which will decline to 9.2 per cent by 1987. Tariffs on pharmaceutical active ingredients entering the U.S. from Canada range from free to 24.9 per cent with the majority of products dutiable between 3 and 10 per cent, to be further reduced by 1987. As Canada currently has almost no production of active ingredients, these tariffs have little impact on the Canadian industry.

Biological products such as insulin, vaccines, sera and plasma currently enjoy duty-free status entering both Canada and the U.S.A.

The prime non-tariff barriers to international trade in pharmaceuticals are the health regulations in the importing country. Certain countries use their regulations as effective trade barriers to spur the growth of these sectors in their own countries.

As an example, the U.S. has some regulatory requirements which effectively block the import of Canadian biologicals (vaccines) into that market. These consist of difficult administrative conditions, mostly unrelated to product quality, which are imposed on Canadian producers. This constraint has been the main factor behind the decision by Canada's principal vaccine producer, Connaught Laboratories, to manufacture for the U.S. market in Swiftwater, Pennsylvania.

The Canadian-owned generic segment cannot sell their compulsory licensed copies of brand name products in the major industrialized countries which have strong patent systems. Therefore, the sale of products in the major Western industrialized nations is limited to those

products which are off-patent and have low profit margins and strong competition. Sales of compulsory licensed products however, are strong in the Third World.

(c) Technological Factors

Since the domestically-owned pharmaceutical sector is largely limited to smaller firms, there appears to be little chance that the indigeneous industry will ever attain the size and critical mass required to engage in drug discovery. Only the biologicals (vaccine) subsector, which is Canadian-controlled and involves substantial government participation, engages in significant research and development effort and product innovation in Canada.

Canada presently lacks a basic pharmaceutical fine chemical (fermentation) industry. It is, therefore, unlikely to benefit to any significant extent from recent developments in genetic engineering. The absence of this basic industry must be considered a major constraint to the development of an advanced biotechnology based industry in Canada.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

In virtually all countries, the pharmaceutical industry is subject to a high degree of government scrutiny and regulation.

In Canada, the Food & Drugs Act gives the Federal Government wide ranging powers to control directly the safety, efficacy, and quality of all medicines sold for use in Canada and to determine their distribution channels and labelling requirements. This Act, which is administered by the Department of Health and Welfare, is intended to safeguard the health of the user and to ensure good manufacturing practices. In general, the regulatory requirements governing drug products sold in Canada are among the most respected world-wide as ensuring high quality products.

Another federal measure which has had an important impact on the pharmaceutical industry was an amendment introduced in 1969 to the Canada Patent Act. This legislation empowered the Commissioner of Patents to issue Compulsory Licenses permitting the importation of dosage pharmaceuticals or the raw materials for their manufacture by competitors of the patent holder. This measure, which is unique to Canada among the western industrialized nations, was intended to be an instrument of competition policy.

The legislation has led to the creation of a Canadian-controlled generic drug industry in Canada which has utilized these provisions of the Patent Act to introduce generic copies of brand name products. This legislation is under review by the Government.

There are no federal or provincial programs of financial assistance which are specific to this sector.

4. THE EVOLVING ENVIRONMENT

The innovation and development of new drugs is central to investments and profits in the international pharmaceutical industry. The average annual expenditure on R&D is usually between 8 per cent and 10 per cent of sales for most innovative firms. The cost and time required for the development of new drugs has increased sharply during the past 20 years. Using constant values, the financial requirement to bring a new chemical entity to the market was estimated at $8.8 million in 1962 compared to $60 million in 1980, exclusive of capital expenditures. Development times have also risen from 3-5 years in the early 60s to 8-12 years today or even longer in some cases.

The threshold of research spending below which a firm stands little chance of sustaining development of novel products exceeds $35 million annually, corresponding to a firm with annual sales in the range of $230 to $430 million. This high threshold is probably the single most important factor behind the increasing concentration in the international

pharmaceutical industry and the centralization of research and development activities. Lacking both multinational head offices and a large market base, Canada is likely to suffer as a result.

New advances and developments in biotechnology that have taken place since the early seventies which include gene-splicing and cell fusion techniques promise to revolutionize not only the way drugs are developed but also the methods of production. They will also offer new approaches to medical therapies.

There is a general consensus that these advances in biotechnology will likely cause a fundamental restructuring of the pharmaceutical industry starting in the late 1980's. The potential impact has been compared to the importance of developing the silicon chip for the computer field and the therapeutic revolution of the 1930's and 40's.

Genetic engineering technology will impact directly on the production of pharmaceutical active ingredients and will be used in three main areas:

(i) to improve existing traditional biotechnological fermentation processes to increase yields and reduce process costs.

(ii) to develop methods of producing materials of high therapeutic value, which are either inaccessible or in short supply. Examples are human insulin, human growth hormones, interferon and interleukin II.

(iii) to introduce completely new therapeutic entities such as novel antibiotics & vaccines.

5. COMPETITIVENESS ASSESSMENT

As an overall assessment, the multinational component of the pharmaceutical industry operating in Canada is less competitive than its international counterparts for the following reasons:

(i) the lack of a vertically integrated pharmaceutical industry in Canada. Most active ingredients must be imported. These active ingredients can represent up to 40 per cent of the cost of the finished dosage product.

(ii) underutilization of production capacity. The fact that most production runs in Canada are short and most plants operate on one shift imply that the capital costs must be spread over a smaller output, contributing to a less competitive position.

(iii) Canada is at a greater distance to most export markets than either the EEC or the U.S.A. The added cost of importing active ingredients from Europe and the U.S.A. and exporting finished dosage products contributes to a less competitive position.

These factors are critical to those products which are off-patent and considered commodity drugs, since the international industry tends to have specialty drugs which are protected by strong patents, that give it a degree of monopoly power.

Those firms manufacturing generic products under compulsory licensing generally source their active ingredients at lower prices from countries such as Italy, Hungary, Argentina, and others. In addition, there is a higher utilization of production capacity. When these factors are coupled with low R&D expenditure and lower marketing costs, the generic drug manufacturers are considered competitive in international markets.

However, constraints to effective international market penetration by the Canadian owned generic segment include a lack of an international marketing structure and the ability to address non-tariff barriers.

In the biological subsector, Canada continues to be very competitive on a commercial tender basis in the supply of finished dosage vaccines as well as technology transfer projects tied to long term purchases of bulk vaccines. However, an inability to respond quickly to match foreign bilateral aid packages and to provide financing at competitive rates could drastically reduce Canadian vaccine exports in the next decade. Such an eventuality would not only erode the financial base for innovation but could seriously jeopardize this segment of the Canadian pharmaceutical industry.

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DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Fact Sheet

Pharmaceuticals & Medicines

1. Principal Statistics

	1973	1980	1981	1982	1983	1984
Establishments	143	138	134	131	129	NA
Employment (total)	14,649	15,800	16,058	15,707	15,268	NA
Shipments ($ million)	536.3	1,144	1,327	1,560	1,785	2,060
Exports ($ million)	38.9	89	104	118	144	149
Domestic Shipments ($ million)	497.4	1,055	1,223	1,442	1,641	1,911
*Imports ($ million)	109.9	365	404	441	510	538
Canadian Market ($ million)	607.3	1,420	1,628	1,883	2,151	2,449
Exports - % of shipments	7.3%	7.8%	7.8%	7.6%	8.1%	7.2%
Imports - % of domestic market	18.1%	25.9%	24.8%	23.4%	23.7%	22.0%

*About 2/3 of this figure is accounted for by imports of active drug ingredients for use in further manufacturing.

2. Regional Distribution - 1983

	Atlantic	Quebec	Ontario	West
Establishments - % of total	1.6	34.1	50.4	14.0
Employment - % of total	0.3	41.0	56.4	2.3
Shipments - % of total	0.3	42.8	55.0	2.0

3. Foreign Trade:

		U.S.	E.E.C.	Japan	Others
Imports - % of total	1973	56.8	25.6	1.3	16.3
	1980	45.9	29.5	1.8	22.9
	1981	44.1	25.5	1.8	26.7
	1982	42.3	25.9	1.1	30.6
	1983	44.6	25.5	1.2	28.6
	1984	46.6	27.2	1.4	24.9
Exports - % of total	1973	19.8	27.8	5.6	46.8
	1980	22.1	19.9	8.2	49.8
	1981	18.3	20.7	6.2	54.8
	1982	23.5	16.9	4.5	55.1
	1983	24.3	14.0	4.7	56.9
	1984	29.5	13.3	5.5	51.6

Major Firms:

Company	Location	1984 Market Share (%)	1984 Domestic Sales (millions)	Employment
A. Foreign-Owned Multinationals:				
American Home Products	Montreal	7.5	151.0	1,360
Merck-Frosst Group	Montreal	6.3	127.7	760
Johnson & Johnson Group	Toronto	4.8	96.0	600
Ciba-Geigy	Toronto	4.5	90.6	350
B. Generic Producers:				
**Novopharm	Toronto	1.9	38.1	350
**Apotex	Toronto	1.2	23.3	130
Horner	Montreal	1.2	23.3	210

**(Canadian-owned)

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Fact Sheet

Pharmaceuticals & Medicines

5. Concentration

Share of Total Shipments (est-%)

	Average No. of Employees	Pharmaceuticals					
		1973	1975	1979	1981	1982	1983
largest firms	500 - 999	23.9 (6)*	16.1 (4)*	23.0 (6)*	24.5 (6)*	20.6 (5)*	21.1 (5)*
	200 - 499	39.8(17)	41.1(19)	34.2(16)	39.6(18)	42.7(18)	41.5(17)
	100 - 199	17.0(16)	22.3(17)	23.4(18)	17.8(17)	18.3(17)	19.7(18)
	50 - 99	11.2(23)	11.8(21)	11.5(17)	11.4(21)	11.0(17)	9.3(20)
	20 - 49	4.6(28)	6.9(35)	5.7(29)	5.2(24)	5.7(25)	6.7(19)
	10 - 19	2.6(16)	0.7 (7)	1.5(17)	1.2(15)	1.4(17)	1.4(19)
	5 - 9	0.4(13)	0.2 (8)	0.2 (8)	0.3 (9)	0.1 (3)	0.1 (8)
smallest firms	0 - 4	0.5(24)	0.2(23)	0.5(33)	0.1(24)	0.2(29)	0.1(23)
*(No.) of Establishments:		(143)	(134)	(144)	(134)	(131)	(129)

6. Financial Statistics

	1973	1975	1979	1980	1981	1982	1983
Total Income	676.3	843.7	1,352.8	1,438.3	1,676.5	1,876.9	1,656**
After Tax Profits							
- millions ($)	41.3	48.6	85.3	104.5	117.9	127.2	n/a
- on capital employed (%)	11.7	11.5	14.3	16.1	16.0	15.1	n/a
- on total income (%)	6.1	5.8	6.3	7.3	7.0	6.8	n/a
Retained Earnings ($ millions)	199.4	223.0	330.7	351.7	416.6	503.8	n/a
Debt/Equity Ratio	0.7	0.9	0.9	0.9	0.9	0.8	n/a
Current Assets/Current Liabilities (Ratio)	2.2	2.0	2.0	2.0	1.9	2.0	n/a
Investment ($ millions)	24.2	41.2	46.1	63.0	76.3	99.9	82.3

** Total Sales not Total Income

7. Production Statistics

	Pharmaceuticals SIC 374						
	1973	1975	1979	1980	1981	1982	1983
Workers/Total Employees (%)	42.8	45.3	40.1	43.3	43.4	42.3	46.3
Wages of Workers/ Industry Shipments (%)	8.8	9.2	8.8	9.2	9.0	8.7	8.4
Wages of Employees/ Shipments (%)	26.8	26.3	27.2	25.7	25.4	26.0	23.4
Cost of Materials/ Shipments (%)	33.2	37.6	38.9	37.0	34.5	34.7	32.2
Value Added/Shipments (%)	72.2	69.9	70.9	69.6	73.1	73.1	74.0

8. Statistical Sources

a Catalogue 46-223 Pharmaceuticals, Cleaning Compounds and Toilet Preparations
b Catalogue 46-209 Manufacturers of Pharmaceuticals and Medicines
c Catalogue 46-214 Manufacturers of Soap and Cleaning Products
d Catalogue 31-001 Inventory Shipments and Orders in Manufacturing Industries
e Catalogue 72-002 Employment, Earnings and Hours
f Catalogue 65-004 Exports by Commodities
g Catalogue 65-007 Imports by Commodities
h Catalogue 61-207 Corporation Financial Statistics
i Catalogue 61-205 Private & Public Investment in Canada
j IMS Drug Store and Hospital Purchases

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DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE

PLASTICS PRODUCTS INDUSTRY

1. STRUCTURE AND PERFORMANCE

a) Structure

The plastics products industry * is composed of manufacturing establishments transforming synthetic resins and plastics materials into a wide range of finished end products, parts for other manufactured goods, and intermediate materials consisting of shapes and forms made by a variety of fabricating methods. A graphic representation of the industry and typical processing technologies and products are shown in Appendices #1 and #2 attached.

Plastics products manufacturers are dependent on inputs from suppliers of raw materials, machinery and tooling, but, generally speaking, may choose from among many such suppliers both domestically and abroad. The industry obtains a substantial proportion of its technical information and other assistance from supplier companies, from agreements with other companies (technology transfer) and from the extensive literature on plastics processing that is available.

The industry shipped goods valued in excess of $3.5 billion in 1985, produced in more than 1000 establishments employing approximately 32,000. These figures do not include "in-house" or captive production by companies such as General Motors of Canada, Northern Telecom, Samsonite Luggage and other large establishments which are classified in other industry sectors.

Regional distribution of establishments is as follows: Ontario 51 per cent, Quebec 26 per cent, West 20 per cent, East 3 per cent. Regional distribution of employment is: Ontario 63 per cent, Quebec 26 per cent, West 10 per cent, East 1 per cent.

Twenty-one per cent of the industry's establishments accounted for 75 per cent of the value of shipments and employed 64 per cent of the production workers. Of these establishments, two-thirds were Canadian-owned. Eighty-five per cent of Canada's external trade in plastics products was with the United States, 5 per cent with the EEC and the balance distributed broadly among other world regions.

Imports of plastics products, at $1.0 billion in 1985, were composed largely of film and sheet (33 per cent) and "fabricated materials and end products" (41 per cent). Other imported plastics products included shipping containers (9 per cent) and laminated materials (7 per cent). Examples of film and sheet imports include products not made in Canada, such as polyester film (e.g. "Mylar" and "Melinex") for photographic film base and food packaging, interlayer film for safety glass, polyvinylidene chloride ("Saran") film for the packaging industry as well as for retail sale as household food wrap, metallized films which compete with aluminum foil in some packaging applications, specially coated films, and styled films decorated and/or embossed with designs not available in Canada. Examples of "fabricated materials and end products" include appliance parts, lighting lenses, housewares and a very wide range of other products.

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* The sector includes establishments reporting in the Annual Census of Manufacturers by Statistics Canada under S.I.C.'s 1611 ("Foamed and Expanded Plastics Products Industry"), 1621 ("Plastics Pipe and Pipe Fittings Industry"), 1631 ("Plastic Film and Sheeting Industry"), 1691 ("Plastic Bag Industry"), 1699 ("Other Plastic Products Industries, n.e.c.") and 3256 ("Motor Vehicle Plastics Parts Industry") (1980).

Exports of plastics products, at $0.55 billion in 1985, were composed largely of fabricated materials and end products (50 per cent), shipping containers (23 per cent) and film and sheet (20 per cent). Included in these exports were automotive parts, beverage-handling cases, fish containers, industrial bags, floor and wall coverng, specialized packaging films and many other products.

b) Performance

The plastics products sector has grown much more rapidly than has all manufacturing. During the period 1973-1985, the average annual growth in gross domestic product of the plastics products industry was approximately 5.8 per cent, while that of all manufacturing declined fractionally. During the 1973-1983 period employment by the plastics products industry increased at an annual rate of 2.6 per cent while that by all manufacturing remained almost constant. The number of plastics-industry establishments increased at an average annual rate of 5 per cent compared to 2 per cent for all manufacturing.

Value added as a proportion of value of shipments in the plastics processing sector declined during this 1973-83 period largely because the cost of plastics raw materials used by the industry, resulting from steep increases in petroleum costs, increased more rapidly than selling value of the finished plastics products. The primary factor in the downward trend of the ratio of value added/shipments appears to be a decline in profitability of the sector.

The sector has been successful in increasing exports, the ratio of exports to shipments increasing from 9 per cent in 1980 to 15 per cent in 1985. During the same period the trade deficit in these products continued to increase at an average annual rate of 6.7 per cent. Imports historically have supplied about one-quarter of Canada's requirements for fabricated plastics products.

2. STRENGTHS AND WEAKNESSES

a) Structural

The Canadian plastics products industry in general is at a disadvantage compared with the United States industry because costs for capital, overheads and raw materials are higher.

It appears that under present conditions, raw materials in Canada, protected by a 10 per cent duty, are somewhat more costly --- some industry executives estimate by about 5 per cent --- than in the United States. In international sales this may not be a major disadvantage because duty-drawback regulations permit Canadian exporters to bargain with suppliers for competitive prices or, alternatively, use foreign raw material and claim drawback on the duty paid. Additional cost disadvantages exist in marketing, attributable to smaller scale of operation in Canada and market areas that are more diffuse than those in the United States. A comparison of other cost elements, including direct labour, utilities and factory and administrative overhead, is more difficult because these elements are influenced by plant location, process, corporate size and other factors.

In terms of the Canadian market these disadvantages to the manufacturer in Canada may be offset to some extent by increased costs borne by the foreign manufacturer because of freight costs, the need to adapt the product to Canadian requirements (e.g., packaging) and the need to provide competitive service to clients. Overall the unit-cost disadvantage of the Canadian plastics products industry compared with the United States industry is judged to be 3 to 4 per cent at current exchange rates.

The disadvantages of higher manufacturing costs and increased distribution costs incurred in selling into the United States are not believed to be insurmountable for Canadian exports, which consist largely of products that are unusual in design, size or material; where margins are better than in the case of commodities, and the competitiveness between a Canadian and a United States producer is influenced by the relative locations of production facilities. Thus, even if the Canadian industry collectively is estimated to be at a small cost disadvantage compared with the United States industry, an individual Canadian company may enjoy particular offsetting advantages arising from location, design, service or other factors. The industry in Canada consistently maintains about 75 per cent of the domestic market, in part because of its tariff protection, and in part because of the locational factors which favour companies situated near to major markets.

b) Trade Related Factors

The Canadian rate of duty on plastics products will be as high as 13.6 per cent in 1987. The United States tariff will range from free to 8.1 per cent, products such as film and plastics pipe being 3.1 per cent.

For this industry over-all, no major non-tariff barriers are evident, although in selected sub-sectors (e.g., plastics pipe), pressures have been felt as a result of the "Buy American" regulations.

c) Technology Factors

In the plastics products industry there are constant changes and improvements in machinery, equipment and processes. Generally speaking, plastics processors in Canada have ready access to; and commonly employ, up-to-date machinery and tooling, equipment and raw materials. In addition, extensive technical information is available from a broad range of trade magazines, journals, technical papers and corporate reports. A number of companies avail themselves of transferred technology by licensing products and processes from others.

Continuing efforts are made to upgrade performance and quality levels while increasing output, decreasing rejects and reducing raw material costs. For example, improvements in pipe production have been obtained by the use of sophisticated sizing dies and dimensional control devices. In the case of the extrusion process for plastics film, there have been innovative developments in dual air rings and internal bubble cooling which have improved dimensional control and increased productivity. Technically complex multi-layered laminations of packaging films are being made in Canada and sold internationally using proprietary processes perfected in Canada. Modern technology has allowed the injection moulding of economical but serviceable thin-wall containers for the commercial packaging of bulk ice cream and other food products.

Areas in which Canadian technology may lag behind that of the United States include technology developed in secret with respect to military parts; specialized films for photographic purposes; futuristic developments (such as the plastics automobile engine); and certain industrial processes and products for a limited market (such as the manufacture of medical devices or electronic parts or machinery parts).

d) Other Factors

Since raw materials often account for 50 per cent or more of the cost of production, exchange rate changes which influence both input costs and final selling prices have only a moderate impact on competitiveness. Nevertheless, the decreasing trend in the value of the Canadian dollar in recent years has been a factor in the high rate of increase in Canadian exports.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

There are no federal government financial assistance programs that are specific to the plastics products industry sector.

4. EVOLVING ENVIRONMENT

The plastics products manufacturing sector in Canada and elsewhere is expected to maintain a continuing high rate of growth. Plastics products will continue to increase their share of markets of traditional materials used in the packaging, building and construction, transportation, communications and other sectors. Plastics containers either exist now or are in the late stages of development in the following areas all of which are likely to have a strong impact in the next 5 to 10 years:

- plastics containers for soups, soft drinks, meat, paint and aerosols;
- plastics bottles for ketchup, barbecue sauce, jellies, preserves and juices;
- multi-layer "controlled atmosphere" snack food bags;
- "microwaveable" ovenware.

5. COMPETITIVENESS ASSESSMENT

The plastics products industry in Canada in general is not fully cost-competitive (with its counterpart in the United States), because of smaller scale of operation, higher costs of raw materials and capital, and higher marketing costs. There are, however, individual companies that are competitive and account for much of the exports of plastics products from Canada. These products are specialized in either size, design or technical concept. Canadian exports of plastics have shown a strong rising trend, which may be evidence that a portion of the industry in Canada is internationally competitive.

With the present relatively high level of tariff protection, the industry in Canada appears healthy, growing at an above-average rate, maintaining its share of the domestic market, increasing its exports at a steady rate, and adopting new technology promptly.

Prepared by: Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: July 3, 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: Plastics Products SIC(s) COVERED: 1611,1621,1631,1691 1699,3256 (1980)

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	Estimate 1985
Establishments	558	873	888	890	1,034	-	-
Employment	20,900	32,600	32,800	30,400	31,650	-	-
Shipments ($ million)	501	2,182	2,471	2,425	3,486	3,718(E)	3,968(E)
Gross Domestic Product (Constant 1971-$ millions)	219.1	461.4	487.7	446.0	520.3	580.1	629.3
Investment ($ millions)	19.3	78.7	76.3	70.1	84.3	123.0	140.0
Profits After Tax ($ millions)	37.0	98.6	117.8	54.9	68.2	-	-
(% of income)	7.4	4.5	4.8	2.3	2.2	-	-

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Exports ($ million)	26	207	250	282	328	430	551
Domestic Shipments ($ millions)	475	1,975	2,221	2,143	2,813	2,933	3,047
Imports ($ millions)	116	571	685	581	733	930	1,042
Canadian Market ($ millions)	591	2,545	2,906	2,724	3,546	3,863	4,089
Exports as % of Shipments	5	9	10	12	10	13	15
Imports as % of Domestic Market	20	22	24	21	21	24	25

Source of imports (top 4)	U.S.A.	E.E.C.	ASIA	OTHERS
1981	89	5	4	2
1982	88	5	5	2
1983	86	6	4	4
1984	85	7	2	6

Destination of exports (top 4)	U.S.A.	E.E.C.	ASIA	OTHERS
1981	70	6	4	20
1982	74	4	3	23
1983	84	3	3	10
1984	85	3	2	10

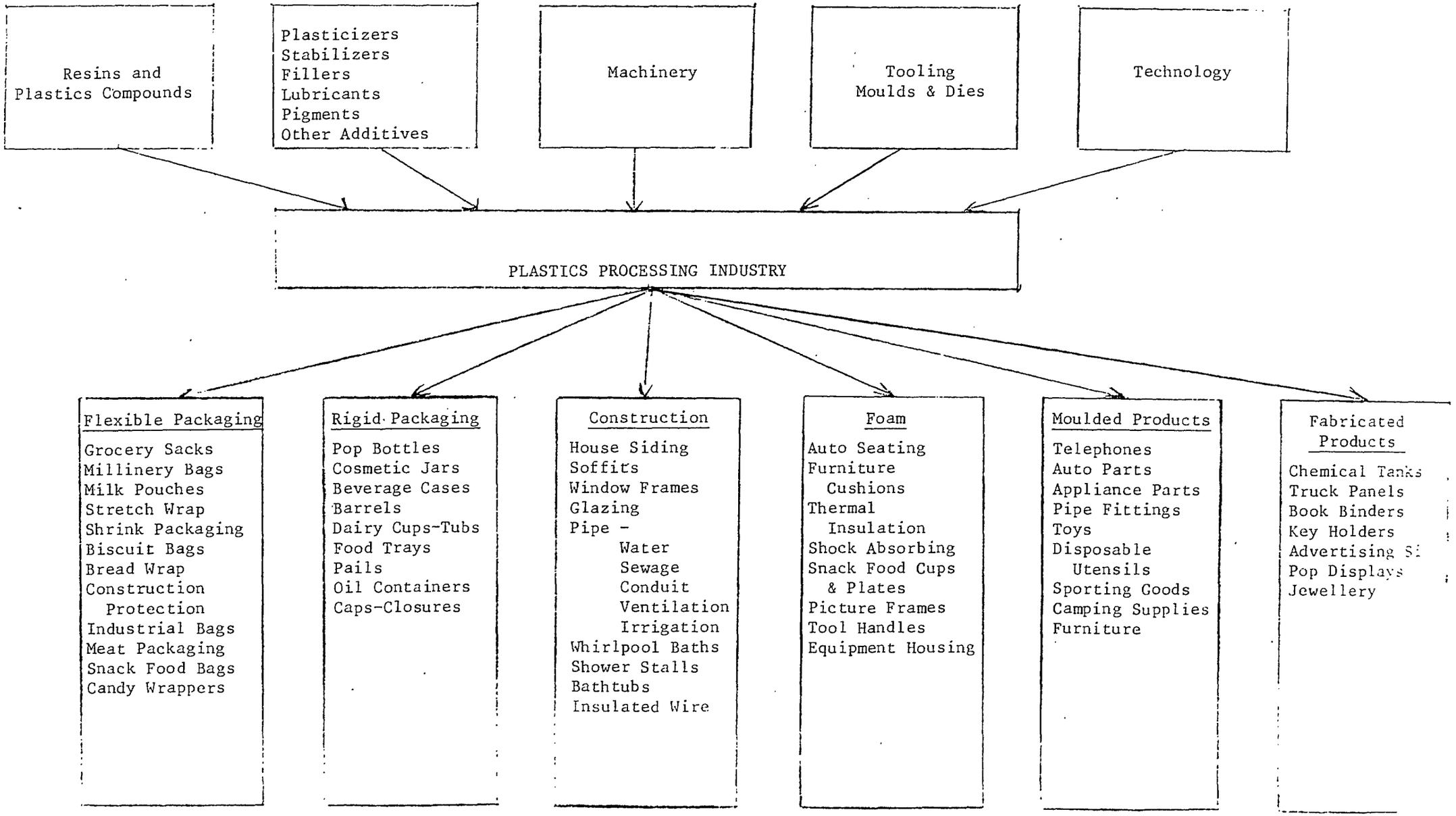
3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % Total	3	26	51	12	8
Employment - % Total	1	26	63	4	6
Shipments - % Total	1	30	61	4	4

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants	Concentration (% of Domestic Market)
Canron Inc.	Canadian	Montreal-Toronto	N/A
Scepter Manufacturing Co. Ltd.	Canadian	Toronto-Edmonton	N/A
North American Plastics Co. Ltd.	U.S.A.	Wallaceburg-Windsor	N/A
Woodbridge Foam Corp.	Canadian	Woodbridge	N/A
Waterville Cellular Products Ltd.	Canadian	Waterville, St-Jérôme	N/A
ABC Plastic Moulding	Canadian	Toronto	N/A
C-I-L Inc.	U.K.	Edmonton-Brampton	N/A
Dupont Canada Inc.	U.S.A.	Various Across Canada	N/A
Canadian General Tower Ltd.	Canadian	Cambridge-Hamilton	N/A
Dow Chemical Canada Inc.	U.S.A.	Various Across Canada	N/A
I.P.L. Inc.	Canadian	St. Damien	N/A
Reliance Products Ltd.	Canadian	Winnipeg-Milton	N/A
Leco Inc.	Canadian	Toronto-Montreal	N/A
Maple Leaf Plastics Corp.	Canadian	Toronto, Peterborough	N/A

PROCESS AND END USE FLOW SHEET



Typical Plastics Processing Technologies and Products

Primary Processes	Secondary Level	Products
Blow Moulding	Extrusion Blow Moulding Injection Blow Moulding Multilayer Blow Moulding Stretch Blow Moulding	Bottles, Jars, Fuel Containers, Fan Shrouds, Wind Spoilers and Hollow-ware in general
Injection Moulding	Co-Injection Hot Runner Runnerless Structural Foams Reaction Injection Moulding	Auto Parts, Pipe Fittings, Telephone Handsets, Pails, Boxes, Butter Tubs, Vehicle Parts, Ice Cream Containers, Machine Housings, Furniture.
Extrusion	Compounding Profiles Pipe Flat Film and Sheet Extrusion Co-Extrusion Cross-head Extrusion	Film, Sheet, Pipe, Window Frames, Siding, Furniture Edging, Strapping, Skipping Ropes, Garden Hoses, Multi-Layer Food Packaging Films.
Rotational Moulding	-	Large Containers, Septic Tanks, Agri-cultural Chemical Tanks, Ice Fishing Huts, Fish Net Floats
Calendering		Vinyl Film and Sheet
Casting		Polyurethane Rollers
Coating		Plastisol-Coated Textiles
Compression Moulding		Electrical Switches
Foaming		Polyurethane Seating, Bedding, Thermal Insu-lation
Fiber Reinforced-Plastics Fabrication		Boats, Tanks, Floor Grating, Subway-Car Parts,
Thermoforming		Disposable Food Con-tainers, Signs,
Slush Moulding		Footwear, Toys

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT

COMPETITIVENESS PROFILE

PLASTICS AND RUBBER MACHINERY INDUSTRY

1. STRUCTURE AND PERFORMANCE

a) Structure

The plastics and rubber machinery industry encompasses two distinct but related segments, the machines themselves and the molds and dies used on the machines to form the plastic and rubber products.

1) **Plastics and rubber machinery** includes machines and auxilary equipment that produce a wide range of plastic and rubber products such as food packages (e.g. bottles, coffee cups, margerine and yogurt tubs); automobile and appliance components, audio visual products (e.g. cassette casings and video cartridges), and plastic pipe and film. The sector also includes manufacturers of machines to build rubber products only, such as tires and conveyer belts. While there is a very broad range of products produced by this sector's machinery, the principal markets for these machines are the packaging and automotive industries. The packaging industry in Canada and worldwide is the largest consumer of plastic resins. The majority of machinery used is in the production of plastic products.

2) **Mold and die manufacturers** specialize in building molds and dies for plastics and rubber machines. Molds and dies are custom built to the specifications of plastics and rubber processors and are generally purchased separately from the machines.

The production of **plastics and rubber machinery** in Canada is limited to a few selected types and sizes of standard and custom made machines. The industry has gained an international reputation in the area of injection molding and injection blow molding manufacturing systems, (up to 800 tons capacity), including molds and handling systems.

In addition, it has developed "niche markets" and competes worldwide in the production of extrusion systems for blown film (sheet plastic), extrusion of corrugated or smooth wall plastic pipe and tubing, and plastic profiles such as mouldings and vinyl sidings. However, production is limited to single screw machines (as opposed to the more sophisticated twin screw machines) and to narrow size ranges. Some smaller auxiliary production machines and hot stamping (plastic decorating) machines are produced and compete internationally. Canada is also recognized as a major North American producer of air rings, a central component of blown film machines for producing sheet plastic.

Machinery produced in Canada for rubber products only is limited to rubber extrusions and molds, roll calendars, and rubber belt making machines. Tire building machines, including curing presses, are proprietary items manufactured by one company, Uniroyal, soley for its U.S. parent, a tire manufacturer.

The **plastics and rubber machinery** segment in Canada is comprised of some 50 firms employing approximately 1,500 persons with estimated shipments in 1985 of $238 million, exports of $114 million, and imports of $226 million. Forty-five of these manufacturers are small, very specialized, Canadian owned firms employing from five to 40 persons each and with annual sales ranging from 1 to 8 million dollars. The five largest firms in Canada together employ approximately 750 persons, the smallest of which has 65 employees and the largest 230, with respective annual sales ranging from $10 to $60 million. These 5 firms account for an estimated 50 per cent of this segment's shipments and employment and 75 per cent of its exports. Two of these firms are foreign owned. Forty-four firms in this segment are located in Ontario, four firms in Quebec, one in the Western Provinces, and one in the Maritimes.

International production of plastics and rubber machinery is estimated at U.S. $5 billion in 1985 with exports and imports accounting for U.S. $3.5 billion. The dominant firms in the machinery segment are located in the Federal Republic of Germany (FRG), Japan and U.S.A., in that order, and account for 88 per cent of world production and trade in plastics and rubber machinery. The remaining 12 per cent is accounted for by firms in Austria, Canada, France, U.K. and Italy in that order.

A large portion of world production is accounted for by major corporations such as Cincinnati Milacron, HPM, and Vandorn of the U.S.A.; Meike, Sumitomo/Nestal, Kawaguchi, J.S.W., Toshiba and Nissei ASB of Japan; and Battenfeld, Krupp Reifenhauser, Krauss Maffei and the Klockner/Ferromatik/Desma/Windsor Group of the FRG.

The **mold and die** segment is comprised of some 230 firms, mainly Canadian-owned, and employs approximately 5,600 persons. Shipments in 1985 are estimated at approximately $443 million of which 50 per cent were exported, primarily to the U.S.A. automotive industry. The two largest firms together employ approximately 355 persons with total shipments of approximately $42 million. Otherwise, the industry is comprised of small shops employing 15 to 45 persons each. Eighty-five per cent of the industry is located in Ontario, primarily in the Toronto and Windsor areas. About three quarters of the shipments of this segment go to the automotive industry.

The international production of molds and dies is estimated at slightly more than double that of plastics and rubber machinery. Quality, custom designs, and quick delivery and after-sales service dictate that the mold and die maker be located close to his customer. Thus, offshore trade is not significant.

b) Performance

Shipments of the **plastics and rubber machinery** segment experienced strong growth in the 1975 to 1985 period (from $28 million to $238 million in current dollars which is a real growth rate of 16 per cent annually). Growth was particularly strong in the period from 1975 to 1980, slowed in the early 1980's, but resumed strong growth in 1984 and 1985. The major factors contributing to this growth were the rapid development and substitution of new plastic materials for use in the manufacture of automobile and appliance parts and in the packaging industry.

Export growth was also strong throughout the period 1975 to 1985 and increased at a real annual growth rate of 9 per cent, from $24 million to $114 million. Exports of plastics and rubber machinery averaged 45 per cent of industry shipments in the 1980 to 1985 period declining from an average of 76 per cent from 1975 to 1980. Exports as a share of shipments declined after 1980 because Canadian machinery manufacturers focussed their efforts on securing orders in Canada to compensate for reduced orders in the U.S.A. and Europe brought about by the recession of the early 1980's. Exports to the U.S.A. have steadily increased from about 75 per cent of total exports during the 1970's to 87 per cent in 1984. Exports to European countries have declined as a proportion of shipments largely because of the increase in value of the Canadian dollar against European currencies.

Imports of machines into Canada during the period 1975-1985, increased at an annual rate of 6 per cent in real terms, from $60 million to $226 million. To a large extent, these imports were made up of larger and more sophisticated plastics and rubber processing machines that are not manufactured in Canada. Imports as percentage of the Canadian market fluctuated annually between a range of 88 to 96 per cent during 1975 to 1978, but declined to an average of 68 per cent from 1979 to 1985. The

decrease in import penetration of the Canadian market is believed attributable to development by Canadian firms of new machinery for plastics injection molding and extrusion. Imports from the U.S.A. accounted for 66 per cent of total Canadian imports in 1984. Imports from the E.E.C. accounted for approximately 25 per cent of total Canadian imports, mostly from the Federal Republic of Germany, with the remaining 9 per cent coming from other countries.

The growth rate in shipments of **molds and dies** by Canadian manufacturers paralled that of the plastics and rubber machinery segment and increased from $53 million in 1975 to $443 million in 1985.

Exports, primarily to the U.S.A., by the mold and dies segment throughout the 1970s averaged 84 per cent of shipments annually. However, from 1980 to 1985, exports declined to an average of 45 per cent of shipments as Canadian mold and die makers took advantage of increasing demand from the Canadian automotive industry. This change in orientation towards the Canadian market has resulted in a decline in the share of the Canadian mold and die market held by imports. The average import penetration rate of 55 per cent from 1975 to 1979 was reduced to only 14 per cent from 1980 to 1985.

2. STRENGTHS AND WEAKNESSES

a) Structural

The **plastics and rubber machinery** segment of the industry has excellent capabilities (albeit within limited product and size ranges) in the production of plastics and rubber injection molding and extrusion machines, and is competitive internationally. In general, orders are obtained on the basis of quality, innovation, performance, and delivery with price being a secondary consideration.

Within specific size ranges and types of injection molding machinery, Canada is able to offer complete totally automated systems on a turn-key basis, and is extremely competitive internationally despite the fact that its main competitors are large machinery conglomerates in the U.S.A., Federal Republic of Germany, and Japan. In most cases, these companies can offer a broader range of machinery sizes. One Canadian company, Husky Injection Molding Systems, has become highly competitive internationally exporting about 90 per cent of its production. It is the largest company in this sector in Canada. Its competitive strength is that it can design and supply complete technologically superior systems to customers that lack plastics processing knowledge. The competitive strength of the two largest injection molding machine manufacturers, Husky and Ludwig Engel, is demonstrated by the fact that they do not require duty protection under the terms of the Machinery Program.

Canadian **mold and die** producers have a strong position in a wide range of injection and/or blow molding capabilities. They are able to sell into the U.S. market because of their strong technical skills, quality, specialization in specific mold types, relatively short delivery times, and the favourable exchange rate of the Canadian dollar. Most shops have numerically controlled machine tools and a few have full computerized design and manufacturing capabilities. Offshore markets are difficult to penetrate because of the transportation costs involved and the need to be located close to the customer.

b) Trade Related Factors

Plastics and rubber machinery and parts thereof are imported into Canada under tariff item 42700 with a MFN duty of 9.9 per cent (9.2 by 1987). Under the Machinery Program, if equivalent machinery is not available from Canadian production, the duty otherwise payable on imports may be remitted. Because there are wide gaps in Canadian manufacturing capability, exporters of plastics and rubber machinery to Canada enjoy substantial duty-free access. In total, it is estimated that 80 per cent of plastics and rubber machinery imports into Canada are not subject to duty. Mold and die imports are dutiable under the same tariff item 42700, because extensive Canadian mold making capabilities exist.

Plastics and rubber machines and related molds and dies imported into the United States are subject to a duty of 4.1 per cent (3.9 by 1987). Machines and molds imported into the E.E.C. are subject to a duty of 4.4 per cent ad valorem. Japan imposes a duty of 3.4 to 4.6 per cent on both machines and molds. There are no major non-tariff barriers which affect Canada's trade in plastics and rubber machinery products with the U.S.A., Japan, or the EEC.

c) Technological Factors

The level of world technology in the **plastics and rubber machinery** industry encompasses a wide array of processing machines which include injection and blow molding, thermoforming, vacuum forming and extrusion systems. Canada's technological capabilities are mostly limited to two specific areas, injection and blow molding and extrusion systems. In injection and blow-molding systems (up to 800 tons) Canada is considered to be a world leader. There is a growing demand for more sophisticated and higher tonnage machines for the production of larger single-molded components for the automotive and appliance industry where Canada does not currently have any technological capability.

Canadian manufacturers of extrusion machines are also facing increased competition in domestic and export markets because of their lack of technology in certain areas and their inability to provide complete processing systems.

Most firms in the plastics and rubber machinery segment of the industry are small and are not capable of undertaking any significant R&D. It is expected they will have difficulty in keeping up with the rapid and costly technological changes which are taking place in the plastics and rubber processing industry. Canadian firms are rarely able to import the necessary technology through licencing agreements or joint venture arrangements as it is generally preferred to supply the smaller Canadian market from a larger production facility in the U.S.A.

Canada, and Ontario in particular, has become a major world centre for **mold and die making** in thin wall packaging containers and in automotive applications, through concentrated research and development and investment efforts. Major automotive customers are increasingly requiring that their suppliers be linked with them by computer and to be equipped with Computer Integrated Manufacturing (CIM). A few large, well capitalized Canadian companies are introducing this computerized technology. However, because of the high capital costs, most of the smaller Canadian mold and die makers will have difficulty keeping up technologically.

d) Other Factors

The favourable exchange rate of the Canadian dollar is an important factor in maintaining the competitive position of all machinery and mold and die manufacturers. For the smaller firms who operate at a less sophisticated level of technology, this factor is critical to their competitiveness.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

Plastics and rubber machinery firms benefit from the provisions of the Machinery Program which ensures that manufacturers receive protection on imported equipment equivalent to that which they manufacture in Canada. At the same time, many of these same firms are assisted in rounding out their product line by receiving remission of duty on imported machines not manufactured in Canada. Mold and die makers receive protection under the terms of the Machinery Program.

The plastics and rubber machinery and mold and die firms also have access to the full range of incentive programs for export development, R&D and innovation.

4. EVOLVING ENVIRONMENT

Markets for **plastic machinery** manufacturers over the next five to ten years will continue to experience strong growth as plastics replace traditional materials such as glass, metal, and paper. With the development of new products resulting from the revolution in packaging, electronics, home entertainment, automotive and other industrial sectors, these markets are undergoing rapid growth and technological change. While the larger firms in this segment are expected to keep pace with these trends, the extent to which the relatively small Canadian firms will be able to participate in these emerging markets is uncertain.

The future of Canadian **mold and die makers** will be largely dictated by the North American automotive industry which will continue to insist that moldmakers be equipped with "state-of-the-art" computerized technology. Major Canadian mold and die makers are expected to adopt the required technology.

5. COMPETITIVE ASSESSMENT

In the **plastics and rubber machinery** segment, firms that produce injection and blow molding and extrusion systems are considered competitive within their specialized product areas, and account for most of the exports. These firms, about a dozen, compete in an open and aggressive international environment and are successful on the basis of quality, innovation, performance and delivery. Price is a secondary consideration. The rest of the machinery segment's firms operate at a less sophisticated technological level with exports limited primarily to the U.S.A. They are generally oriented towards serving the Canadian market. A favourable exchange rate will continue to be an important factor in maintaining their competitive position in North America.

The Canadian **mold and die making** segment competes strongly in North America serving the needs of the automotive and packaging industries. A number of the larger firms have adopted, or are adopting, advanced mold making technologies which will enable them to maintain their strong competitive position in the North American market. The majority of the segment's firms, however, are small owner-managed operations whose future will depend on their adoption of computerized design and production technology. In addition, a favourable exchange rate will be significant in their ability to remain competitive.

Prepared by: Machinery and Electrical Equipment Branch
Department of Regional Industrial Expansion

J M Bougan

for Assistant Deputy Minister
Capital and Industrial Goods

Date: _____

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: Plastics & Rubber Machinery **SIC(s) COVERED:** 3199 *

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Establishments							280
Employment							7,100
Shipments ($ millions) (estimated)	78	363	420	452	507	599	681
Gross Domestic Product	-	-	-	-	-	-	-
Investment ($ millions)	-	-	-	-	-	-	-
Profits After Tax ($ millions)	-	-	-	-	-	-	-

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Exports ($ millions)	68	148	175	172	222	292	328
Domestic Shipments ($ millions)	10	215	246	280	285	308	352
Imports ($ millions)	67	190	184	227	187	241	269
Canadian Market ($ millions)	78	406	430	507	472	548	622
Exports as % of Shipments	87%	41%	42%	38%	44%	49%	48%
Imports as % of Domestic Market	87%	47%	43%	45%	40%	44%	43%
Canadian Share of International Market	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source of imports		**U.S.**	**E.E.C.**	**ASIA**	**OTHERS**
(% of total)	1981	66	29	2	3
	1982	53	44	1	2
	1983	67	27	2	4
	1984	66	25	4	5
	1985	N/A	N/A	N/A	N/A

Destination of exports		**U.S.**	**E.E.C.**	**ASIA**	**OTHERS**
(% of total)	1981	78	12	2	8
	1982	81	9	3	7
	1983	86	6	4	4
	1984	87	5	3	5
	1985	N/A	N/A	N/A	N/A

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	1%	10%	86%	1%	2%
Employment - % of total	-	-	-	-	-
Shipments - % of total	-	-	-	-	-

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants
Plastics & Rubber Machinery Sector		
Husky Injection Molding Systems Ltd.	Cdn.	Bolton, Ont.
Ludwig Engel Canada Ltd.	Austria	Guelph, Ont.
Uniroyal Ltd. (R.M.S. Division)	U.S.A.	Kitchener, Ont.
Polysystem Machinery Manufacturing Inc.	Cdn.	Mississauga, Ont.
Corma Inc.	Cdn.	Concord, Ont.
Mold & Die Sector		
Husky Injection Moldings Systems Ltd.	Cdn.	Bolton, Ont.
Tradesco Mold Ltd.	Cdn.	Rexdale, Ont.
Valiant Machine & Tool Co. Inc.	Cdn.	Windsor, Ont.
Wentworth Mould & Die Co. Ltd.	Cdn.	Hamilton, Ont.
Ryka Blow Molds Ltd.	Cdn.	Mississauga, Ont.

* SIC 1980 Basis

DRAFT - PROJET

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

June 25, 1986

COMPETITIVENESS PROFILE

THE PRIMARY GLASS SECTOR
(Glass Containers and Flat Glass)

1. STRUCTURE AND PERFORMANCE

a) Structure

This sector covers the production of glass containers and flat glass which, together, are generally referred to as primary glass. Major raw materials are silica sand, soda ash and lime; in addition, the industry has major energy requirements, usually in the form of natural gas.

Domestic shipments in 1985 of container glass were about $550 million while estimates in the case of primary flat glass are placed around $160 million. Employment in 1985 was about 6100.

Flat glass is produced by two companies, Ford Glass Limited and PPG Canada Inc. (PPG). Both companies are subsidiaries of large American corporations and each has a primary glass plant in Ontario, in Scarborough and Owen Sound respectively. These companies produce not only primary glass, but also finished glass products such as coated glass, insulated window units for residential and non-residential buildings, as well as tempered and laminated glass for the transportation industry. Most of their production of flat glass, however, is sold to over a hundred manufacturers who convert the flat glass to finished glass products. Overall, usage of flat glass is accounted for as follows: 50% as window glass used for residential and non-residential construction; 30% in the transportation field, chiefly automotive, while the remainder is employed in a wide range of applications such as mirrors, shelvings, decorative uses, etc.

Glass containers are made by two Canadian companies, Domglas Inc., a subsidiary of Consolidated Bathurst Inc. and Consumers Glass Company (to be renamed Consumers Packaging Inc. as of July 1st, 1986). Both companies, or associated companies, are also heavily involved in manufacture of containers made primarily of plastics. Both companies have U.S. interests. Consolidated Bathurst holds a 42% share in Diamond-Bathurst Inc., the third largest glass container company in the U.S., with 16 plants from coast to coast. Consumers Glass, on the other hand, owns two plastics container plants in the U.S. but is not involved in glass containers in that country.

Domglas operates five glass container plants in Canada, in Montreal, Que.; Brampton, Ont.; Hamilton, Ont.; Redcliff, Alta. and Scoudouc, N.B. Consumers Glass Inc. also operates five glass container plants: in Montreal, Que.; Candiac, Que.; Toronto, Ont.; Milton, Ont. and Lavington, B.C. Domglas is the larger manufacturer with about 50% of the total market while Consumers accounts for about 40%; the remainder consists of imports.

The glass container sub-sector is experiencing increasing competition from containers made of plastics and metals. While non-glass materials are gaining steadily in Canada, glass is still the most important, with glass representing 62 percent of usage, versus 33 percent and 5 percent for metal and plastics, respectively. In the U.S. on the other hand, the market is radically different, with shares for glass, metal and plastics being 24, 64 and 12 percent respectively. Canadian glass bottles for beer and soft drinks are not so susceptible to replacement by metal cans because, being returnable, Canadian bottles are more economical than American non-returnables; on average, returnables are recycled about twelve times before being scrapped. To hedge their market position, the Canadian glass container producers have diversified into plastics and have become major participants in this sector. They have not, however, entered the metal container business which is in the hands of strong metal container companies.

Industry estimates indicate that glass containers are used as follows:
48% for beer and soft drinks (30% and 18% respectively)
34% by the food industry,
15% by distilleries and wineries and
3% for pharmaceuticals, cosmetics and miscellaneous uses.

Trade in glass containers is mainly with the U.S. Imports and exports have varied quite widely in recent years; imports in the range of $30 to 75 million and exports in the range of $50 to 60 million. Both container glass companies serve some U.S. customers, largely because of closer proximity than U.S. suppliers (shipping distances are in general limited to about 800 Km). For some whiskeys as well as some export beer, bottles are imported empty and re-exported as the finished product. Fancy bottles for perfumes, etc., are largely imported.

Historically, Canada has experienced a significant trade deficit in the flat glass sector because of the widely dispersed domestic market while manufacturing is concentrated in Ontario. Even the Ontario market faces competition from over a dozen American plants some of which are controlled by the owners of the Canadian industry. In addition, certain types of products are currently not produced in Canada.

Flat glass imports are estimated at about $100 million per year while the value of exports is considered to be lower, although no figures are available; such exports are mainly to the U.S. The relatively high imports and exports are explained partly by the auto pact and partly in the context of some rationalization in auto glass manufacture between Canada and the U.S. While Ford Glass does manufacture most lines of coated glass, a product which finds significant usage in non-residential construction, PPG has to import such requirements from the U.S.

b) Performance

Shipment value (in current dollars) of primary glass increased by 25 percent in the three years 1982 to 1984, this being to a large extent a recovery from recession levels. During the last recession, specifically 1982, flat glass consumption was adversely affected by the decline in construction and auto production, while container glass sales showed relatively steady growth. Container glass production is not as subject to cyclical variations as flat glass, but is heavily influenced by competition with other forms of containers such as metal cans and plastics.

Even though the shipment value of primary glass production is up by 25 percent over the past three years, employment has only increased by five percent over the same period, from 5,800 to roughly 6,100, reflecting to some extent increased productivity. Plants have become more highly automated and more capital intensive in terms of raw material batching, furnace operation, handling and packaging and are now more efficient in energy usage. This applies to both containers and flat glass.

While capital investment figures for glass container manufacture are difficult to disassociate from those for plastic containers, it appears that recent annual investments for container glass have been typically in the region of $40 million, or about 10 percent of the gross investment in glass container facilities. No information is available on new investment for the two flat glass companies.

Both glass container companies achieved sales and profit figures in 1985 only slightly below those of the record year 1984 and show strong balance sheets. They have been more profitable recently than some of the American companies who had a large share of their business in returnable bottles for beer and soft drinks and saw this market largely replaced by aluminum cans.

There are no published statistics regarding flat glass sales and profits but in the last few years the industry is believed to have shown growth and adequate profitability. Ford Glass, which acquired Pilkington's facilities in 1980, has not felt justified in reopening one of its two flat glass lines which had been closed prior to the acquisition.

2. STRENGTHS AND WEAKNESSES

a) Structural Factors

Total glass container costs are made up of raw materials 15% (10% for soda ash), fuel 10%, labor 35% and capital related charges 40%. Most of these costs are higher than equivalent costs in the U.S. Glass container plants in Canada generally have shorter production runs than those in the U.S. Plants of major producers in the U.S. are rationalized amongst themselves with the result that they have longer runs, fewer glass colour as well as mold changes. While a Canadian plant might utilize up to 1200 molds in a given year, a U.S. plant might use only 50 to 100. Such rationalization is not practical in Canada to the same extent because of greater shipping distances between plants. Mold changes are costly insofar as they take up six hours of production time, so that 300 changes per year represent a loss of 20 percent of furnace capacity. Glass colour changes are less frequent, but require two to three days to complete.

While Canada and the U.S. have their own supplies of silica sand and soda ash, Canadian raw material costs are higher than in the U.S. Canadian soda ash is priced to reflect duty (at 12.5%) and transportation cost of U.S. soda ash from Wyoming. Because of quality, about half the Canadian sand requirements for glass containers are imported from the U.S., at a relatively high transportation cost.

Canadian investment costs are higher than in the U.S. largely because of a 9.2% duty on production machinery. While such machinery is classed as "made in Canada", in practice it is imported from the U.S. on grounds that it is required to achieve the necessary productivity and quality of glass containers.

The supply of cullet (recycled glass) is important for glass container production and can make up 25 to 60% of furnace feed. Use of cullet can significantly reduce energy and raw material cost. Some cullet is imported from the U.S. since, because of higher raw material cost, Canadian producers can offer higher prices for it than their U.S. counterparts.

Canadian flat glass plants are believed to operate at about 80 percent, of capacity; this is somewhat above the accepted break-even point of 75 percent. The level of operations at Canadian plants is controlled, to some extent, by the U.S. parents. Low volume product lines, rather than being produced in Canada, are generally imported.

b) Trade Related Factors

The Canadian flat glass tariff in 1987, depending on type, will range between 4 and 5.5% while the corresponding U.S. rate will range between 2.8 and 4.6%. These duties will provide little obstacle to rationalization between the two countries. The two companies concerned already are oriented to a North American context.

The Canadian rate of duty on most types of glass containers will be 11.4% as of January 1st, 1987. The main U.S. tariff classes for glass containers are scheduled to go duty free on January 1st, 1987. The Canadian duty is important to the Canadian producers from the viewpoint of protection of the domestic market, while duty free access to the U.S. is not regarded as of very significant value, essentially because of the higher cost structure in Canada and hence difficulty in competing in the large volume and lower priced U.S. market.

Canadian tariffs on containers of glass, metal or plastics, are all in the region of 10 to 11 percent so that changes in the rate of any one type of container could influence market share of all others.

There are no NTBs involved for exports of either glass containers or flat glass.

c) Technological Factors

All modern flat glass plants use the British float glass process invented in the fifties and this process is used in Canada. The Canadian companies have full access to developments of their parent companies.

Domglas Inc. has often licensed technology from Owens-Illinois, the leading manufacturer in the American glass container industry, while Consumers Glass Inc. has a technical assistance agreement with the second largest American glass container producer, Brockway Glass Inc. Based on licensing, both companies are producing a lightweight small glass bottle for fruit juices and soft drinks which have enjoyed great success in Canada.

A significant element of technology is incorporated in the imported glass production machinery.

In 1984, Consumers Glass was amongst the founding members of International Partnership for Glass Research (IPGR). This organization has initiated basic research on glass aimed at reducing the weight and increasing the strength of glass containers. Some research is being done on glass in Canada, but most of the major research projects are under way at British and American universities as well as private research organizations.

d) Other Factors

Exchange rates and ocean transportation rates influence trade in flat glass and European manufacturers have, over the years, exported varying amounts of flat glass to Canada and the United States. The currency realignments of 1985 have been followed by a marked reduction in these imports.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

There are no specific federal government programs or policies applicable to the glass industry.

Provincial environmental regulations have strongly influenced the market for soft drink and beer containers. These regulations have favoured glass in New Brunswick, metal in B.C. and steel in Ontario.

4. EVOLVING ENVIRONMENT

In recent years, glass container shipments in the U.S. have declined at about five percent per annum and a further drop is forecast over the next few years. As a result, a number of American glass container plants have closed. This course of events is unlikely to be followed in Canada because of the widespread use of returnable glass containers which will continue to favour glass in economic terms. In addition, glass enjoys excellent acceptance in the Canadian marketplace.

The flat glass sector in North America has grown at a rate of more than four percent per year for the last 20 years. In the balance of the century, North American demand is forecast to grow at a slightly lower rate, largely because of demographic factors. While houses may become smaller, glass use may increase because of more windows and greater use of insulating glass units. The use of new types of low emissivity glass for residential construction is expected to rise. Reflective glass panels will gain a greater market share in new non-residential buildings. While at present Canadian flat glass plants produce only a limited range of reflective glass, with much of the Canadian demand satisfied by imports, this could change with increasing demand.

Automotive glass consumption will largely depend on car production. If the volume of car imports declines with increasing assembly of "foreign" cars in Canada and the U.S., an increase in domestic automotive glass requirements may be expected.

5. COMPETITIVENESS ASSESSMENT

The glass container sector in Canada is largely non-competitive at this time despite the fact that the industry is modern and up-to-date. The basic reasons have previously been outlined: higher raw material costs, higher investment and reduced productivity because of lost time due to frequent mold and glass colour changes. At present, with much spare capacity in the U.S., duty protection plays a significant role in preserving market share for the Canadian manufacturers and preventing overflow production from the U.S. from being dumped in Canada.

In order to compete effectively in a rationalized North American market, the industry would require access to raw materials and production machinery at prices similar to those available to their U.S. counterparts. In addition, time and investment would be required to phase in new equipment with higher capacity than currently found suitable for production for the Canadian market alone. In considering future competitiveness, the rising penetration of alternative forms of packaging into the traditional Canadian glass market is of concern as well as the extent that packaged food will continue to be made in Canada, rather than being imported.

Metal cans represent the greatest threat to the biggest volume items, soft drink and beer bottles. However, if the practice of using returnable containers is maintained in Canada, penetration of cans is unlikely to be as extensive as it has been in the U.S.

The Canadian flat glass sub-sector operates two world-scale flat glass plants which, generally, are regarded as being as competitive and efficient as the ones in the U.S. However, the Canadian plants do not produce complete product lines and, in addition, are in some cases at greater distances from domestic customers than are competing U.S. plants. The magnitude of imports, estimated to amount to as much as 40 percent of the Canadian market, testifies to the fact that U.S. producers at present enjoy a very strong trading position in Canada.

While the Canadian flat glass plants appear to be in a position to maintain their existing share of the Canadian market, they are at present unable to either increase their market share or their exports.

Prepared by: Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: July 3, 1986

DRAFT - PROJET

FACT SHEET June 26, 1986

NAME OF SECTOR: PRIMARY GLASS (Glass Containers and Flat Glass) **SIC(s) COVERED:** 3561

1. PRINCIPAL STATISTICS

	1982	1983	1984	1985
Establishments (plants)	12	12	12	12
Employment ('000)	5.8	5.7	6.1	6.1
Shipments ($ millions)	572	644	718	800 (est.)

Gross Domestic Product, Investment and Profit After Tax figures are only available for SIC 356 which covers all glass products. These figures are not relevant to the Primary Glass Sector.

2. TRADE STATISTICS

	1982	1983	1984	1985
* Exports ($ millions)	95	84	91	92
Domestic Shipments ($ millions)	477	560	627	708 (est.)
Imports ($ millions)	122	147	180	180
Canadian Market ($ millions)	599	707	807	888 (est.)
Exports as % of Shipments	16.6	13.0	12.7	11.0
Imports as % of Domestic Market	20.4	20.8	22.3	12.6
Canadian Share of International Market				

Source of imports (top 4)		U.S.A.	E.E.C.	JAPAN	OTHERS
% of Total	1982	88.4	6.2	3.5	1.9
	1983	87.1	7.0	3.3	2.6
	1984	87.7	6.9	3.0	2.4
	1985	85.6	10.0	2.4	2.0

* Destination of exports		U.S.A.	E.E.C.	JAPAN	OTHERS
% of Total	1982	81.0	6.8	nil	12.2
	1983	80.5	5.1	0.1	14.3
	1984	80.9	2.8	0.1	16.2
	1985	91.1	1.2	0.1	7.6

3. REGIONAL DISTRIBUTION - Average for 1985

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	8.3	25	50	8.3	8.3
Employment - % of total	x	x	x	x	x
Shipments - % of total	x	x	x	x	x

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants	Concentration (% of Domestic Market)
Domglas Inc.	Canadian	5 plants across Canada	n/a
Consumer Glass Co. Ltd.	Canadian	5 plants across Canada	n/a
Ford Glass Ltd.	American	Scarborough, Ont.	n/a
PPG Canada Inc.	American	Owen Sound, Ont.	n/a

* Since there are only two companies in each subsector, StatsCan data for exports are only available in two broad caterogies containing some products that should not properly be included in sector 3561. The degree of distortion introduced is not believed to be significant.

Note: Years prior to 1982 are not available because of changes in industry groupings by StatsCan.

DRAFT - PROJET

March 24/86

COMPETITIVENESS PROFILE

PRIMARY IRON AND STEEL
SIC (291)

1. STRUCTURE AND PERFORMANCE

1.1 STRUCTURE:

The primary iron and steel sector consists of 17 companies operating 26 facilities across Canada. These companies produce "primary rolling mill products"; semi-finished ingots, blooms, billets and slabs, sheets, strip, plate, bars, rods, structural sections and rails. The industry had shipments valued at $7.76 billion and employment of 44,500 in 1984.

There are two major classes of producers; large "integrated" mills which consume iron ore and produce a wide range of products; and Mini-mills which consume ferrous scrap and produce a limited range of products. Integrated mills are integrated backwards into raw materials (iron ore, coal, limestone) and forward into finished products (pipe, wire products). Mini-mills may be backward integrated (scrap) and forward integrated (pipe, wire products).

More than 90% of the industry is privately owned and Canadian controlled. Two mills which are wholly provincially owned (Nova Scotia, Quebec) represent significant exceptions.

Proximity to market which is the prime determinant of mill location (about 80% Ontario, 10% Quebec), and technology (very large production scale requirements) strongly influence disproportionate concentration in Central Canada. Three companies, Stelco, Dofasco and Algoma, constitute 75% of the domestic capacity, but smaller mills play important regional roles.

By viewing the Canadian steel industry as three major individual integrated producers, concentrated in Ontario and several mini-mills which supply regional markets across the country, a better appreciation of the Canadian competitive position can be gained.

i) Mini-mills

As a group these companies dominate the production of steel bar and rod products, having successfully captured markets from the integrated mills over the past twenty-five years. They now compete amongst themselves. With few exceptions, these companies operate as a unit of a larger corporate group of companies. This provides the steel mill with greater financial leverage than it might otherwise enjoy, and in some cases provides a significant captive market. Major exceptions within this classification include Ipsco Inc. in Saskatchewan, and Sidbec-Dosco in Quebec, which produce flat rolled steel and pipe.

ii) Integrated Mills

There are four Canadian firms operating integrated mills, however, only Stelco, Dofasco and Algoma will be considered here. Sysco, in Nova Scotia, will be addressed separately.

The three companies are very different in market orientations and financial capabilities. Dofasco produces only flat-rolled products, sheet, strip and plate, primarily for consumer durables markets; automotive, white goods etc. Historically these markets have been relatively stable. Dofasco, avoided the worst of the 1982/83 steel slump, did not experience financial losses, and was quick to recover in 1984, earning record profits of $180 million, when it may have been the most profitable integrated steel company in the world.

Stelco produces the widest range of steel products in Canada, serving both consumer and capital goods markets. Its dependence on capital goods markets, which were slow to recover, delayed financial recovery from the recent recession. In 1985, Stelco returned to profitability ($ 78 million), but has yet to match pre-1981 performance.

Algoma produces a product line which is heavily oriented to capital goods and energy markets. These markets are highly volatile, traditionally returning above average yields during strong markets, but subject to swift declines. Since 1982 these markets have been depressed and what volume recovery that was experienced in 1984 failed to generate significant firming of prices.

iii) Provincially Owned Mills

The provinces of Quebec (Sidbec-Dosco) and Nova Scotia (Sysco) operate mills which were legacies of U.K. interests which abandoned unprofitable facilities in the late 1960s. Both companies have encountered substantial losses since, but recent actions, withdrawal from iron ore production in the case of Sidbec-Dosco, and renewed commitment to modernization at Sysco has brightened the outlook for these companies. In both cases government financial intervention has been required, and since they operate outside private sector environments, they must be treated separately in any analysis.

1.2 PERFORMANCE:

Despite new capital investment of $5 billion and commissioning of several new plants since 1973, the industry has experienced slow volume growth, primarily due to domestic steel market stagnation. Canadian steel consumption has experienced virtually no growth during the past decade, averaging about 10.8 million tonnes per year in the two years of 1984/85 compared with 11 million tonnes in 1973/74. Growing exports (by about 150,000 tonnes per year during 1973-84) have offset domestic trends and allowed for some increase in shipments. Import penetration has generally remained unchanged at levels of about 16% of the value of Canadian demand. Significant price erosion has been experienced since 1982 as a result of an international glut of low-priced steel. Market maturity in industrialized economies is the root cause of the sluggish performance, but the oil shock, technology (stronger steels, better design engineering) and shifting international market forces (manufacturing in LDCs) are important contributing factors. New facilities once viewed as incremental capacity have become replacement capacity, with a concomitant reduction in older equipment. Employment has declined by about 9,000 (17%) from its peak in 1981 as higher productivity facilities come on stream, and as companies thin overheads to reduce costs.

Compared with other integrated steelmakers, traditionally Canadian steelmakers have been among the most profitable internationally. Profitability declined sharply in 1982, however, and only one integrated company, Dofasco, has recovered strongly since. Mini-mills appear to be competing effectively, but very little hard data is available for these mills.

Industry has indicated that capital investments of about $3 billion must be undertaken by the end of the decade to reduce costs and enhance product quality. Some companies, particularly Algoma which has reported net losses totalling $222 million since 1982, have accumulated serious debt loads as a result of debt financing of capital projects and borrowing to support recent operating losses. The attending capital formation problems tend to be company-specific rather than a general sector condition.

2. STRENGTHS AND WEAKNESSES

2.1 STRUCTURAL:

Despite the segmentation that does exist in this industry, all companies face common market environments. Individual competitive performance, however, may vary significantly between companies, and will be dealt with in a latter section of the report.

Steel markets are changing, both in size and in composition. Many forces which supported the market's structural growth cycle, creation of infrastructure in industrialized countries, reconstruction of Europe and Japan

etc., have matured. Down-sizing of automobiles, substitution of materials (concrete for structural steel) and improved technologies (stronger steels require lower quantities, improved design technology allow more efficient consumption of materials) all contributed to declining steel consumption per capita and steel intensity in Canada, and in most other industrialized countries. Internationally, steelmakers must come to grips with a quantitatively mature market which, simultaneously is pushing the technological limits for product quality.

The domestic industry faces comparatively little adjustment by international standards. Most plants are of international scale, and well placed with respect to markets in Canada and the U.S.A. Unlike U.S. companies where investment has been spread across several plants with sub-optimal results, Canadian firms generally operate single plants and can focus new investments to maximum advantage. Actual closures of facilities have been comparatively few, although there has been a general shedding of labour, due to closure of some product lines and installation of less labour intensive equipment.

Domestic mills are generally not capable of competing profitably against low cost suppliers outside of North America. In Canada and the U.S., however, they gain back some advantage by competing other than solely on price. Canadian mills can successfully supply major Canadian and U.S. manufacturing sectors such as automotive which have specific, demanding needs for products and services such as "just in time" delivery. Proximity to the largest and most lucrative international steel markets is a major factor in the strength of the industry.

The major weaknesses of the industry include certain internationally uncompetitive factor costs. Major inputs include labour, materials, energy and capital. Canadian producers are not internationally competitive, except with the U.S., in labour and in some materials (iron ore) costs. Canadian companies are currently tied to captive high cost iron ore mines in Canada and the U.S.A., but the iron ore industry is being rationalized and iron ore costs are gradually being reduced. Similarly, labour costs are being moderated and may, in future, be partially tied to company profitability.

The current Canada/U.S. exchange rate greatly assists in competing for North American business. Canadian mills were at a significant disadvantage against many other industrialized and developing countries with currency alignments in place in the early 1980s, but this factor has lessened in 1985/86.

Cost reduction is essential to improved profitability and securing market share on commodity-grade products. Higher product quality is necessary to avoid competing head-on with low cost producers, and to satisfy the requirements of the high margin product customers such as automotive customers. Most producers are undertaking capital spending to meet these objectives. It is not clear, however, that reduced costs will necessarily lead to higher industry profits. Continuing over-capacity may push prices downward as costs decline. Producers which do not improve costs, under this scenario, are destined to become hopelessly uncompetitive in the future.

2.2 TRADE-RELATED FACTORS

Trade issues are of fundamental importance to the domestic steel industry, both from import and export perspectives. Simultaneously, the Canadian industry is being pressured by imports, often unfairly traded, while increasingly facing a variety of non-tariff barriers abroad. Since 1977, the industry has initiated 54 anti-dumping cases involving 22 products against 19 countries.

Tariffs: Canadian tariffs are nominally higher than those in the U.S.A., but when end-use exemptions are considered, the effective tariff protection is only 5-6%, and declining in accordance with MTN schedules. Existing tariffs are generally ineffective in limiting imports from offshore suppliers due to the tendency to dump or subsidize steel exports.

Tariffs in other countries are not an important factor influencing Canadian exports, though NTBs are.

Non-Tariff Barriers: NTBs are increasingly becoming an instrument of foreign government policy. For Canadian steelmakers, U.S.A. NTBs are very significant because the U.S. is a market in which Canadian mills are otherwise generally competitive. Recently, the U.S. Congress and Administration has shown a willingness to reinforce unfair trade and safeguard actions administered under existing trade laws with new NTBs. "Buy America" provisions in the U.S. Federal Surface Transportation Assistance Act and in over 30 U.S. States have precluded Canadian companies which consume domestic steel, such as structural and bridge fabricators from participating in the U.S. markets involved.

The major concern of the Canadian industry is the possibility of having its exports to the U.S.A. constrained by quotas resulting from a Section 201 (G.A.T.T. XIX Escape Clause) action for perhaps up to 5 years. Since the President's Steel Program to control imports into the U.S.A. was implemented in October 1984, countries accounting for 85% of total steel imports have signed Voluntary Restraint Agreements (V.R.A.) to limit tonnage. Canada was not asked to take a V.R.A. There is on-going pressure on the Administration from the U.S. steel industry and Congressmen from steel districts to include Canada in the Program. Canadian industry is being forced to direct significant financial and executive resources to fighting these market access threats and there is evidence that investment decisions are being influenced. Many companies have indicated that investments in the U.S.A. may be the only recourse for companies dependent upon increased U.S. market penetration to sustain corporate growth.

2.3 TECHNOLOGICAL FACTORS

Canadian mills are relatively modern compared with the steel plants in Europe and the U.S.A. today, but the rapid rationalization/modernization programs in these countries will result in very much more competitive facilities in the near future. Canadian companies generally have very modern finishing facilities, and consequently can concentrate spending on primary facilities; improved steelmaking techniques, and continuous casting. The higher product quality and reduced costs at the primary stages benefit all finished products lines.

Steelmaking technology is internationally available, and Canadian producers have a history of commercializing technological advances at an early date. The only major limitation to adopting new technologies is the small domestic market. Once committed to a certain process it is generally necessary for markets to grow sufficiently to support new facilities. Steelmaking plants have very long lifespans. Scrapping of serviceable, fully depreciated assets can only be justified where operating savings and/or product quality considerations offset capital costs.

2.4 OTHER FACTORS

The major factor, over which the companies have no control is exchange rates. The impact may be positive, as it currently is in competing for U.S. business against the persistently strong American dollar. While many of the other developed country currencies have strengthened considerably against the Canadian dollar since 1984, some, such as the French, have not and continue to place Canadian producers at a competitive disadvantage.

An additional complication of currency swings relates to the cost of debt financing in foreign currencies. The relative strengthening of foreign currencies adds to the costs of financing capital projects and reduces competitiveness.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

With a few exceptions, the Canadian steel industry has neither depended upon, nor received substantial government financial support.

An agreement has recently been signed with the Province of Nova Scotia toward federal/provincial sharing of costs associated with the modernization of Sysco's steelworks in Cape Breton.

In consideration of the importance of Canada/U.S.A. steel trade relations, where Canadian mills have achieved favourable treatment largely on the basis of their "fair trader" claims, direct capital assistance to the industry is expected to be reserved for exceptional cases only.

4. EVOLVING ENVIRONMENT

During the next 5 to 10 years, Canadian steelmakers are likely to face i) sluggish domestic markets; ii) competitive price and quality competition from both established and developing foreign suppliers; iii) growing protectionism in their prime export market, the U.S.A. Industry has indicated that its primary objectives are to: i) secure existing domestic share and improve price structure through enforcement of unfair trade statutes; ii) undertake capital projects needed to permit competing on the basis of price and product quality; and iii) maintain favourable accesses to U.S. markets. The latter consideration necessitates that the industry maintain its profit-oriented unsubsidized status.

5. COMPETITIVENESS ASSESSMENT

Aggregated statements on the competitiveness of the Canadian steel sector are not able to adequately describe many of the important industry characteristics. To this end, summary comments on three subgroupings are appropriate, as well as comments specific to the three major producers.

i) Mini-mills - As a group these companies compete mostly amongst themselves and against their counterparts in the U.S.A., although foreign low-cost suppliers are eroding markets at the low quality end of the product range. In the U.S., where there is excess mini-mill capacity, competition is fierce, and some rationalization is likely. Supply and demand are more balanced in Canada, and this situation is less likely to occur. Canadian firms have been amongst the leaders in mini-mill technology and are considered to be competitive.

ii) Integrated Mills

By international comparisons, the three firms in this subgrouping are technologically competitive today, but will require substantial investment to remain so. To a large degree, the ability of these companies to remain competitive is tied to their current ability to underwrite necessary capital projects.

Dofasco, avoided the worst of the 1982/83 steel slump, did not experience financial losses and was quick to recover in 1984. The company reported 1984 profit of $180 million followed by $170 million in 1985. With low debt service requirements and strong earnings, Dofasco should have no problem in undertaking its $750 million in modernization spending. The company should remain competitive.

In 1984 Stelco earned $48 million after losses in 1982 and 1983 and in 1985 reported net earnings of $78 million. Stelco operates the most modern integrated mill in North America (Lake Erie Works opened in 1980) but requires substantial upgrading at its main Hamilton plant. The company is currently installing two continuous casters, and upgraded steelmaking and rolling facilities at Hamilton which should greatly improve production costs by the late 1980s, and make the company competitive at all of its facilities.

Algoma's financial position has been seriously eroded having accrued losses of $222 million since 1982. Long term debt has risen to about $680 million. Though breaking even on an operating basis in 1984, debt service requirements continued to place the company in a net loss position through 1985. Algoma is in serious financial difficulty and has publicly announced that it is evaluating its operations. Some corporate rationalization is probable.

iii) Provincially owned mills

Sydney Steel is embarking on a major modernization program which will reduce overhead and operating costs and improve product quality. Sysco may be able to return to some level of operating profitability in the

future. Sidbec-Dosco operates several facilities in the Montreal area. Many of these operations are cost competitive. The company's losses have resulted from an unprofitable iron ore mining operation. This situation was corrected in 1985 with the rationalization of the Quebec iron ore mining industry.

The industry recognizes that the necessary structural adjustments are threefold:

i) Modernization of existing facilities through installation of improved steelmaking equipment and continuous casting facilities.

ii) Undertaking limited investment projects as opportunities permit.

iii) Appropriate financial restructuring.

Prepared by: Resource Processing Industries Branch, DRIE

Assistant Deputy Minister

DATE: 25.3.86

FACT SHEET

March 24, 1986

NAME OF SECTOR: Primary Iron & Steel SIC(s) COVERED: 291 *

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	Estimate Partial 1985
Establishments	21	26	26	26	26	26	26
Employment	49,000	50,214	53,564	43,051	49,500	44,500	45,000
Shipments ($ million)	2,345	6,432	6,997	5,715	6,313	7,660	8,000
(million tonnes)	9.9	12.3	12.0	9.3	10.0	11.6	11.9
Gross Domestic Product (Constant 1971 $ millions)	942.1	1,009.1	955.4	775.3	837.4	970.6	N/A
Investment ($ millions)	486.7	1,293.7	1,409.2	1,102.1	820.4	979.9	1,464.7
**Profits After Tax ($ millions)	178.2	424.1	472.5	5.6	(9.3)	237.6	250.0
(% of Sales)	9.34	7.19	7.23	0.16	(0.12)	3.33	4.33

**From Corporate Financial Statements of 6 firms representing approx. 90% of industry.

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Exports ($ million)	292	1,601	1,663	1,525	1,266	1,615	N/A
Domestic Shipments ($ millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Imports ($ millions)	410	940	1,688	798	829	1,172	N/A
Canadian Market ($ millions)	2,463	5,771	7,022	4,988	5,876	7,217	N/C
Exports as % of Shipments	12.5	24.9	23.8	26.7	20.1	21.0	N/C
Imports as % of Domestic Market	16.6	16.3	24.0	16.0	14.1	16.2	N/C
Canadian % Share of International Trade	1.1	2.2	2.2	2.3	1.6	1.8	1.9

		U.S.A.	E.E.C.	Asia	Others
Source of Import (% of volume)	1981	38	36	14	12
	1982	40	26	18	16
	1983	44	29	16	11
	1984	26	39	10	25
Desitnation of exports (% of volume)	1981	77	3	5	15
	1982	47	12	13	28
	1983	84	2	4	10
	1984	92	4	3	1

3. REGIONAL DISTRIBUTION - 1980-82 Average

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments - % Total	3.8	27.0	50.0	15.4	3.8
Employment - % Total	3.5	8.5	83.5	3.5	1.0
Shipments - % Total	3.8	8.6	80.4	6.2	1.0

4. MAJOR FIRMS

	Name	Ownership	Location of Major Plants	Concentration (% of Domestic Capacity)
1.	Stelco Inc.	Canadian	Hamilton, Ontario Nanticoke, Ontario Contrecoeur, Quebec Edmonton, Alberta	36.5
2.	Dofasco Inc.	Canadian	Hamilton, Ontario	21.3
3.	Algoma Steel Corp.	Canadian	Sault Ste. Marie, Ont.	16.0
4.	Sidbec Dosco Ltée	Prov. of Quebec	Contrecoeur, Quebec Montreal, Quebec Longueuil, Quebec	6.3
5.	Lake Ontario Steel Co.	Canadian	Whitby, Ontario	4.1
6.	Ipsco Inc.	Canadian	Regina, Saskatchewan	3.4

* 1970 SIC Classification through 1982; 1980 SIC Classification 1983-1985.
N/A - not available
N/C - not calculated

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT

COMPETITIVENESS PROFILE

POWER GENERATION EQUIPMENT SECTOR

1. STRUCTURE AND PERFORMANCE

Structure

The sector produces a broad range of mainly customed-engineered, high technology products for a technically sophisticated marketplace. The main products manufactured include the mechanical equipment used in generating power by the public utilities, resource processing plants and other industrial and marine applications. The sector is comprised of approximately 200 companies with 9,500 employees, mainly located in Ontario and Quebec.

Sector shipments have averaged $995 million annually since 1980. There are large swings in the sector's annual shipments because of relatively infrequent, high value orders and the long lead time between receipt of an order and shipment of the goods.

In most industrialized countries domestic markets are closed to import competition by national policy or the use of other non-tariff barriers. As a result the industry in these countries has been able to develop from a captive market base with the accompanying advantage of some stability in volume and price for a significant percentage of its business. Canada (and the U.S.A.) on the other hand have remained open markets and the Canadian industry has lost significant business to offshore manufacturers.

There is worldwide overcapacity in the power generation sector which is estimated to be working at approximately one third of capacity. For example, in the boiler industry there were contract awards for 20,436MW of utility fossil fuel boilers in 1984 outside of China and the Soviet Bloc; all supplied from a corresponding manufacturing capacity estimated to be in excess of 70,000MW. As a result the international trading environment is highly competitive. Major competition in export markets is coming from those countries with protected domestic markets (i.e. Japan, Western Europe and U.S.S.R.). Third world countries such as Brazil and Korea, which have negotiated technology transfer agreements with industrialized country producers, are beginning to provide additional competition.

The sector can be divided into two broad product categories. A description of their overall environment follows:

- Power boilers, pressure vessels and heat exchangers (SIC 3011/3021)

  This is the largest group in the sector consisting of some 185 firms and an estimated 8,000 employees. It manufactures mostly large, high value, custom-engineered goods. The group is dominated by large, mainly U.S. owned multinationals which established in Canada many years ago as a result of high import tariffs. The group has a broad range of industrial linkages. It draws on a wide variety of supplier sectors such as basic steel, refractories, tubing, forgings, fans, pumps, compressors, valves, instrumentation, sophisticated controls and engineering services. Its markets are the public utilities, general industry, and service companies.

- Engines and Turbines (SIC 3194/3199)

  There are 13 companies with an estimated 1,500 employees manufacturing engines and turbines in Canada. The domestic market is dominated by the requirements of the public utilities in the case of large

turbines and the multinational oil, chemical and resource-based industries for the smaller turbines. Engines manufactured in Canada are mainly diesels for railway locomotives, while the requirements for general industrial engines are met by imports. The sector's linkages are very broad. It sources basic steel castings, forgings, gears, electric motors, pumps, valves and environmental controls. It sells to electric power as well as to manufacturing industries.

Performance

Shipments of power generation equipment in 1985 were $1 billion which represented 8 per cent of total machinery industry shipments. There was a strong export orientation with exports of $235 million representing 24 per cent of total shipments of domestic manufacturers. Imports of $491 million captured 39 per cent of the domestic market.

Total sector performance shows a 5.1 per cent decrease, in real terms, in the annual rate of production from 1980 to 1985 compared to an overall decline of 1.3 per cent for the machinery industry as whole. The performance of the two major subsectors for the period 1980-1985 demonstrates the wide variations that can occur within the product groupings making up the sector.

- Power boilers, pressure vessels, heat exchangers

  These products represent the largest grouping in the sector with 1985 shipments of $677 million, which grew at a real annual rate of 4.3 per cent during the 1980-1985 period. Exports of $56 million in 1985 were 8 per cent of total shipments; while imports of $76 million represent 11 per cent of the $697 million domestic market.

  Despite the Canadian market being open to imports, domestic manufacturers have obtained most domestic power boiler orders because of their high technical ability and service organizations. Some of the larger Canadian manufacturers which are not constrained in exporting, except to the U.S.A., have had considerable success selling to other countries.

  In general, Canadian companies are competitive and with the exception of some specific items such as heavy-wall pressure vessels and heat exchangers from Japan and Europe, imports do not pose a threat. Exports have averaged 12 per cent of shipments over the past five years. Canadian firms have competed successfully in export markets in Eastern Europe, Africa, South America and Asia.

- Engines and Turbines

  These products accounted for 1985 shipments of $325 million. The sector suffered a 7.3 per cent real annual decline in production during the 1980-1985 period. Exports of $179 million were 55 per cent of total shipments in 1985 and imports of $415 million represented 74 per cent of the $561 million domestic market.

  Exports have averaged 57 per cent of shipments during 1980-1985 and most of these sales have been for small and medium-sized steam and gas turbines as well as large hydraulic turbines. The majority of exports were made by two Canadian subsidiaries of U.S. companies which have world product mandates (Westinghouse Canada Inc. and Canadian General Electric). The other side of the coin is a 76 per cent average import penetration during 1980-1985, primarily resulting from the purchases by provincial power utilities of large steam, gas and hydraulic turbines. This import competition comes from major manufacturers in Japan, Italy, U.K., Switzerland, France, Germany and the U.S.S.R., who have two important key elements for success, namely, a world product mandate and total protection in their domestic market.

2. STRENGTHS AND WEAKNESSES

Structural

In general, for those products which it manufactures, the power generation sector is strong in the area of technology and product servicing, which are demanded by a sophisticated clientele. The industry's manufacturing efficiency is high in custom-engineered products. On the other hand its labour and material costs are high, and it does not benefit from economies of scale on products which lend themselves to mass production.

Many of the larger firms in this sector are owned by foreign multinationals which can be either a strength or a weakness depending upon the particular circumstances of the firm.

In some cases Canadian firms have certain export markets closed to them due to corporate policy on market rationalization. This situation is particularly true for the U.S. market which is often reserved for parent companies. Foreign ownership can also result in the transfer of production out of Canada in the overall best interests of the corporation but to the detriment of the Canadian industry.

On the other hand foreign ownership has been a strength for many subsidiary companies in the sector; particularly those which have obtained world product mandates. In these circumstances foreign parents have often provided very valuable international marketing assistance to the Canadian subsidiary. In addition to supplying financial assistance from time to time, foreign parents often provide their subsidiaries with access to their technology and research and development facilities. This, however, has frequently resulted in a low level of Canadian research and development activity.

Trade Related Factors

As noted earlier the sector is dominated by large, mainly U.S. owned multinationals which established in Canada many years ago as a result of high import tariffs and Commonwealth preferential duties. In the majority of cases these tariffs were 22.5 per cent on goods of a class or kind made in Canada and 7.5 per cent on goods not made in Canada. The general tariff now is in the order of 9 per cent and duty remission may be granted where the goods are not available from Canadian manufacturers. Furthermore, special end-use tariffs, often 0 per cent, such as those covering fertilizer plants, mining and enhanced oil recovery equipment, which were put in place to assist specific industries, have reduced the protection for Canadian equipment manufacturers which, as a consequence, have a large portion of their market open to strong import competition.

Price dumping and foreign concessional financing can have a major impact in the domestic market. Few cases have been pressed due mainly to the reluctance of most companies to initiate proceedings against a major customer for fear of losing potential future business. Nonetheless, despite these commercial considerations, and the difficulty of obtaining proof, particularly on tenders where closed bids are requested, three cases concerning the dumping of hydraulic turbines have been proven but only after the orders were placed and Canadian jobs were lost.

The public utilities are the major purchasers of both hydraulic and steam turbines and up to early 1960, sourced the majority of their requirements in Canada. To date Ontario and Quebec have continued to purchase from Canadian suppliers. However, during the past two decades the other provinces, with few exceptions, have sourced the majority of their requirements from foreign suppliers. For example, since January 1, 1964, these provinces have purchased 40 of 48 utility-sized steam turbine generator sets offshore. This change in sourcing has occurred during a time of reducing Canadian tariffs and commitments by some industrialized

countries to increase employment in a labour intensive, high technology sector while at the same time protecting their own national self-sufficiency in the energy field.

Countertrade is an area of growing concern. Some provincial authorities have expressed interest in countertrade arrangements with foreign purchasers of provincial resource products in return for capital goods not available in that province, but available elsewhere in Canada. For example, it has recently been reported that Manitoba is negotiating a countertrade deal with India for export of potash; and in return Manitoba would purchase hydro-generator sets.

Unlike other industrialized countries the U.S. market is not closed to foreign imports of power generation equipment. Tariff rates into the U.S. vary from 4-7.5 per cent. Only the few publically-owned utilities (e.g. Tennessee Valley Authority) favour U.S. made equipment. Canadian companies have had some success in this market based upon their world product mandates and marketing assistance from their U.S. parents.

Despite the competitive nature of the international marketplace, Canadian companies have had success selling hydraulic turbines and power boilers into developing country markets against fierce international competition from foreign manufacturers which have both the technical ability to produce high quality products at competitive cost, and can offer flexible, attractive financing packages. Because the major markets are in the developing countries (China, India, Indonesia), financing packages offered by the Canadian government are often the deciding factor.

Technological Factors

The sector as a whole produces high technology products and from a technological perspective Canadian industry is on an equal footing with major international competitors.

This is not a sector of new product breakthroughs but rather one of slow evolution which demands a continuity of effort. Many of the foreign subsidiaries manufacturing in Canada import this technology while the remainder of the industry is responsible for its own R & D. Under the domestic market conditions noted above it is difficult for Canadian companies to finance the modern manufacturing facilities, ongoing research and development, and engineering and marketing activities necessary to maintain their technical competence and manufacturing competitiveness.

Many Canadian manufacturers have already undertaken modernization programs respecting computer-numerically-controlled (CNC) machine tools and utilization of CAD/CAM. Some additional benefits may still be obtainable through further automation. It is considered that Canadian plants are on an equal footing with their major competitors with respect to modern plant facilities and procedures.

Other Factors

The low value of the Canadian dollar in recent years has helped to offset the country's high labour costs. Should the value of our dollar increase substantially in value, Canada's competitive position versus foreign suppliers in both the export and domestic markets could be seriously impaired. Foreign parent companies would rapidly switch sourcing to lower cost offshore subsidiaries and/or licensees. Canadian manufacturers might also be forced to joint venture and manufacture locally in some export markets in order to reduce costs.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

Procurement policies of provincial utilities provide the most notable government influence on the sector. Ontario and Quebec utilities have purchase preferences for local suppliers (usually 5-10 per cent), and

most utilities have close operating ties with manufacturers within their province.

As the sector faces increasing pressure from imports, federally administered border measures such as anti-dumping and countervail become more important to the industry.

4. EVOLVING ENVIRONMENT

The developing countries are likely to provide substantial markets for new power generation equipment in the near future. The forecast demand for this equipment in Canada is minimal and is likely to take place in those provinces where the Canadian industry has not been able to maintain a significant share of the domestic market. There is expected to be strong international competition for this business and it is important to the survival of Canadian manufacturers that they capture a high proportion of it. To lose these orders would weaken the future competitiveness of the industry by reducing the manufacturing order base and cash flow, jeopardizing future investments in R & D, machine tools, and plants. It would also be detrimental to the marketing credibility of Canadian producers in the export market which will also be required for survival.

5. COMPETITIVE ASSESSMENT

The range of capability of Canadian manufacturing is fairly complete with particular strengths in large hydraulic turbines, and small and medium-sized gas and steam turbines as well as a wide range of steam generation equipment including power and industrial boilers and boiler room equipment. Canadian firms in these areas are active exporters, and have demonstrated their competitiveness in international markets which are not closed to them.

This sector is critically dependent upon domestic procurement practices and government financing of exports. The openess of the Canadian market has enabled foreign manufacturers to engage in practices such as price dumping to obtain orders in certain segments of the market. Examples are steam turbine generator sets, large hydraulic turbines (except in Quebec), heavy wall pressure vessels, and heat exchangers. Even though Canadian firms are competitive, tariff structure in favour of user industries, price dumping and concessional financing by foreign governments make it difficult for Canadian manufacturers to be successful on major domestic projects. If these conditions continue it is expected that further attrition of Canadian manufacturers will occur in this sector.

Prepared by: Machinery and Electrical Equipment
Department of Regional Industrial Expansion

Assistant Deputy Minister
Capital and Industrial Goods

Date: 26 June 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: Power Generation Equipment **SIC(s)* COVERED:** 3011, 3021, 3194, 3199

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	Estimate Partial 1985
Establishments							200
Employment							9,500
Shipments ($ M)	278	856	1,188	1,117	931	874	1,001

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Export ($ M)	68	182	272	284	270	275	235
Domestic Shipments ($ M)**	211	674	916	832	662	598	767
Imports ($ M)	111	459	564	473	526	429	491
Canadian Market ($ M)**	322	1,133	1,480	1,305	1,187	1,028	1 258
Exports as % of Shipments	24	21	23	26	29	32	24
Imports as % of Domestic Market	35	41	38	36	44	42	39

Source of imports (%)	**U.S.**	**E.E.C.**	**ASIA**	**OTHERS**
1981	74	19	5	2
1982	69	20	6	5
1983	72	16	8	4
1984	72	20	5	3

Destination of exports (%)	**U.S.**	**E.E.C.**	**ASIA**	**OTHERS**
1981	48	3	19	30
1982	36	1	32	31
1983	34	4	37	25
1984	50	7	18	25

3. REGIONAL DISTRIBUTION - Information based on sector data.

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	4	23	53	12	8
Employment - % of total	1	29	58	10	2

4. MAJOR FIRMS

Name	Ownership	Major Plants
1. Babcock & Wilcox Canada	U.S.	Cambridge
2. Combustion Engineering	U.S.	Sherbrooke, Cornwall, Edmonton
3. Foster Wheeler Limited	U.S.	St. Catharines
4. Versatile-Vickers	Can.	Montreal
5. Canadian Erectors Ltd. (TIW Div.)	Can.	Toronto, Calgary
6. Koch Muirhead Engineering	U.S.	Toronto
7. Canadian General Electric (DEW)	U.S.	Lachine
8. Westinghouse Canada Inc.	U.S.	Hamilton, Renfrew
9. Brown-Boveri Howden	Switz./U.K.	Scarborough
10. Dominion Bridge-Sulzer	Can./Switz.	Montreal

*SIC's on 1980 basis

**May not add due to rounding.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION DRAFT

COMPETITIVENESS PROFILE

PULP & PAPER EQUIPMENT SECTOR

1. STRUCTURE AND PERFORMANCE

a) Structure

In this profile the pulp and paper equipment manufacturing sector includes pulp processing machinery and paper mill machinery, but excludes paper converting machinery where it is considered there is minimal Canadian capability.

The two most significant products of the Canadian pulp and paper industry have been chemical pulp and newsprint. Since the Canadian equipment sector was intended to serve primarily the domestic market, it is only natural that its technological strength and expertise also lie in these two areas.

The sector consists of approximately 60 companies of which 20 are considered to be medium to large in size, i.e. with over 100 employees. Most are located in the large urban centres of Ontario (30 per cent), Quebec (65 per cent), and British Columbia, where markets, supplier inputs and skilled labour are concentrated. The sector provides 4,000 direct jobs. Most of the large firms in this industry supply equipment to more than one industrial sector, i.e. pulp and paper, mining, power plants, waste treatment plants, and usually rely on this diversity to keep a relatively healthy backlog of orders.

Subsidiaries of foreign companies, mostly American, represent approximately 75 per cent of the Canadian pulp and paper equipment industry based on shipments. Most were established in the early 1900's when import tariffs were high (25 per cent) and new pulp and paper mills were being built everywhere, particularly in Eastern Canada. Canadian owned firms are generally smaller, have more narrowly focused product lines, and are more export oriented.

Most of the Canadian pulp and paper equipment offshore sales, i.e., outside of the United States, are related to major international projects where Canadian consultants are involved. These projects usually range between $250 to $500 million and approximately 40 per cent of this figure translates directly into process machinery. The Canadian pulp and paper engineering consultants are well established internationally and can provide a full range of services ranging from preliminary studies to full turnkey responsibility on these projects. Usually the financing terms, as offered by organizations such as EDC, play a determining factor in the awarding of the contract. Of course, when EDC is involved, the multi-nationals are often obliged to waive away the normal geographical restraints imposed on their Canadian subsidiaries because of the tied nature of the financing. Although EDC's Canadian content requirement is usually 60 per cent, in this sector a requirement of 75 to 80 per cent is generally the norm due to the strength of the sector.

Generally, competition in this sector comes from Sweden, Finland and the Federal Republic of Germany (FRG).

b) Performance

Shipments by Canadian pulp and paper equipment manufacturers increased on average 5.2 per cent per annum in real terms between 1970 and 1985, growing from $79 million to $325 million in current terms. This compares with a real growth rate of 5.9 per cent experienced by the total machinery industry during the same period.

As stated earlier, exports were particularly strong in the late seventies when exports as a percentage of shipments rose steadily from 33 per cent in 1976 to 76 per cent in 1980. However, from 1981 to 1984, this figure dropped to less than 30 per cent as the industry world-wide experienced a marked slowdown in new expansions. In 1985, 80 per cent of the export shipments were directed at an EDC financed project in Malaysia. Each individual major export project averages over $100 million in process machinery and hence has a large influence on annual export figures. Export sales were particularly strong from the mid-seventies through to 1980 as Canadian pulp and paper equipment firms successfully marketed technically advanced equipment to major EDC financed pulp and paper projects in Poland, Czechoslovakia, Argentina and Chile.

The United States has traditionally been the most important export market for Canadian producers, with usually over 50 per cent of all yearly exports. However, import data published by the U.S. Department of Commerce shows that from a leading position of 30 per cent in the mid-70's, Canada's share of the U.S. market fell to approximately 15 per cent in the early 80's. Sweden and United Kingdom producers also saw their share in the U.S. market decline over this period. Finland showed the greatest increase from a 21 per cent share to 34 per cent.

During the slowdown in export opportunities of '81 to '84 Canadian equipment suppliers were able to focus on the domestic market where improvement projects, some undertaken as part of federal of provincial initiatives to modernize Eastern Canadian pulp and paper facilities, have provided the bulk of new business opportunities. During this period, almost 70 per cent of shipments went to domestic customers with the domestic market more than tripling between 1980 and 1981 and then remaining at approximately twice the 1980 level, for the next four years.

Import penetration of the domestic market declined somewhat during the early 1980's to an average of 39 per cent from an average 43 per cent in the late 1970's. Nevertheless the sector is again coming under strong import pressure. Competition is felt not only from traditional European equipment suppliers such as Federal Republic of Germany, Sweden and Finland but also from developing countries such as Brazil. Some multi-nationals are utilizing their Brazilian subsidiaries to enter the Canadian pulp and paper equipment market under preferential duty rates as well as very favourable concessional financing terms.

Some of these imports reflect the fact that the Canadian pulp and paper industry is gradually changing from a strong newsprint and chemical pulp supplier to coated, supercalendared and other types of specialty paper grades. These grades have already been in the marketplace in Europe for several years therefore the associated equipment and technology have a proven track record.

2. STRENGTHS AND WEAKNESSES

a) Structural

As the majority of the larger firms are subsidiaries of American companies, established here to serve the domestic market, the traditional strength of the sector lies primarily in the supply of machinery and technology to the chemical pulp and newsprint industries. This strength is reflected in the fact that the sector is capable of meeting all the requirements of these two industries with the most technologically advanced equipment and imports are usually limited to

projects where foreign financing is involved. Some subsidiaries even have world mandates for their product lines. Canadian-owned firms have found specialty areas where they excel and can compete successfully in the domestic and export markets.

Over the years, most of the subsidiaries have been relying heavily on the parent company to provide the technical support required to remain competitive and have done very little if any R&D in Canada. The Canadian branch plants are usually much smaller than any of the foreign competition, with a mixture of product lines for various sectors, including, sometimes, some sub-contract work for other companies. This seems to have a negative impact on productivity, quality and workmanship. There are a few of these subsidiaries who are presently being re-organized and realigned to operate on a more efficient basis and this primarily as a direct result of changes in senior management and ownership.

In Canada there are no commercial relationships (ownership) between equipment manufacturers and end-users (pulp and paper companies) as is the case in Sweden and Finland. This affects the sector in two significant areas: first, it is very difficult to find customers to work with in proving prototype machinery and processes resulting from the R&D and secondly, while we can supply complete manufacturing facilities for major overseas projects with the latest in technology, at the same time, our domestic customers feel free to import similar process equipment because of more competitive financing terms from foreign sources.

Based on recent observations of the Swedish and particularly Finnish pulp and paper equipment sectors, it seems that their manufacturing facilities are far better equipped and organized to meet the requirements of the industry in terms of quality standards than the Canadian industry. Also, productivity throughout the industry appears to be greater than in Canada possibly because of the high degree of product specialization for each plant.

In addition, when one views the major commitment to R&D made by all Swedish and Finnish manufacturers, particularly during the last five years, it is not surprising to see the rise in their export sales, especially to North America, during the same period.

b) **Trade Related Factors**

On the export side, in this sector, the only country where tariffs have been a significant factor in preempting entry of our product lines is Brazil where import tariffs are in the order of 40 per cent for pulp and paper machinery. In all other countries, tariffs do not seem to affect our exports. Also, except for Brazil where an import licence is required, there are no NTB's affecting this sector.

The most important factor for this sector in export markets, is availability of competitive financing. Although Canadian consultants do obtain smaller offshore contracts on their own, their ability to offer complete turnkey packages including competitive financing by EDC has definitely been a key factor in their past successes such as Kwidzyn in Poland (1977-79), Ruzomberok in Czechoslovakia (1979-1980) by H.A. Simons Overseas Ltd.; Alto Parana in Argentina (1980) by SNC Rust; Puerto Piray, also in Argentina (1980) by Sandwell; and more recently in South Sabah, Malaysia (1984-85) by Klockner-Stadler-Hurter (KSH) of Montreal. This last project had an added feature to it in that because of the low credit rating of the client country, the major financial risk was shared by Canada and Austria, and with the Federal Republic of Germany to a smaller extent.

On the import side, the latest threat comes from Brazil. As explained earlier this is directly related to financing factors such as rates of interest, repayment period, and grace period before payments are due. Under tariff item 42700, imports from Brazil are dutiable at the GPT rate of 2.5 per cent instead of the usual MFN rate of 9.2 per cent since Brazil is considered a developing country.

c) Technological Factors

The Canadian pulp and paper industry is in the process of switching away from the traditional chemical pulp process and standard newsprint manufacture to high yield pulping processes such as Chemi-Thermo Mechanical Pulp (CTMP), and specialty grades such as supercalendared and coated papers. There is a tendency to look offshore to fulfill the technological requirements for these new grades, particularly to the Federal Republic of Germany, Sweden and Finland, where these changes started to occur several years ago and, hence, the associated technology and process equipment seems to be that much more advanced. Again since most of the Canadian equipment firms are subsidiaries of American companies, in general, they lack the access to this latest technology from other countries and are generally not competitive.

Canadian owned equipment firms are aggressively pursuing R&D projects in various areas of the pulping process to develop their own product lines which will compete on a technical basis with offshore suppliers. At the present time, there are no Canadian owned firms supplying equipment for the paper finishing areas such as coating and supercalendaring.

It is estimated that while European pulp and paper equipment suppliers invest approximately four to five per cent of sales in R&D, Canadian owned firms invest approximately 1 to 1.5 per cent and subsidiaries less than 0.5 per cent.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

Pulp and paper equipment firms benefit from the provisions of the Machinery Program which ensures that manufacturers receive the full benefit of protection from duty on imported equipment equivalent to that which they manufacture in Canada. At the same time, many of these same manufacturers are assisted in rounding out their product line by receiving remission of duty on imported machines not manufactured in Canada.

There is no doubt that the Pulp and Paper Modernization Program which was a Federal/Provincial cooperative program, did strongly influence the machinery sector shipments during the first half of the 1980's. Ongoing participation of the various governments in major projects, such as Domtar, Windsor, P.Q., will continue to affect this industry.

4. EVOLVING ENVIRONMENT

Exports of chemical pulp from Canada, which represent 90 per cent of the sector output have gone from a peak annual growth rate of 7.2 per cent in the 1960's to 0 per cent since 1980 and are expected to remain that way for the foreseeable future. The newsprint sector is considered a mature industry world-wide with growth potential estimated at less than 2 per cent annually. For this reason, the potential market in the two areas of Canadian equipment and technology specialization are deemed very poor for new projects and will consist primarily of upgrading existing facilities.

The equipment industry must react to the increased level of imports. The obvious solutions are serious commitments to R&D, acquisitions of technologies in specialty grades through joint ventures, licensing, etc. However, due to the large segment of foreign ownership of the industry, mainly from the U.S.A., the lack of freedom to deal directly with European and Scandinavian firms will severely curtail Canadian opportunities in this sector.

5. COMPETITIVENESS ASSESSMENT

Canadian pulp and paper equipment manufacturers, mainly subsidiaries of American companies, have developed the technical expertise to compete in the domestic market. This market has traditionally been chemical pulp and newsprint. However, new expansions and paper mill modernizations are shifting this emphasis towards higher yield pulp processes and specialty papers.

While Canadian equipment suppliers are keeping pace with the technology and equipment required for the pulping and the paper making areas, they are not competitive in the paper finishing areas such as coating and supercalendaring. It is estimated that this area represents less than 10 per cent of the sector's market. This deficiency exists because there are no Canadian owned firms active in this area and the foreign subsidiaries are not free to establish relationships that would facilitate the transfer of the leading technology from Finland and the Federal Republic of Germany.

The Canadian pulp and paper equipment manufacturing industry in large part (about 90 per cent) is competitive, however, in the area of paper finishing, which is expanding, there is a capability gap.

Prepared by: Machinery and Electrical Equipment Branch
Department of Regional Industrial Expansion

Assistant Deputy Minister
Capital and Industrial Goods

Date: OCT 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT
CONFIDENTIAL

FACT SHEET

NAME OF SECTOR: Pulp and Paper Industries SIC(s) COVERED: 3199 *

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985**
Establishments							60
Employment							4000
Shipments ($ millions)	58	280	427	303	231	273(e)	325
(volume, e.g. tonne where applicable)							
Gross Domestic Product (Constant 1971-$ millions)							
Investment ($ millions)							
Profits After Tax ($ millions)							
(% of income)							

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Exports ($ millions)	18	213	95	92	68	75	169
Domestic Shipments ($ millions)	40	67	332	211	163	198	156
Imports ($ millions)	24	102	176	128	83	108	176
Canadian Market ($ millions)	64	169	508	337	246	306	332
Exports as % of Shipments	31%	76%	22%	30%	29%	28%	52%
Imports as % of Domestic Market	30%	61%	35%	38%	34%	35%	53%
Canadian Share of International Market	N/A						

Source of imports (in %)

	U.S.	E.E.C.	ASIA	OTHERS
1981	45%	20%	3%	32%
1982	53%	8%	2%	37%
1983	60%	11%	3%	26%
1984	67%	12%	5%	16%
1985	N/A	N/A	N/A	N/A

Destination of exports (in %)

	U.S.	E.E.C.	ASIA	OTHERS
1981	52%	3%	6%	39%
1982	57%	2%	1%	40%
1983	68%	2%	2%	27%
1984	76%	5%	4%	15%
1985	N/A	N/A	N/A	N/A

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total		65	30		5
Employment - % of total		70	25		5
Shipments - % of total		70	25		5

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants
Beloit Canada Ltd.	U.S.A.	Sorel, Quebec
Ingersoll Rand (Canada) Inc.	U.S.A.	Sherbrooke, Quebec
Black Clawson Kennedy Ltd.	U.S.A.	Owen Sound, Ontario
Dorr Oliver (Canada) Ltd.	U.K./U.S.A.	Orillia, Ontario
Valmet Dominion Inc.	Finland/Can.	Lachine, Quebec

* SIC's on 1980 basis
** Estimates used for shipments and regional distribution

DRAFT - PROJET

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE
Name of Sector: Publishing

1. Structure and Performance

a) Structure

The industry consists of establishments engaged in publishing only or in combined publishing and printing activities. Distributors and retailers of published materials are excluded. Publishing covers numerous operations including the gathering of news, the preparation of editorials and the selling of advertising in the case of newspapers and periodicals and the selection and editing of manuscripts in the case of books. Roughly a third of all firms in this industry, the bulk of them in the daily newspaper field, perform their own printing. The others sub-contract this operation to commercial printers.

The Canadian industry was composed of an estimated 1,300 companies in 1985 that controlled 1,575 establishments, employed about 47,200 people on a permanent basis and reported revenue from sales of own goods at $3.9 billion. English-language published materials represented about 80 per cent of all shipments. The industry is an important source of employment for freelancers (primarily writers).

The industry is made up of three major sub-sectors, which together account for over 90 per cent of industry's shipments; only a handful of companies operate in more than one of the key sub-sectors.

- newspapers: employed roughly 30,000 people in 1985 with revenue of about $2.4 billion; advertising accounted for 75 per cent of revenue; newspapers essentially serve local/national needs; as there is little international trade in this product, this sub-sector will not be analyzed in detail;

- periodicals: employed roughly 10,000 people with revenue of about $800 million; advertising represented about 60 per cent of revenue; consumer periodicals accounted for about two-thirds of sub-sector's output;

- books: employed about 5,000 people with sales of own books estimated at roughly $500 million; textbooks accounted for about 40 per cent of sales; in addition most firms act as agents for foreign publishers; this activity, which involves importing and marketing, generated additional sales of about $300 million.

The industry is heavily concentrated in Ontario and Quebec, primarily in the areas of high population density. Book publishing is the most centralized sub-sector, with over 90 per cent of shipments originating from plants located in the Toronto and Montreal Metropolitan Areas.

The industry is characterized by the presence of a large number of small production units. Roughly 60 per cent of the plants have fewer than 10 employees but together they account for less than one-tenth of all shipments. In contrast, establishments with 100 and more employees, or about 4 per cent of the total, account for roughly 65 per cent of industry's shipments. At the company level, concentration of activity is particularly high in the daily newspaper segment, where the two largest chains control over 55 per cent of total revenue.

Foreign ownership (predominantly American) is important in the book sub-sector (about 50 per cent of shipments of own goods) and negligeable in the other two sub-sectors as a result of governmental regulations. The book publishing branch plants concentrate their activities in acting as agents for their parent organizations. This activity accounts for about 60 per cent of their sales. Publishing of indigenous (Canadian) talent accounts for the balance. While most Canadian-owned firms also act as agents for foreign publishers, this business represents only about 30 per cent of their sales. Agency business is an important source of cash-flow to finance indigenous publishing. On the other hand, many of the larger Canadian-owned publishing companies, notably in the daily newspaper field, have significant investment abroad, primarily in the United States.

There are about 350 companies publishing predominantly French-language materials with revenues of about $0.8 billion. Average company size is smaller in the French-language segment in comparison to its English-language counterpart. In the former segment, concentration of activity among the largest firms is more pronounced in the newspaper sub-sector while foreign ownership is negligible in the book sub-sector. As a group, French-language periodicals rely less extensively on advertising as a source of revenue.

Most employment in the Canadian industry is in the skilled category. The daily newspaper field is highly unionized. Paper and ink are the two major raw materials consumed by the industry. No critical sourcing difficulties have been experienced in the past few years, although some higher quality paper grades have been at times in tight supply.

Overall, the structural characteristics of the Canadian publishing industry tend to parallel those of its counterparts in most developed nations. The notable exception is the high level of foreign ownership in the Canadian book sub-sector in comparison to its counterparts in other countries. This reflects the proximity to the United States, one of the world leaders in the creation and distribution of books.

b) Performance

Reflecting generally favourable market conditions, industry's employment and shipment levels during the period 1973-85 expanded at average annual growth rates of 1 and 5 per cent (in constant dollars) respectively. This is slightly better than the manufacturing sector as a whole. Similar patterns occurred in other developed countries.

During the period 1973-85, exports of published materials grew at a faster rate than domestic shipments increasing their share of the industry's total output from 3 to 8 per cent. Imports also expanded at a faster rate than domestic production, as their share of the apparent Canadian market increased from 19 to 23 per cent. However, the trade deficit grew from $203 million to $727 million. Canada's trade in this field is conducted primarily with the United States. There is almost no trade in newspapers reflecting the local/national nature of the product. The Canadian periodical sub-sector had an export orientation ratio estimated at between 5 and 10 per cent in 1985, while import penetration stood at about 35 per cent. The bulk of trade in this area is in consumer periodicals where American products account for about 75 per cent of newsstand sales of English-language papers in Canada. The book sub-sector had an export orientation ratio of about 18 per cent, however, one firm accounted for an estimated 90 per cent of all exports. Import penetration for books stood at an estimated 70 per cent.

As a group, the Canadian publishing industry's financial performance has usually been better than all manufacturing. However, this reflects in a large measure the very high profits associated with newspapers and is not representative of the difficult situation faced by many Canadian publishers of periodicals and books, which are subject to import competition.

A major characteristic of book and periodical publishing (notably trade book and consumer periodical), worldwide, is the risk factor. Consumer preferences in these areas are very unpredictable.

2. Strengths and Weaknesses

a) Structural Factors

In essence, publishing firms are engaged in obtaining and marketing stories and authors. There is a significant difference in the potential of the Canadian and American publishing industries to develop and market their respective talent pool successfully on a sustained basis. For example, the two largest Canadian-owned book publishers reported revenue of Cdn. $266 million and $35 million in 1985, compared to U.S. $1.0 billion and $0.6 billion for their American counterparts.

Because of their size and inherent economic advantages, which in turn is a reflection of their market base, the large American book publishers are able to lure away the best writers and publish a wide range of titles in order to spread their risks. In addition, they are able to mount extensive marketing campaigns.

Overall, the Canadian-owned book publishing segment is subject to the weaknesses usually associated with small scale. The majority of companies are underfinanced. After absorbing creative and printing costs, they lack the resources to undertake adequate promotion at home or abroad. The size of most companies also restricts the extent to which a full-fledged management and technical groups can be employed. The impact of these weaknesses is particularly noticeable in French-language Canada, given the small size of the market base.

In the periodical sub-sector, the disparity in size between Canada and the United States is not as evident, although it is an important factor, particularly in the consumer periodical field. Given their much larger population base and advertising dollar market, the large American publishers can offer better editorial coverage and a more attractive products than their Canadian counterparts.

b) Trade Related Factors

In response to the American surcharge on imported shakes and shingles, Canada re-imposed on June 6, 1986 a 10 per cent M.F.N. rate on English-language books (except books for educational institutions and libraries, and of a religious nature) and periodicals issued less than four times a year. This tariff had been suspended in 1979 in response to an exemption granted to Canada from the manufacturing clause of the United States Copyright Law. Other published materials are granted duty-free entry. However, Canada prohibits through the Customs Act the importation of (1) periodicals in which more than 5 per cent of the advertising space consists of advertisements that indicate specific sources of availability in Canada and (2) split runs or regional editions of a periodical that contain an advertisement that is primarily directed to a market in Canada and that does not appear in the other editions of that periodical. These restrictions were introduced to encourage Canadian advertisers to use Canadian periodicals to reach domestic consumers.

In addition, Canada prohibits through the Customs Act the importation of reprints of Canadian books and reprints of British books which have been copyrighted in Canada. Under this item, a copyright owner can prevent the importation of cheaper foreign editions (including remainders) of his work by giving notice in writing to Revenue Canada. To date, this measure of protection has been used only to a limited extent by Canadian publishers because of significant administrative problems. Proper administration of this measure would require examining the contents of every book shipment coming into Canada to verify authorship.

Finally, several measures established by governments in Canada to support the industry are considered as non-tariff measures by the United States including income tax restriction with regards to advertising in foreign media and preferential postal rates. In contrast to Canada, other developed nations provide duty-free entry to published materials and their use of non-tariff measures is relatively modest.

c) Technological Factors

In terms of manufacturing processes, the industry, worldwide, generally relies on suppliers of machinery and equipment to originate technological developments. Manufacturing technologies are available on a worldwide basis.

In the last decade, there has been a trend, worldwide, among publishing firms (as opposed to combined publishing and printing) to acquire pre-printing equipment (notably typesetting) in order to better control costs. In this area, Canadian publishers, as a group, have not totally kept pace with their American counterparts.

3. Federal and Provincial Programs and Policies

Over the years, the federal government has adopted numerous special measures to support the publishing industry, particularly the periodical and book sub-sectors. The prime objective has been to support the development of a Canadian culture by providing a medium in which Canadian authors could flourish and topics and issues could be aired and discussed from a Canadian point of view. Consequently, they have been directed largely at stimulating the production of a wide variety of titles as opposed to focussing on the development of strong companies. The principal measures in place are:

a) deductions from income by a taxpayer of expenditures incurred for advertising directed at the Canadian market in a foreign newspaper or periodical is disallowed;

b) entry into Canada of a foreign periodical containing Canadian domestic advertising is prohibited through the Customs Act;

c) the Canadian Book Publishing Development Program of the Department of Communications provides financial support to publishers to implement projects aimed at improving their viability, and to trade associations to undertake projects designed to benefit the sub-sector as a whole;

d) the Canada Council provides financial assistance to support the publishing of literary and arts periodicals as well as books of cultural value while the Science and Humanities Research Council supports learned periodicals;

e) the Department of Communications contributes towards second-class mailing costs of various cultural products (whether Canadian or imported) by absorbing a portion of the deficit incurred by the Post Office in distributing these goods; community newspapers and periodicals are the two major beneficiaries of this measure; in addition, domestic mail regulations provide for a preferential rate for Canadian periodicals, a second higher rate for foreign periodicals printed in Canada (most notable example is Time) and a third most expensive rate for foreign periodicals printed outside Canada;

f) newspapers, periodicals and books (whether Canadian or imported) are exempted from the federal sales tax.

In July 1985, the Canadian government adopted a policy to Canadianize the book publishing and distribution sector. For example, direct acquisitions of foreign-controlled businesses in Canada by new foreign interests are permitted under the Investment Canada Act if the foreign investors agree to return control of their subsidiaries in Canada to Canadians within a reasonable period of time, usually two years.

The current Copyright Act in Canada came into force in 1924 and, except for a small number of amendments, has not been updated since that time. It is now anticipated that drafting of new legislation will commence in 1986. In contrast, the copyright law in the United States was rewritten in the late-70's. In particular, it provides better protection against illegal use of copyright materials.

Several provincial governments, notably Quebec and Ontario, provide important support to the periodical and book sub-sectors, notably through loans to publishers, grants and contributions to trade associations, and Canadian-content requirements for textbooks. Quebec has a requirement that public institutions buy only from government accredited booksellers and distributors.

At a meeting of federal, provincial and territorial ministers responsible for cultural resources in March 1986, participants created a steering committee on book publishing that will, among other things, focus on improving access by companies to financial markets, and reviewing the role of postal subsidies.

4. Evolving Environment

Overall, it is projected that market demand for published materials over the medium term will grow at a somewhat more moderate level than during the seventies. Factors such as the amount of leisure time and the level of educational attainment of the population will continue to have strong positive effects. However, this will be offset by slower growth rates for both the population and real personal disposable income. In contrast, the aging of the population will have little overall effects. Finally, the next few years will bring to maturity a number of technological developments in the news communications areas, such as videotext, which will adversely affect some published materials.

No drastic changes in the basic structural characteristics or methods of operation of the Canadian industry are anticipated over the medium term. No critical shortages of paper or other raw materials currently used by the industry are expected in the medium term. It is generally believed that no dramatic developments in manufacturing processes utilized by the industry are likely to occur during the next five years, and that the major emphasis will be on refining existing technologies. There will continue to be increasing investment in pre-printing equipment by publishing firms.

5. Competitiveness Assessment

Competitiveness in this industry is tied to the ability to obtain and market stories and authors with mass appeal. This in turn will attract advertisers in the case of newspapers and periodicals. The newspaper sub-sector essentially serves local/national needs and is basically healthy. In contrast, the periodical and book sub-sectors are subject to strong import competition, despite the introduction by governments in Canada of a wide range of special measures to assist domestic publishers and authors.

The majority of Canadian-owned book publishers are not currently competitive. They suffer significant size-related economic disadvantages vis-à-vis the branch plants in Canada and their parent organizations. While less pervasive, these disadvantages are also found in the periodical sub-sector, notably in the consumer periodical field.

Earlier this year, the federal and provincial/territorial governments created a steering committee to examine ways to better assist the book sub-sector.

PREPARED BY: FOOD AND CONSUMER PRODUCTS INDUSTRIES BRANCH
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

DATE: JUL 11 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: PUBLISHING SIC(s) COVERED: 2831, 2839, 2841 & 2849 (1980)

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Establishments	1,164	1,273	1,350	1,359	1,480	1,525(E)	1,575(E)
Employment	41,178	47,475	45,443	45,832	46,365	46,700(E)	47,200(E)
Shipments/Revenue ($millions)	1,055	2,613	2,944	3,121	3,427	3,797	3,900
Gross Domestic Product (constant 1971 $millions)	599	839	836	770	789	798	795
Investment ($millions)	35	86	92	90	89	115	101
Profits After Taxes ($millions)	92	173	207	205	273	N/A	N/A
(% of income)	8.7	6.3	5.8	5.3	6.7	N/A	N/A

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Exports ($millions) (1)	33	138	147	173	278	275	325
Domestic Shipments ($millions)	1,022	2,475	2,797	2,948	3,149	3,425	3,575
Imports ($millions)	236	680	769	869	937	1,047	1,052
Canadian Market ($millions)	1,257	3,155	3,566	3,817	4,086	4,569	4,627
Exports as % of Shipments	3.1	5.3	5.0	5.6	8.1	7.2	8.3
Imports as % of Domestic Market	18.7	21.5	21.6	22.8	22.9	22.9	22.7
Canadian Share of International Market	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source of imports (%)

	U.S.	E.E.C.	ASIA	OTHERS
1981	87.4	11.2	0.5	0.8
1982	89.4	9.6	0.5	0.5
1983	89.3	9.2	0.9	0.6
1984	87.8	10.2	1.1	1.0
1985	88.0	10.2	0.8	1.0

Destination of exports (%)

1981	88.0	8.0	0.2	3.5
1982	93.0	5.1	0.2	1.7
1983	95.4	3.0	0.1	1.5
1984	94.5	3.5	0.2	1.9
1985	94.8	3.3	0.2	1.8

3. REGIONAL DISTRIBUTION - 3 yr avg.

	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
Establishments - % of Total	5	23	41	18	13
Employment - % of Total	5	19	48	17	11
Shipments/Revenue - % of Total	3	26	47	14	10

4. MAJOR FIRMS

	OWNERSHIP	LOCATION OF MAJOR PLANTS
1. Torstar	Canadian	Ontario and abroad
2. Maclean Hunter (publishing only)	Canadian	Que., Ont., Alta and abroad
3. Southam (publishing only)	Canadian	Que., Ont., Alta, B.C. and abroad
4. Thomson Newspapers	Canadian	Canada wide and abroad

(E): Estimate
N/A: Not available
(1) The export statistics quoted in this report overstate the actual level of export orientation of the Canadian publishing industry. For statistical purposes, Canada's international trade in newspapers, periodicals and books is usually assigned to the publishing industry. However, it is believed that a good portion of Canadian exports of these commodities originates from companies classified to the commercial printing industry. Unfortunately, it is not possible to estimate the value of these export shipments at this time. In contrast, it is believed that the bulk of Canada's imports of newspapers, periodicals and books originates from foreign publishers as opposed to commercial printers.

DATE: _____

DRAFT

COMPETITIVENESS PROFILE

RAILWAY FREIGHT CAR INDUSTRY

1. Structure and Performance

There are four main manufacturers of freight cars in Canada, capable of producing up to 15,000 cars annually. In 1984 and 1985, 3,488 and 3,160 units were produced respectively (1984 value $193.8 million and 1985 value $206.4 million).

National Steel Car Ltd. began building cars in Hamilton, Ontario in 1912 and has manufactured most types of freight cars, except for tank cars.

Hawker Siddeley Canada Ltd. (Trenton, Nova Scotia) commenced freight wagon production in 1930 and manufactures all types of freight cars, including tank wagons. The company also produces wrought steel wheels for railway vehicles and is the sole producer of freight car axles in Canada.

Marine Industries Ltd. (Sorel, Quebec) manufactures light ships, heavy industrial turbines, and related equipment. In the mid-1950's MIL opted to build freight cars in order to take advantage of an available labour source (when the shipbuilding side experiences a downturn in orders).

Procor Ltd., a subsidiary of the Union Tank Car Corporation (U.S.A.), was founded in Oakville, Ontario in 1952 as a lease operation. Procor subsequently began to manufacture tank cars to meet the requirement of lessees.

Due to the competitive nature and structure of this industry, financial information on specific companies or industrial divisions within companies is not available hence their performance cannot be measured. Capital investment in plant upgrading has been limited to specific operations and has not been done on a general basis.

2. Industry Strengths and Weaknesses

Structural:

There is significant overcapacity in the Canadian industry. The total capacity, based on three shift operations, vastly exceeds the historical annual average output of 5,000-6,000 (1974-1984) and the average in recent years of 3,200. Production has normally been done on a one (sometimes two) shift basis. This overcapacity combined with the cyclical character of the demand has created a disincentive to capital investment and modernization. Long-term adjustment has been hindered by government procurement policies, regional concerns, and the nature of the labour market. Labour can readily be cut back in downturns through layoffs or reassignment to other production areas (in the case of MIL) and recalled when required. In some communities, limited alternatives for employment allow a very high level of returns in recalls.

Some wagon manufacturers have been able to diversify production and keep their plants operating utilizing reduced production staff. Hawker Siddeley manufactures other heavy industrial fabrications and is prepared to sign other contracts for non-structural steel fabricating. Marine Industries Ltd. is looking for ship manufacturing contracts and since the completion in 1985 of the last grain car order, the company has not been active in the rail car market. National Steel Car does not normally diversify its car production and tends to concentrate on obtaining additional orders from both the CNR and the CPR.

Trade Related Factors:

The industry has exported less than 10 per cent of its output over the last decade, although Hawker Siddeley has exported up to 32 per cent of its annual production in some years. Exports have been restricted to LDC's supported by government financing through CIDA or EDC. Other countries enjoy a competitive advantage in exports due to colonial ties (France and UK) or lower wage costs (Japan and Korea). There has been little interest in marketing into the U.S.A. because of over suppy which has resulted during the economic down turn over the last several years.

The Canadian market is protected by a tariff (17.5 per cent on rail cars and components) and non-tariff barriers. The latter derive from the past procurement practices of the Canadian Wheat Board and the railways. A special group of tariffs is applied by Canada to foreign (U.S.A.) wagons entering Canada as part of the "international service" fleet. These units are granted privileges to operate on specific routes and can deviate from these routes for up to 90 days per annum only. Once a car exceeds this 90 day limit, a 17.5 per cent tariff is applied against the monthly rental fee during its use as domestic equipment. From time to time pressure is brought to bear on the Government of Canada to ease the application of these tariffs -- however, these duties have been enforced just as Canadian built cars have come under American enforced tariffs. The U.S. rail car industry has rationalized over the last few years and there are now three or four main builders of freight wagons. These companies are also faced with an over capacity situation and tend to market cars differently than the smaller Canadian market allows. U.S. builders concentrate on special cars and offer discounts for larger, multiple car runs which often represent the combined orders of several customers.

The industry's dependence upon trade protection is reflected in its fear that its interests will be traded off in favour of other sectors (such as urban transit or even its own suppliers) which might benefit from more liberal trade arrangements. Finally, it should be noted that, at Hawker Siddeley's request, an anti-dumping investigation was undertaken against axles imported into Canada from Japan, the U.S., and the U.K. Revenue Canada determined that dumping of Japanese axles had occurred. The U.K. has dumped locomotive axles in the past and should be watched for future wagon axle dumping infractions. The U.S. manufacturers had not dumped axles during 1984.

Technological:

Robotics and machine controlled cutting, drilling, and milling operations are present in various degrees in the freight car plants in Canada. However, product and process innovation has been hampered by the lack of economies of scale, the need to employ an over abundant local labour force, and limited R&D budgets as a result of poor performance over the last several years in the domestic and export market.

There has been little product innovation in the industry. The freight wagon industry, except for aluminum cars, welded tank cars, and special purpose units, utilizes older technology and leans towards standard designs. As for processes, fully automatic welding machines and submersed torch plate cutting have been in use for the last few years, CAD/CAM systems for car design have only recently come into use in Marine Industries Ltd. and National Steel Car Ltd. Hawker Siddeley is in the process of obtaining a CAD/CAM system for car design and tank car development while Procor has not identified CAD/CAM as a strong requirement. Since Canadian assemblers build to specification for CN and CP, they do little R&D and are at an international disadvantage vis-à-vis the U.S. for example.

3. Federal and Provincial Programs and Policies

The Canadian car industry has received federal government support for product innovation, Canadian sourcing of components, and overseas market development as well as ongoing tariff support. Federal policy has also been used to support the status quo by distributing large government procurements among the major companies. The Wheat Board (or provincial) purchases of grain cars over the last 10 years have accounted for approximately 33 per cent of domestic car purchases. All companies (except Procor) have benefited from these procurements during periods of low demand for rail car.

On occasion the government has supported the manufacture of railcars by the railways as a means to avoid layoffs in their overhaul and repair shops at times of excess capacity. This regional employment concern was a factor in the 1983 decision to manufacture coal cars at CN's Transcona (Winnipeg) shops. As well, interventions have occured whereby railways have been requested to accelerate and direct orders to avoid private sector lay-offs.

4. Evolving Environment

The demand for freight cars is expected to be mainly for replacements. The number required will be low because of improved maintenance procedures by the railways and improvements in their efficiency in the use of cars (through computerized car control and the use of larger and specialized cars).

Domestic freight car demand for the next few years is not encouraging. It is expected that less than 3,000 wagons will be ordered domestically in 1986 and the period 1986 to 1990 does not look any brighter.

No orders are anticipated for additional hopper cars, hence the builders know the ordering pattern for the next few years is weak. Potential opportunities exist in the development of lighter weight wagons, and the industry and their suppliers will need to undertake applied R&D to develop new products of this type. As Canadian railways become more conscious of operating (fuel) and fleet replacement costs, they will tend to purchase light weight, larger capacity wagons whenever possible. This will be more advantagous for bulk haulage lines where large quantities of the same product are moved. Opportunities for export orders for these cars appear to be minimal.

The export market also looks poor due to strong competition. Many of the potential export markets are in LDC's which do not meet EDC financing requirements. The global deterioration in the international credit structure has also closed doors on export opportunities using untied financing. It should be noted that Marine Industries Ltd., in Sorel, Quebec announced in February, 1986, a lay off of one hundred and eighty workers and the company intends to study the future demand for their car products both domestically and overseas.

5. Competitiveness Assessment

Much of the Canadian freight car industry is not competitive despite advantages due to tariff barriers, favourable exchange rates with the U.S., and procurement preferences for Canadian firms on the part of Canadian railways and private users. It, therefore, has little hope of any major infiltration of the U.S. market.

The over-capacity in the Canadian car building industry has been recognized for years but little structural change has taken place. Many of the manufacturing facilities are old and the infrastructure was paid for several years ago. Whenever orders run out, most companies lay off workers and wait for order opportunities to crop up. The MIL announcement is the first indication that some rationalization may be taking place. Government procurement practices have impeded rationalization in the past and will play an important role in the future.

Canadian railcar manufacturers have difficulty competing internationally with producers from lower wage countries such as Korea and Brazil. Export orders also have to include shipping charges which can add an additional 15 to 20 per cent onto the cost of their product. This also serves to insulate the North American market.

The decline of European currencies against the Canadian dollar has hurt Canadian competitiveness against European suppliers, in third country markets.

Prepared by: Automotive, Marine and Rail

Date: February 1986

DG/ADM

FEB FEV 28 1986

FACT SHEET

NAME OF SECTOR: RAILWAY FREIGHT CARS **SIC(s) COVERED:** 326

1. PRINCIPAL STATISTICS

	1980	1981	1982	1983	1984*	1985
Establishments	4	4	4	4	4	4
Employment	3,800	3,200	1,400	1,000	1,140	1,513
Shipments ($ millions)	486	452	190	113	212	190
Gross Domestic Product (Constant 1971$ millions)	(Product 85% Cdn content)					
Investment ($ millions)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Profits after tax	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Exports ($ millions)	131	30	13	0	2	6
Domestic Shipments ($ millions)	355	422	177	113	231.3	206.4
*Imports ($ millions)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Canadian Market ($ millions)	-	-	-	-	-	-
Exports - % of shipments	25	6	7	0	1	3
Imports - % of domestic market (incl. components)	5	5	5	5	5	5

2. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	25	25	50	-	-
Employment - % of total	22	24	54	-	-
Shipments - % of total	35	24	41	-	-

3. MAJOR FIRMS

	Ownership	Location of Major Plants
1. Hawker Siddeley	Canadian/British	Nova Scotia
2. National Steel Car	Canadian	Ontario
3. Marine Industries	Canadian/French Prov. of Quebec	Quebec
4. Procor	American	Ontario

4. FEDERAL AND PROVINCIAL GOVERNMENT PROGRAMS

Program	Type	Amount	Purpose
PEMD	Grant		Marketing Support
EDC/CIDA	Export financing aid		
Provincial Programs			Capital acquisitions by operators

* Imports are leased cars from the U.S.

** Statistics from DRIE survey of industry. Statscan data not disaggregated.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT - PROJET

COMPETITIVENESS PROFILE

RETAIL TRADE

1. STRUCTURE AND PERFORMANCE

As retailers must, with minor exceptions, be located in the markets they serve, the sector faces minimal direct international competition. Some competition occurs in those communities located very close to the Canada-U.S. border and by mail order. This paper examines the efficiency of the retail sector. References to the retail sectors of other countries are included for comparison only, not as an indication of direct competition.

a) Structure:

The retail industry (1980 SIC 601 to 659) includes businesses primarily engaged in selling commodities to the general public for personal or household consumption and in providing related services such as installation and repair. It consists of numerous kinds of business and sales by major sub-sector in 1984 were:

Sub-sector	% of Sector Sales
automotive	32.0%
food	26.0%
general merchandise	14.5%
apparel and accessories	6.4%
hardware and home furnishings	6.3%
other stores	14.8%

In 1985, about 200,000 retail establishments generated $128.4 billion in sales and provided employment for 1.5 million persons, or 13% of the employed labour force. The industry's share of real GDP (1971$) in 1984 was 7.3%.

The size of firms varies greatly, with the majority being small owner-managed businesses. In 1983, about 96% of retailers had sales under two million dollars. Although large in number, these firms only generate about 40% of total retail sales. By contrast, a few very large retailers account for the major portion of sales. There are perhaps a dozen organizations with annual sales well in excess of $1 billion and perhaps another eighteen with sales in the $100 million to $1 billion range. The department store and food sectors are dominated by firms with annual sales ranging from one to several billion dollars. A growing number of specialty chains have sales in the hundreds of millions of dollars, with some approaching one billion dollars or more.

Retailing also includes some very large franchised or voluntary groups(1), such as Canadian Tire, Shopper's Drug Mart, Independent Grocers Association (I.G.A.), and Metro-Richelieu with annual sales in the one to three billion dollar range. Each outlet is usually operated by an independent business person and is therefore counted as a separate establishment for statistical purposes. As a result the retail industry appears more fragmented than actually is the case.

In 1982, foreign controlled firms accounted for 13% of retail sales (excluding sales of foreign franchises) down from 21% in 1970. The decline in foreign ownership has been due to Canadianization of such major firms as Loblaws Co. Ltd. and Hudson's Bay Co. and faster growth during

(1) Group of independent businesses joined together on a horizontal basis for the purpose of benefitting from such things as a common name and bulk purchasing.

NOTE: Although in some cases more recent statistics are not available, the analysis contained in this profile is based as well on more recent information obtained through industry contacts.

this period of the Canadian controlled portion of retailing. Over three-quarters of the sales of foreign controlled firms were concentrated in the food and general merchandise sectors, where their share of the market was 17% and 33% respectively. The market share held by foreign controlled firms in other major sectors in 1982 was minimal. Foreign franchise outlets are concentrated in the automotive sector (e.g. Midas Muffler) and in the computer and electronic stores sector (e.g. Radio Shack). U.S. franchise organizations have been successful in penetrating selected segments of the Canadian market in the last decade, and because of their record of success, will likely continue to do so.

While a domestically oriented industry, retailers engage in international activities mainly in three areas. These include (1) foreign expansion, (2) export of goods and (3) import of goods. The latter two areas can have an important impact on Canadian goods producing industries.

Canadian retailers, particularly food retailers and specialty chains, have been active in expanding into the U.S. in recent years mainly through acquisition. The U.S. sales of Canadian retailers in 1984 were estimated to be between three and four billion dollars or 3 to 4% of Canadian retail sales. While a number have been quite successful (e.g. Steinberg), U.S. expansion has been difficult for others (e.g. Canadian Tire). Many have found that Canadian retail methods do not always work in the very competitive and different U.S. market.

In addition to engaging in international activity through establishment of operations in other countries, a limited number of retailers are also involved in the export of products. Export of "product of own manufacture" (e.g. Canada Safeway), export of private label products (e.g. Loblaws Co. Ltd.), and exports to company stores in the U.S. (e.g. Dylex) are examples of retailing led exports.

The export division of one foreign owned retailer (Canada Safeway) has evolved into a trading house doing over $30 million in exports annually. The lower Canadian dollar and increased U.S. expansion by Canadian retailers should lead to additional opportunities for exporting Canadian products to the U.S., particularly by Canadian retailers that are vertically integrated into manufacturing. Some U.S. retailers are also sourcing product through their Canadian operations such as Colour Your World, Canada Safeway, and Sears.

While up-to-date information on the current import activities of retailers is not available, a 1978 study indicated that foreign controlled firms have a higher propensity to engage in direct import activities than Canadian firms (4.6% of sales compared to 1.7% for Canadian firms). The extent to which foreign controlled retailers import from their parents is not well documented. However, it is known that some are sourcing through their foreign affiliates to take advantage of private label products, their buying power or manufacturing capabilities. Sears is presently rationalizing some of its sourcing so that the Canadian operations will be responsible for sourcing certain products and services for stores in North America and the U.S. operation for others. The import activities of retailers can have an important influence on domestic manufacturing.

b) Performance:

The retail industry is essentially cyclical in nature and is dependent on the health of the economy and rate of population and income growth. After strong real growth in the early 1970s, the retail industry entered a period of weaker growth in 1977 due to rising interest rates and reduced consumer demand. Retail sales declined significantly in real terms during the recession but have since demonstrated strong growth led by new car sales. In 1986, sales are expected to moderate somewhat as tax increases will decrease consumer expenditures. From 1971 to 1980, annual growth in GDP (1971$) averaged 5.4% in retailing, compared to 4.7% for all industries. For the 1980 to 1984 period, annual growth in GDP slowed to 1.1%, compared to the 1.5% average for all industries. Profits at the

industry level are moderate and reflect those of a mature industry. During the recession retail profits dropped but have generally now returned to pre-recession levels. There has been some deterioration in retailer's balance sheets relative to the 1960s and early 1970s. The industry has lost liquidity and increased its reliance on debt financing but is now showing some signs of improvement.

In recent years, the retail industry has experienced poor productivity performance as a result of overcapacity and insufficient attention to such things as inventory management. Increased emphasis is now being placed on improving the sales and efficiency of existing stores through better selling techniques, more efficient space utilization, closing old or outmoded stores and increasing the use of labour-saving technology such as electronic point-of-sale systems, computerized inventory control and automated distribution centres. All these measures are aimed at increasing sales per outlet.

Many companies, particularly department stores, have also launched programs to upgrade and modernize their outlets. Investment in new space is still occurring but it is more selective, better targetted and is frequently associated with the expansion of existing shopping centres. In addition, retailers in such sectors as food, drug and home improvement are investing in large warehouse or discount type outlets to reduce costs and increase their market share. Canadian industry is following the U.S. trends to larger stores which have proven to be successful. These adjustments are also being driven by demographic changes and the need to better serve the marketplace.

2. STRENGTHS AND WEAKNESSES

a) Structural:

By its nature, key factors affecting the effectiveness of participants in the sector are marketing skills and ability to meet consumer demands in price, service, convenience and product terms. The Canadian retail industry is progressive in terms of retail practices and techniques. The skills and reputation of many firms, such as Dylex, Loblaws Co. Ltd. and Shopper's Drug Mart, are held in high regard by foreign retailers. The industry in Canada, however, is more concentrated and chains are more nationally oriented than in the U.S. Canada's small population and large geographic size encourage concentration and large retail organizations which enable the industry to be efficient. The level of concentration and knowledge required of regional distribution/markets impedes major penetration of the Canadian market by foreign controlled companies, except through acquisition of an existing firm.

In the 1980s, general merchandise retailers such as department stores have been losing market share to specialty chains which offer better product selection and service. Traditional supermarkets have also had to adapt in the face of increased competition from many different types of retail outlets offering better prices or service. Successful retailers have taken a particular marketing stance (e.g. targetting a particular age or income level) in an effort to differentiate themselves from their competitors. Having recognized that it no longer possible to appeal to the whole market, they have focussed their attention on one or more segments of the market.

Overall, department stores in Canada have been adjusting more slowly than their U.S. counterparts to changed market conditions. Retail analysts report that management has been weak and sales per square metre are low versus U.S. stores. The profitability and performance of foreign controlled department stores (Sears, Woolco and K-Mart) has been better in recent years than Canadian owned firms such as The Bay, Simpsons, Woodward's and Miracle Mart. These Canadian owned firms are now rationalizing corporate operations, repositioning stores and upgrading management in an effort to improve their efficiency and profits. By

comparison, Eaton appears to be gaining market share, while performance of Canadian owned junior department stores such as Zellers and Towers has been stronger.

The Canadian retail food industry is very efficient with sales per square metre above U.S. standards. Despite the demise of Dominion's, which failed to adjust to changing market conditions, Canadian controlled firms are competitive relative to major foreign controlled firms such as Safeway and A&P. Canadian owned firms, such as Loblaws Co. Ltd., Overwaitea (Western food retailer) and others, have been leaders in introducing new more efficient and profitable retail concepts in Canada such as the large warehouse food stores. A large proportion of the independent food retailers belong to franchised and voluntary groups (IGA) that are backed by large Canadian wholesalers, enabling them to be very efficient as well.

Small firms may experience problems with lack of management expertise, difficulty in securing financing and are more sensitive to economic downturns. Small independent firms which are unaffiliated with a franchised or voluntary group are loosing market share in retailing, and this trend is expected to continue. Franchising is becoming increasingly attractive as it provides the opportunity for independent business operators to compete with large corporate retailers, through association with a recognized brand name, a proven market strategy, collective buying power and the benefits of broad advertising exposure. Franchisees are also generally provided with ongoing support and advice from the franchisor, and have reasonably favourable access to financing because of the lower failure rate in franchise businesses.

The retail industry is an important access route for new job market entrants and has many first-time and young workers. It is also a major employer of part-time employees and employees with limited skills. In an environment where increasing sophistication is required, these characteristics present the industry with challenges in the development of an effective labour force.

b) Trade Related Factors:

As previously indicated the retail industry is involved in international activities. Efforts to reduce trade barriers could help facilitate the export of some Canadian retail concepts or franchises that have been built around particular product lines or standardized systems. For retailers involved in the export/import of goods, trade restrictions vary according to the products involved. The value of the Canadian dollar and efficiency of Canadian manufacturers are also important factors affecting the trade activities of retailers.

Increased development of private label or store brands combined with excellent international contacts developed through import activities has provided retailers with the opportunity to enter the export market. However, not all retailers that have a potential to export are doing so as they remain preoccupied with the domestic market.

To improve their international buying capabilities some Canadian firms, such as department stores, have joined international buying groups. In addition, in sectors such as hardware a firm may join forces with one of its U.S. counterparts when sourcing in overseas markets.

c) Technological Factors:

The use of automation at the retail level has been steadily increasing over the past decade, particularly with respect to automated point-of-sale and inventory control systems. Large chain and department stores have been the trend setters, with 80% of these organizations using computer systems. The slowest to move towards automation are the independent or small chain stores, largely due to the capital costs involved and the lack of trained staff and software packages specifically designed for retailers.

Retail firms in Canada lag somewhat behind firms in the U.S. in the rate at which they adopt technology but closely follow U.S. trends as the technology is proven. The major reasons for this are the larger size of some U.S. retailers and the U.S. position as a leading source of computer and information technology used in retailing. However, there are sectors (drug and hardware stores) where Canada is more advanced in the application of technology. The presence of a growing number of Canadian retail firms in the U.S. marketplace should assist the Canadian retail industry in keeping abreast of U.S. retail trends and technology.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

Much of the legislation/regulation affecting the retail industry comes under provincial or municipal jurisdiction. At the federal level, the tax system, trade policies and consumer protection are of significance. There are no sector specific assistance programs designed solely for the retail industry. However, the industry benefits from a number of broader based programs some of which are outlined below.

The Federal Business Development Bank (FBDB) has provided financial services and management services such as counselling, to a variety of small businesses including the retail industry. A number of provinces have similar programs.

The Small Business Loans Act encourages lenders in the private sector to make term loans available to small businesses. The retail industry is a major user of this program and accounts for almost 25% of the funds loaned.

The Program for Export Market Development (PEMD) has been utilized by a few retail organizations (e.g. Canada Safeway, Dominions) to pursue export (goods) market opportunities. The use of this program by retailers with exportable franchise concepts (e.g. Kiddie Kobbler) has been minimal as most retailers have chosen to expand by acquisition.

4. EVOLVING ENVIRONMENT

Changing demographics will have a major impact on retailing during the next decade. Canada's population is expected to increase at only half the rate of the 1970s. However, a one-third increase by 1994 in the number of people in the high-spending 35-49 age bracket bodes well for retailing and will provide a stimulus for consumer durables and household related furnishings. As a result, retail analysts believe that industry sales growth will outperform growth in the overall economy during this period.

The retail industry is characterized by strong competition in the marketplace where there is a high number of failures and new entrants, and constant innovation by both large and small firms. The retail marketplace is unyielding in its demand that its practitioners demonstrate their relevance and customer appeal day in and day out. Competition within the retail sector is currently intensifying. Consumers today are better educated, more sensitive to price/value relationships, more discriminating and more individualistic in tastes than any previous generation. These factors, combined with recent slow growth in real personal disposable income and population, are resulting in increased competition and a requirement for better marketing and planning to position a store to meet special interests. Department stores, supermarket chains and specialty retailers are competing for each others customers through aggressive advertising, pricing, broader merchandise and new store formats.

Food stores are undergoing dynamic change. Large "super warehouse stores" up to 10,000 square metres or several times the size of a conventional food store are emerging . These mammoths are better able to cater to the price sensitive market and because of their size can carry up-scale products as well. One concept, known as the "super combo", combines food, health and beauty aids, clothing, and housewares. Conventional food, drug

and hardware stores and even junior department stores face increased competition in markets where these operate, resulting in the displacement of marginal operators.

Another recent innovation, the "warehouse club" store, is just entering Canada from the U.S. This is a cash and carry warehouse outlet selling brand name goods at wholesale prices to other businesses as well as consumers. Such outlets offer food, appliances, housewares, sundries and general merchandise in outlets of 10,000 square meters. If U.S. success is any indication, they will provide a major challenge for existing retailers. Even specialty retailers in a growing number of sectors (drug, electronics, toys, home improvement) are opening larger outlets offering a broader range of goods in the category in which they operate. Fighting these trends, department stores have added pharmacies, increased advertising, pared merchandise lines, set up specialty boutiques and promoted their housebrands.

5. COMPETITIVENESS ASSESSMENT

Although the sector is generally healthy and well positioned to meet the demands of the market the industry must continue to improve its performance and balance sheets. Understanding and managing change are the biggest challenges facing retailers today. This will require more sophisticated management, better trained employees and continued investment in market research, new stores formats and computerized inventory control and information systems. To be successful, retailers will be well managed and financed, with activities clearly focussed on a particular market.

Large retail organizations which dominate sector sales have the resources to meet these challenges; small firms which comprise the majority of establishments will face greater difficulties. Small retailers will also face the additional challenge of increased competition from large retailers in their traditional mid-sized and smaller markets.

Prepared by: Service Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

for L. P. Lemelin
Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: JUN JUIN 17 1986

The Canadian Retail Industry

1. Principal Statistics	1971	1981	1982	1983	1984	1985
Establishments [1]	N/A	149,584	161,369	169,116	169,862	N/A
Employment	955,000	1,389,000	1,367,000	1,376,000	1,441,000	1,489,000
Sales ($ billions)	31.4	94.3	97.6	106.2	116.0	128.4
GDP (% of total) [2]	6.8	7.2	7.2	7.3	7.3	N/A
Exports		not available				
Imports		not available				

[1] Excludes owner-operated stores with no paid employees.
[2] Based on constant 1971 $.

2. Financial Statistics	1971	1981	1982	1983	1984
Investment (Constant 1971 $)					
Capital (millions $)	408.5	527.9	471.0	509.0	502.8
Repair (millions $)	113.2	137.1	157.0	147.5	147.9
Profitability [1] (after tax) on					
Total Income (%)	N/A	1.7	1.3	1.7	N/A
Capital Employed (%)	N/A	8.9	6.8	8.4	N/A
Equity (%)	N/A	12.5	9.6	11.5	N/A
Sales to Inventory (Times)	7.4	6.4	6.7	6.8	N/A
Long Term Debt/Equity (%)	17.7	33.7	34.8	32.2	N/A
Salary to Total Expenses (%)	N/A	49.1	48.7	47.7	N/A

[1] Excludes the other stores sector which includes provincial liquor stores whose profits would significantly distort the results.

3. Regional Distribution (1983)	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments - % of total	8.4	29.8	32.6	16.2	13.0
Employment - % of total	8.3	24.8	37.2	18.3	11.4
Sales - % of total	8.2	24.3	37.1	18.5	11.9

4. Foreign trade	U.S.	E.E.C.	Asia	Other
Imports: 1982		not available		
1983		"	"	
1984		"	"	

Special study for 1978 found that direct imports by retailers were approximately $1.3 billion compared to industry sales of $57.7 billion.

Exports: 1982	not available		
1983	"	"	
1984	"	"	

A growing number of retailers are becoming active in export trade particularly in the export of their private label products. Also leading Canadian food and specialty chains are investing in U.S. retail operations and some are exporting to their U.S. stores.

5. Major Firms	Annual Sales ($ billions)	Ownership
1. Loblaws Co. Ltd.	6.9	Canadian (100%)
2. Hudson's Bay Co.	5.3	Canadian (96%)
3. Steinberg Inc.	3.9	Canadian (100%)
4. Sears Canada Inc.	3.8	American (60%)
5. Canada Safeway Ltd.	3.5	American (100%)

NOTE: Sales figures may include U.S. sales of Canadian firms and some non-retailing activities

SOURCE: Statistics Canada and Financial Post 500 Summer 1986.

DRAFT

COMPETITIVENESS PROFILE

SHIPBUILDING, SHIP REPAIR, AND MARINE EQUIPMENT

1. Structure and Performance

Structure:

Output of this sector includes cargo vessels, ferries, ice breakers, fishing vessels, naval vessels, semi-submersibles, jack-ups, and drilling vessels as well as pumps, cranes, propellers, shafts, steering gear, and propulsion systems for these vessels. Both shipbuilding and marine equipment are classified under SIC 327*. The value of vessel construction and conversion work in Canada, as reported by Statistics Canada, averaged $162 million annually between 1975 and 1984, in 1971 dollars. During the same 10 year period, the value of ship repairs averaged $74 million annually, or just over 30 per cent of the total value of shipyard work.

There were 21 major shipyards in Canada, with total yard employment in the first 10 months of 1985 of about 8,000. Historically, these major yards have represented approximately 90 per cent of employment, value added, and total production in the Canadian shipbuilding and repair sector. The residual of the sector's activities are accounted for by approximately 50 smaller yards and repair shops. The industry has facilities in the North West Territories and in every province, except Saskatchewan.

There is little foreign ownership. Yards are owned by both governments and commercial enterprises. The federal government owns and operates Department of Public Works docks in Quebec, Manitoba, and British Columbia although it was announced in the May 1985 budget that the government wished to find buyers from the private sector for these facilities. The Government of Newfoundland owns Marystown Shipyards, Prince Edward Island owns Georgetown, Nova Scotia currently has control of Halifax Industries Limited, and the Quebec government is a majority shareholder of Marine Industries Limited (MIL). Foreign participation is present largely through specialized joint ventures or technological agreements (for example, in offshore oil and gas projects).

There also exists a degree of vertical integration between shipping lines operating in Canada and Canadian shipyards. Major yards, especially in Ontario and British Columbia, are wholly or partially held by such lines as ULS International, Genstar, Rivtow Straits, and Canada Steamship Lines. A major increase in industry concentration has occurred with the takeover of Davie by Versatile, such that four major yards (two each in Quebec and British Columbia) comprising 30 per cent of national capacity are now owned by one company, Versatile Corporation.

The Canadian shipbuilding industry claimed only 0.4 per cent of the world market as of March 1985. Canada's major competitors are Japan, which held a 42 per cent market share in 1983, and Korea, with almost 10 per cent. The market shares of Norway, France, the United Kingdom, Holland, the United States, and Yugoslavia are declining. During the period 1970 to 1975, foreign shipyards had backlogs of up to four years and Canada was able to obtain export orders through SIAP subsidies and by promising earlier delivery. However, world overcapacity is currently estimated at 40 per cent for merchant ships and 20 per cent for drilling rigs. In this environment, prospects for exports are poor. Canadian shipyards have excess capacity, while foreign yards frequently have lower supply costs, due to vertical integration, as well as better facilities and lower labour rates.

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* The Marine Systems Division also has residual responsibilities for some items of specialized ocean equipment, pleasure craft, etc. not dealt with here.

There are more than 160 companies in Canada which manufacture a variety of marine equipment with Canadian content of 65 per cent or higher. Some examples of this type of equipment are pumps, cranes, propeller shafts, safety equipment, fishing on-board equipment, propulsion systems etc. The bulk of these manufacturers are diversified in the products and markets they serve and few specialize in a single product line serving the marine equipment sector.

Performance:

The average annual decline in the value of new construction for the period 1975-84 was 6.8 per cent while the value of repair work increased 2.7 per cent. With respect to the value of new construction, conversion, and repair work, the rate of decline was steeper over the past five years than during the 1975 to 1979 period. The decline in the value of production by Canadian yards reflects both the market volatility of the period and the erosion of the Canadian yards' competitive position in domestic and foreign markets.

During 1984, the current dollar value of production at member yards of the Canadian Shipbuilding and Ship Repairing Association (CSSRA) was $539 million. This represented a decline of over 8 per cent from the $586 million value of work completed in 1983. However, it should be noted that the value of work in 1983 also represented a decline of 38 per cent from 1982.

2. Strengths and Weaknesses

Structural:

There is more shipyard capacity in Canada than can be justified on the basis of potential demand. The consequent underutilization of facilities has led to cost disadvantages in the order of 20 per cent on new commercial bids, cutthroat competition, losses on current government work, and a slowdown in necessary investment in facility improvement. The absence of vertical integration with suppliers and a small domestic market precludes any compensating efficiencies.

Shipyard hourly wage rates were 23 per cent above the Canadian manufacturing average as of February, 1985. Poor profit performance and market prospects have retarded capital investment in the sector, slowing innovation and productivity improvements. Past policies including the allocation of public procurement, subsidies and provincial ownership have not encouraged competitiveness, and labour has been slow to adjust to problems in the sector.

Marine equipment is supplied to the shipbuilding industry on an arms length basis by both domestic and foreign manufacturers of industrial machinery and equipment. In fact there is very little vertical integration of shipbuilding in Canada. At the same time very few Canadian yards are diversified horizontally. The bulk of marine equipment manufacturers also make other products and serve more than this market, although there are a few manufacturers who specialize in a product line dedicated to serving the marine equipment market alone. SIAP records indicate that there are more than 160 companies which manufacture marine equipment, having a Canadian content of 65 per cent.

Trade Related Factors:

A tradition of protection marks the policies of virtually all shipbuilding countries. Seven out of 10 European shipbuilding countries provide direct subsidies. The American market is virtually closed to Canadian yards. U.S. coastal shipping is reserved by the Jones Act to American built ships, and marine equipment has been excluded from the Defense Production Sharing Agreement by overrides in various U.S. appropriation acts. Most shipbuilding countries offer favourable export financing. Canada's export

financing does not match the minimum rates agreed to under the OECD Understanding on Export Credit for ships. Canada does not have preferential interest rates for ships built for the domestic market, as do the U.S. and virtually all industrialized shipbuilding countries. This context plus the 30 to 90 per cent appreciation of the Canadian dollar against most European currencies since 1980 have made Canada's competitive position more difficult to sustain even in the domestic market, despite the existence of high tariffs (20-25%).

Technological Factors:

On the average, Canadian yards lag behind foreign yards in technology although the size of the margin varies with individual yards. Most yards in Canada are still in their original locations and have had to cope with physical constraints which hamper both the production of large modern vessels and the use of modern modular production techniques. These constraints, combined with slack demand, poor profits, and bleak market prospects, have also retarded the introduction of advanced production methods. Ideally these involve modular construction in covered facilities with heavy lifting at the assembly stage. They also involve adjustment to union job demarcation practices, management methods, seniority rules and training programs. Canada, with one of the worst physical climates in the world for shipbuilding, has no covered commercial drydocks.

3. Federal and Provincial Programs and Policies

There has been a long-standing pattern of industry-wide subsidies at the federal level combined with yard-specific support by the provinces, especially in the Maritimes and Quebec. The industry also benefits from more generous capital cost allowances than most industries.

In 1983, the federal government announced its decision to phase out direct production subsidies (for vessels completed after June 30, 1985). Instead, a more uniform tariff is being applied in the traditional customs jurisdiction, and the jurisdiction itself has been extended to the continental shelf zone for vessels used in activities related to resource exploitation. This decision was based on an optimistic outlook for domestic demand (especially related to offshore oil and gas) and the poor outlook for export competitiveness. The tariff is 25 per cent for all ships except fishing vessels over 100 feet in length, and 20 per cent for drilling rigs. Temporary entry provisions allow some flexibility in implementing the tariff.

The strong demand anticipated in 1982 for the domestic offshore area has not materialized, resulting in declining employment and the postponement of necessary capital investment. Government procurement which has always been important to the industry, has now become its mainstay. It is expected to constitute well over 40 per cent of new construction business over the next 10 years.

In the May 1985 Budget Statement, the Minister of Finance announced that earning of credits under the Performance Improvement Grant scheme would no longer apply after June 30, 1985. However, $100 million in credits are still to be disbursed and at the historical average annual disbursement rate of $14 million, it will take seven years to pay out these credits. They will be applied towards covering 50 per cent of the costs of projects whose purpose is to modernize facilities and improve shipyard productivity.

4. Evolving Environment

World demand is not expected to pick up before the end of the decade. While Canada previously could aspire to matching the prices of some European suppliers, the appreciation of Canada's dollar against European currencies has placed Canadian yards at a disadvantage. Meanwhile, new competitors (Korea, Brazil, and Taiwan) are undercutting even Japan, which

has been forced to mothball 35 per cent of its shipbuilding capacity. The worldwide pattern of subsidy and support is not expected to change sharply. Canada is, therefore, unlikely to reclaim a strong export role. Domestic demand is expected to remain poor, due to slower than anticipated offshore development, and the limited orders will most likely be supplied from abroad, given world-wide oversupply and overcapacity. Even with unusually high levels of government orders, total person years of employment in new construction and repair are expected to average 8,000 or less for the rest of the 1980s, compared to an average during the 1970s of nearly 12,000.

5. Competitiveness Assessment

Recent international bids reveal that in most product areas, Canadian yards are uncompetitive on the world market. Canadian bids have been 30 to 70 per cent higher than those of the most competitive foreign yards (Korea and Singapore) depending on the vessel type. Thus even with the protection of the 20 to 25 per cent tariff, Canadian yards are only marginally competitive in the domestic market.

While markets are limited, Canadian yards have established a position of leadership in some product areas. For example, Canadian ice-breaker technology is considered to be at the leading edge and Canadians have a unique expertise in shallow-water self-unloading bulk carriers.

It would be difficult for Canadian yards to improve their competitive position sufficiently to win a major share of the domestic commercial market. However, two changes would help. Consolidation of construction activity in a reduced number of yards would permit economies associated with a larger volume of work and could therefore improve the profit position of the industry. This would enhance the prospects for the second necessary change, investment in improved facilities and new technologies.

Government ownership of specific yards and the negative employment effects of cutbacks in a regionally sensitive industry could complicate the rationalization process. Shipyards are major employers in some communities. Government procurement practices will be of central importance in this adjustment process.

Prepared by: Automotive, Marine and Rail Date: February 1986

DG/ADM

FACT SHEET

NAME OF SECTOR: [illegible] SIC(s) COVERED*: 327

1. PRINCIPAL STATISTICS

	1980	1981	1982	1983	1984
Establishments	69	70	69	69	62
Employment (census)	14,231	13,605	13,122	9,068	8,660*
Shipments ($ millions)	1,076	1,102	1,052	822	987
Gross Domestic Product (Constant 1971$ millions)	168	165	164	112	93
Investment ($ millions) (new capital)	31	48	58	29	22
Profits after tax ($ millions)	26.1	8.5	1.2	4.9	N.A.
Exports ($ millions)	294	141	260	126	165
Imports ($ millions)	51	252	80	572	351
Domestic Market ($ millions)	833	1,213	872	1,268	1,173
Exports - % of shipments	26	14	23	14	15
Imports - % of domestic market(1)	6	22	9	42	27

* preliminary

(1) understated drastically since temporary entries are not counted as imports by Statistics Canada.

2. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments - % of total	33.3	14.3	14.3	0.0	38.1
Employment - % of total	27.7	26.3	19.5	0.0	26.5
Shipments - % of total	24.9	25.4	18.8	0.0	30.9

3. MAJOR FIRMS

	Name	Ownership	Location of Major Plants
1.	Collingwood Shipyards	Canadian	Collingwood, Ont.
2.	Les Chantiers Versatile Davie Limitée	Canadian	Levis, Que.
3.	Halifax Dartmouth Industries Limited	Canadian	Halifax, N.S.
4.	Marine Industrie Limitée	65% Canadian 35% French	Sorel, Que.
5.	Port Weller Dry Docks	Canadian	St. Catherines, Ont
6.	Saint John Shipbuilding & Dry Dock Co. Ltd.	Canadian	Saint John, N.B.
7.	Versatile Pacific Shipyards Ltd.	Canadian	Vancouver, B.C. and Victoria, B.C.

4. FEDERAL AND PROVINCIAL GOVERNMENT PROGRAMS

Program	Type	Amount	Purpose
Shipbuilding Industry Assistance Program	Capital Assistance Grants	Earning of additional credits ended as of June 30, 1985.	Assist productivity improvement.
Accelerated Capital Cost Allowances		Accelerated depreciation of capital cost of vessel built in Canada	Encourage domestic sourcing by purchasers of vessels.
B.C., Ontario, Quebec and Maritimes provincial policies	Procurement practices		
DIPP	Grants		Technological and productivity improvement.
PEMD	Grants	Up to 50% of costs sustained by exporters	Marketing support.

5. MAJOR REPORTS AVAILABLE

Name	Type of Report	Year
Canadian Ocean Industries Directory	Directory of Canadian companies in Marine Industry	1980
Canadian Shipbuilding Industry: Sector Profile	Overview of Industry	1985
Offshore Hydrocarbon Exploration	Overview	1983
Offshore Field Profiles - four area papers	Descriptive Overviews	1983
Offshore Oil & Gas - three area papers	Scenario papers	1983
Product Papers		
Ocean Industries Strategy: East Coast Offshore Oil and Gas	DRIE Ocean Industries Committee Report	1985

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT

COMPETITIVENESS PROFILE

THE SPACE INDUSTRY

1. Structure and Performance

a) Structure

The Canadian space industry is primarily involved in the design, development, and manufacture of communications satellite systems and sub-systems. This activity includes both the earth segment (transmitting and receiving ground stations) and the space segment (the satellite and payload). The sub-sector is also involved in the design and manufacture of teleoperators and robotic systems (e.g. Canadarm), remote sensing systems (e.g. sensors and image processing systems for earth observation satellites) and scientific payloads (e.g. scientific experiments carried out aboard the Space Shuttle).

The industry is small. Its 1985 sales are estimated at about $350 million and employment at about 3,200 persons. Revenues and employment are evenly distributed between Ontario (39 per cent) and Quebec (41 per cent) with the remainder in Western Canada. There is significant concentration in the Montreal and Toronto areas.

The Canadian industry's heavy orientation towards communications satellites has resulted from the role of government in space matters and the decision to use space to serve Canada's unique requirements created by a large land mass, a barren north and widely dispersed communities in remote areas. Most of the industry was founded on the demand created by government for contract R&D and technology demonstration, one-of-a-kind projects. This encouraged entrepreneurial researchers and scientists to participate in government projects and found small R&D intensive firms. Growth was significantly aided by the procurement of the Anik series of domestic communications satellites by Telesat Canada. Telesat Canada is owned equally by the federal government and domestic telephone companies. It is the owner and operator of Canada's domestic satellite communications network.

A further stimulus to the development of communications satellite capability in Canada was provided by the government decision to encourage and support Spar Aerospace in developing a prime contractor capability for communications satellite systems. Spar's involvement covers over 50 private and government satellite production programs in Canada and abroad beginning with Alouette in 1962. As a result, not only has Spar itself become a world-class satellite manufacturer but many other Canadian companies have excelled technologically as suppliers of satellite components and sub-systems.

There are about 50 firms involved in space-related work; however, most of industry sales are accounted for by about ten firms. Spar Aerospace Limited dominates the industry and accounts for about half of total sales and employment. Although most of the important companies in the industry are Canadian-owned, Spar is the only firm that trades publicly. Ownership is generally closely held, with the principal shareholder(s), in many instances, also occupying key executive positions.

Foreign ownership in the industry is limited and manifests itself in the form of subsidiary plants of large, mostly U.S., integrated electronics and aerospace companies who manufacture specialty, space-related products

(mostly components) along with other products developed by their parents. These companies do not have world product mandates for specific space products and the space-related revenues of these companies are usually small in relation to total revenues.

The space industry world-wide is technology-intensive. Research and development expenditures as a percentage of sales are generally quite high, between 10 per cent and 15 per cent. For the less diversified companies and those dependent on government business, sales and profits tend to fluctuate as a result of the intermittent demand for satellites systems and the uncertain nature of government procurements.

Worldwide, governments generally play a strong role in setting policy and in providing support either directly through R&D grants or indirectly by providing a market. The use of space for such purposes as communications and surveillance is a strategic consideration that accounts for the significant role of government. The high costs, high risks and long timeframe for economic returns have been deterrents to private sector investment. Government spending on research and civilian procurements has been increasing and the 1985 civilian space expenditures were estimated to be (in 1985 Canadian $): U.S.A.-$10B; France-$900M; Japan-$770M; and Canada-$170M. In addition there are considerable military space expenditures, particularly in the U.S. Competition is intense and increasing. Market access is a problem and considerations other than the conventional requirements of price, quality and delivery are becoming important.

The U.S. space industry is by far the world's largest followed by the USSR, France, Japan, U.K., West Germany, Italy and Canada. There has been significant growth in Canada's space industry. However, the growth in the space industries of other countries has been perhaps even more pronounced, particularly in the U.S., France and Japan. In some specific component areas, Canadian companies enjoy a significant market share, e.g. about 70 per cent of all multiplexers (signal processing devices) used in communication satellites in the free world are built by one Canadian company (COMDEV).

b) Performance

Although small, space is a growth industry. Sales and employment have grown steadily in the last few years, averaging 20 per cent annually. Growth in the aerospace sector as a whole has been about five per cent in the corresponding period. Significant government expenditures for contract R&D and procurements of systems since the mid-1970's have contributed to the strength of the Canadian space industry.

With a limited domestic market, the industry has had to look to foreign markets, particularly the huge U.S. market, for survival and growth. In this it has been very successful; exports have grown from about $10 million in 1977 (17 per cent of sales) to over $240 million in 1985 (70 per cent of sales). Canadian content of industry output has always been and remains high at about 70 per cent. Profit performance has been fair to good (5 per cent to 10 per cent of sales) depending on the demand for communications satellite systems in Canada and abroad.

2. Strength and Weaknesses

a) Structural

The Canadian space industry is reasonably well managed, is adequately financed, and is not hampered by the constraints of foreign ownership. Proximity to the huge U.S. market and the well-developed U.S. space industry are advantages in that they allow Canadian companies to respond quickly to market requirements and keep abreast of technological developments.

Although Telesat's requirements for new or replacement satellite systems for domestic communications are intermittent, these requirements have a significant impact on Canadian industry. For example, the recently-announced procurement of two Anik-E satellites by Telesat is estimated to generate over $200 million in sales for Canadian companies in the next 5 years.

Space companies in the U.S., Europe, and Japan have the comfort of large domestic markets which allow a secure base and permit economies of scale. Because the domestic market is small and access to other markets is limited, Canadian companies in comparison generally do not have opportunities for volume production. This results in higher unit production costs than those of competitors in the U.S., Europe, and Japan who can spread their fixed costs, especially their R&D costs, over larger production volumes. Consequently Canadian companies generally are forced to look to exports markets and to compete on a technology basis only. They are at a disadvantage therefore in markets for high-volume products where cost is a major determinant of success.

With the exception of Spar, other companies are relatively small (sales between $20-$30 million) and continue to depend for a significant share of their revenues on government contracts. However, some have managed to establish a world-class reputation based on their technological superiority, e.g. Comdev.

b) Trade-Related Factors

Survival for Canadian companies depends on their ability to penetrate foreign markets, especially the huge U.S. market, and to a lesser extent Europe, Japan and the developing countries. Not only are there more competitors fighting for the same markets, direct market access itself is becoming increasingly difficult. To the conventional requirements of price, quality, and delivery can be added considerations such as domestic content, technology transfer, and financing. Tariff rates themselves are low enough (between 5% and 10%) and do not pose a serious impediment to trade. However, Canadian exporters face a variety of non-tariff barriers and other restrictive practices that in many cases discourage them from seeking to export. Some notable examples are:

- U.S. Restrictive Classification rules (related to security considerations) including the "no-foreign" classification (i.e. no foreign suppliers), the Buy America Act and the Small Business Set-Asides (i.e. a per cent of total contract value set aside for small U.S. businesses);

- NASA Commonality rules that require that Space Station development work in components and sub-systems comply with its 'commonality' program, i.e. components and sub-systems must be usable in other NASA programs;

- Government purchases for which "national treatment" is not required because Government entities purchasing telecom equipment are not covered by the GATT Procurement Code;

- U.S. military security procedures that are extremely complex and time-consuming;

- Aggressive use of countertrade and 'credit-mixte' to secure contracts in developing countries.

Canadian companies have had limited success in the European market and practically none in the Japanese market primarily because of the strong protectionist stance of their governments.

The non-tariff barriers faced by exporters to Canada are the industrial offset and regional benefits requirements in federal procurements and the Canadian content requirements in Telesat procurements.

Unlike the other aerospace sectors, the space industry is not covered either under the Defence Production Sharing Agreement (DPSA) umbrella or the GATT Agreement on Trade in Aircraft.

c) Technology Related Factors

The strength of this industry lies in its sophisticated high-technology capability in world market niches, mostly in components and sub-systems for communications satellites, remote sensing and space telerobotics. Spar, with its demonstrable systems capability, is an exception in that it competes directly with the international majors as a prime contractor for communications satellites.

Canada is presently seen as the leader in teleoperator and in some aspects of remote sensing technology. Recent commercial successes in the export market, e.g. Brazilsat and Earth Stations for China and the high-profile Canadarm, have afforded Spar and Canadian industry world recognition and established credibility for future business. Canadian participation in the US Space Station program on the strength of Spar's expertise in telerobotics is another example of Canadian technological superiority in some areas.

The technological capability of Canadian space firms is the result of significant government expenditures on contract R&D and demonstration projects. Access to U.S. technology developed under military programs or classified as strategic to U.S. interests is usually difficult. Privately developed technology is commercially available.

3. Federal Programs and Policies

The Canadian Government views space as a growth industry and continues to be strongly committed to the development of the Canadian space industry. Active support has been provided to industry in the form of contract R&D and procurement of technology-demonstration projects. Federal expenditures, about $150 million annually over the last five years, have focussed on communications and remote-sensing technology development, on space science research, and co-operative arrangements with the European Space Agency (ESA) and the National Aeronautics and Space Administration (NASA). The government also operates and maintains world-class national test and research facilities (e.g. David Florida Lab) which are available to Canadian companies on a cost-recovery basis. In addition to these expenditures, indirect government support has been forthcoming in the form of major procurements, such as 'Canadarm' and Anik satellites.

In addition to the specific policies and measures described above, space companies continue to benefit from funding under several federal assistance programs (e.g. the Defence Industry Productivity Program and the Industrial Research & Applications Program).

4. Evolving Environment

The commercialization of space has begun. Communication satellites are already being operated profitably on a commercial basis. There is a move by governments (especially the U.S.) to dismantle government monopolies in space systems and allow private sector companies to offer competitive services. Notable examples are the sale of the U.S. government-owned earth observation satellite (Landsat) to a consortium of private companies and the decision, in the aftermath of the Challenger disaster, to not use the Shuttle for launching commercial payloads. This is expected to give a strong boost to the nascent privately-owned and operated expendable launch vehicle industry in the U.S. Arianespace in France is already operating successfully along commercial lines and China has declared its intention to offer commercial launch services.

In Canada too, the Government's approach to space is changing from a strict R&D, technology-demonstration orientation to commercialization and export markets. A major thrust taken by the government recently is the

Memorandum of Understanding (MOU) with Spar designed to make Spar more self-supporting and to develop the sub-contractor and supplier base in Canada.

Although there should be a stable demand for communications satellites at least until the end of the century, the market for earth terminals for private and business communications networks is likely to experience the fastest growth in the short term. The processing and sale of remotely-sensed meteorological, geological, crop and geodetic data are likely to become commercially viable in the mid-1990's. With the establishment of the permanently manned U.S. Space Station in the mid 1990's, materials processing in space (e.g. the manufacture of gallium arsenide crystals) is likely to become commercially attractive in the late 1990's.

Despite the trend to commercialization, U.S. defense purchases will continue to create a major market. Military use of space has been a fact of life in the U.S. for many years; however, it has gained greater significance and priority in recent years and the U.S. has created a Space Command to unify all its space based military activities. The military space budget in the U.S. is about $20 billion per year. Canada's Department of National Defence (DND) has not been a big user of space systems and has met its requirements through co-operative arrangements that exist between Canada and the U.S. in the area of defence. For example, Canada and the US are already collaborating on the North Warning System (part of the NORAD Agreement) with Canada providing the ground terminals for the system. Some Canadian companies are also pursuing Strategic Defence Initiative (SDI) related work.

The requirement in the U.S. for more sophisticated and secure military communications and surveillance systems is driving more technological research and development in areas such as extra high frequency satellite communications, electro-optics and space-based radar. The U.S. Space Station program has given a stimulus to research into robotics and artificial intelligence.

In the free world, the U.S., Europe and Japan are evolving as three distinct nodes for technological R&D, full space capability, and as major markets. Access to each other's markets is limited or not possible for various reasons. Joint ventures or consortia must be formed to facilitate market access, to share costs, risks and technology. Canada's biggest market is the U.S. and joint venture arrangements are being actively sought to facilitate access. Even within Canada, smaller Canadian companies are joining with the bigger ones, e.g. SED Systems Ltd. with Spar and Telesat, to bid on major procurements which are too big for the smaller companies to handle alone.

Developing countries offer limited but accessible markets, although more than technology superiority is needed to win contracts. The role of government becomes important in assisting Canadian firms to succeed in these markets by providing marketing support and export financing through the Export Development Corporation. Technology and infrastructure development assistance to the client country through the Canadian International Development Agency (CIDA) and the willingness to enter into countertrade arrangements (e.g. Brazilsat) are equally important.

5. Competitiveness Assessment

Several small Canadian space companies have demonstrated an ability to serve diverse foreign market niches. Spar has demonstrated its ability to serve total communications satellite system requirements domestically and for export. In this regard, the industry can be judged as competitive, certainly in technology terms, in meeting essential qualifications to bid, and in cost terms in certain niche markets.

Canadian companies continue to be strong in high-technology, low-volume products. However, it is unlikely Canadian companies can compete in high-volume, low-cost products, because the entry barriers to such markets

are lower and high-volume producers in Japan and the U.S. can quickly bring the benefits of scale economies to bear and drive out competition on the basis of cost [Television Receive Only (TVRO) terminals is a good case in point]. Canadian companies are therefore most likely to compete in technology market niches where price is of secondary importance.

The U.S. continues to be the world's and Canada's biggest market. It offers the best opportunity, both commercial and military, for Canadian companies and further gains are possible through joint ventures with U.S. firms, as sub-contractors to U.S. prime contractors, or by establishing a manufacturing presence in the U.S. Canadian companies recognize the importance of the U.S. market and some have started to take action in this regard. Spar for example has two U.S. subsidiaries and is negotiating joint venture arrangements with some U.S. firms.

Prepared by: Electronics and Aerospace Branch
Department of Regional Industrial Expansion

A/Assistant Deputy Minister
Capital and Industrial Goods

Date: October 29, 1986

FACT SHEET

NAME OF SECTOR: SPACE SIC(s) COVERED: _____

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Establishments						50	
Employment		2200	2250	2700	3100	3200	3200
Shipments ($ millions)		120	123	196	276	313	345
(volume, e.g. tonne where applicable)							
Gross Domestic Product (Constant 1971-$ millions)							
Investment ($ millions)							
Profits After Tax ($ millions)							
(% of income)							

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Exports ($ millions)		60	69	122[1]	179[1]	219[1]	240[1]
Domestic Shipments ($ millions)		60	54	74	97	94	150[1]
Imports ($ millions)							
Canadian Market ($ millions)							
Exports as % of Shipments		50	56	62[1]	65[1]	70[1]	70[1]
Imports as % of Domestic Market							
Canadian Share of International Market							

Source of imports (top 4)	U.S.	E.E.C.	ASIA	OTHERS
1981) 1982) 1983) 1984)	#1			
Destination of exports (top 4)	U.S.	E.E.C.	ASIA	OTHERS
1981) 1982) 1983) 1984)	#1			

3. REGIONAL DISTRIBUTION - Average over the last 3 years.

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	-	20[1]	60[1]	----20[1]----	
Employment - % of total		40[1]	40[1]	----20[1]----	
Shipments - % of total		41[1]	39[1]	----20[1]----	

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants	Concentration (% of domestic market)
Spar Aerospace	Public Canadian	Montreal & Toronto	approx. 50%
McDonald, Dettwiler	Private Canadian	Vancouver	approx. 13%

[1] Estimated - Exact figures are not available because of the private ownership character of many space companies.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT

COMPETITIVENESS PROFILE

SPECIALTY AND OTHER VEHICLES

1. Structure and Performance

Structure:

This sector encompasses manufacturers of specialty vehicles including truck body and trailers (SIC 3241, 3242, 3243 and 3244), firefighting equipment (SIC 3199), snow clearing equipment (SIC 3192), all-terrain tracked and wheeled vehicles and snowmobiles (SIC 3299); military vehicles and equipment (SIC 3231 and 3299); and off-highway haulers used in mining and construction (SIC 3231). Industry sources and Statistics Canada reported total sales for all sub-sectors listed above in 1985 of approximately $2.0 billion with total employment over 14,000.

Specialty vehicles are produced by over 300 establishments employing 12,000 people, the majority in central Canada. Total shipments were estimated at $1.2 billion. This is a highly fragmented industry covering a diversified range of products used in the transportation of goods and people, in emergency and public services and in the recreational field. Much of the equipment produced is used in the essential operation and maintenance of airports, roads and highways, fire protection, ambulance services, public utilities, and transportation in the country's remote areas. Foreign ownership is not significant (only 15 per cent of the companies are foreign owned), and the industry operates on a small scale (only 10 per cent of the Canadian plants employ more than 100 people). Truck body and trailers is the largest sub-sector in the specialty vehicles group and it consists of 265 establishments with 7,700 employees and shipments in 1985 totalling $720 million. The specialty vehicle industry is basically geared to the requirements of the domestic market. Exports account for only 17 per cent of total sales. However, approximately 30 per cent of sales of technologically advanced products such as airport crash/fire rescue vehicles, aircraft refuellers, specialized trailers, all terrain vehicles and snowmobiles are exported. Manufacturers of such products must seek export business to maintain production capacity. Principal export markets for specialty vehicles are the U.S., North Africa, the Middle East, and South East Asia. Imports are estimated at 12 per cent of the domestic market.

Military vehicles, equipment and components are built by eight companies employing approximately 2,000 people in Ontario and Quebec with annual sales estimated at $500 million. This is a relatively new industry which was established to supply the Department of National Defence. The two major companies (GM and Bombardier) quickly realized that DND requirements alone could not support their manufacturing facilities and decided to pursue actively U.S. and off-shore markets. They have had excellent success in the U.S. and moderate results off-shore. Approximately 60 per cent of annual production is being exported mainly to the U.S. Employment levels have been maintained and the companies have been able to increase significantly the sourcing of parts and components in Canada. Product technology is based mainly on licensing agreements and joint ventures, although some emphasis is now being placed on increasing new product development in Canada. Because military vehicles and equipment purchases are not subject to the GATT code on government procurement, and are usually sourced in Canada, imports have a negligible effect on this sub-sector.

The three companies manufacturing off-highway haulers (Wabco, Euclid, and Unit Rig) are wholly owned subsidiaries of American firms. Employment (650) is all in Ontario. Manufacturing has been rationalized on a North American basis under the Off-Highway Vehicles Duty Remission Orders in Council, and production is geared to the world market. Annual estimated sales total $208 million. The industry is heavily dependent on export sales, and imports are minimal.

Application oriented research and development is carried out in Canada. The industry is sensitive to cyclical fluctuations affecting its customers (major open-pit mines and large construction projects) and is currently operating at 80-85 per cent capacity. No significant new major markets have been developed in North America and the majority of export sales are made to off-shore markets.

Performance

The specialty vehicle industry has demonstrated slow growth with an average annual increase in shipments in current dollars of 2.5 per cent over the last 10 years. Employment levels peaked in 1979 and gradually declined to historical levels as a result of planned modernization and new production processes which were introduced in some of the larger firms. Although Canadian exports have a relatively small share of world markets, the sector recorded marked increases in export sales, specifically a recent sale of airport crash trucks to the U.S.

The military vehicle and equipment sub-sector is essentially a very young industry but has demonstrated rapid growth which must be attributed to domestic military requirements. Employment presently has peaked and higher employment levels can only be realized with new export sales to the U.S. and off-shore.

The off-highway hauler sub-sector has experienced slow but steady growth since the introduction of the Automotive Products Trade Agreement in 1965 and the duty remission programs. Rationalization of product lines between Canada and U.S. provided for stable employment over the years.

2. Strengths and Weaknesses

Structural:

The scale of operations of specialty vehicles in Canada is relatively small compared to its American competitors. In general, the industry which consists mostly of small and medium sized establishments is regionalized and responds to municipal, provincial, and private sector requirements. Municipal and provincial purchasing practices favouring local firms have played an important role in the regionalization of this sector. Companies in this industry generally have limited financial resources which can be attributed to low volume production and a small domestic market. In the truck body and trailer sub-sector companies are frequently forced into receivership. This industry is continuously adjusting to Canadian market conditions.

The military vehicle and equipment manufacturers are not vertically integrated and must rely on the U.S. and off-shore for the supply of major components. In addition, no real R&D is being performed and the companies rely on joint venture partners and licensing arrangements for the manufacture and marketing of their products. GM Diesel Division in London, Ontario currently manufactures light armoured vehicles and has very successfully entered the U.S. market based principally on a quality product, their corporate strength, and their marketing ability with the U.S. military.

In the off-highway hauler sub-sector rationalization has been beneficial to the industry because companies were able to benefit from economies of scale and Canada became the sole source for certain models. Because of low volume production, Canada has not been able to attract major component manufacturers to Canada. All major components i.e.: engines, transmissions, axles, generators, direct current electric wheel motors, etc. are sourced from the U.S.

Trade Related Factors:

The Defence Products Sharing Agreement provides Canadian manufacturers of military vehicles and equipment with an opportunity to access the larger U.S. military market duty free. Opportunities for off-shore sales also exist in the Middle East, some European countries and in developing nations.

The off-highway hauler manufacturers in Canada operate under special duty remission Orders-in-Council. Exports are essential to the existence of the off-highway haulers which are sold in world markets. Export financing plays a significant role in offshore sales. In many instances, Canadian export orders were lost to the Japanese and Europeans who offered more attractive long-term financing at low rates, but not always lower prices. The principal markets are the U.S., Central and South America, except Brazil, and Asia.

The export-oriented segments of the sector should be in a position to realize the advantages of the lower Canadian dollar versus the U.S. dollar in export markets as long as the Canadian dollar remains below par. However, this advantage is reduced in the case of Canadian products such as military vehicles and off-highway haulers where foreign content exceeds Canadian content, i.e. companies which must import major components from the U.S. and off-shore. In addition, tariffs and other trade impediments may also preclude the industry from exporting to most countries. These include road laws and regulations, bidding and sourcing practices, local content requirements, specifications and technical standards, and implied "buy-local" policies. Canada requires the use of export permits. For example, while Bombardier has sold 2,500 military pattern light utility vehicles to Belgium, the agreement involved final assembly in Belgium as part of an off-set requirement.

Canadian tariffs for some of the major products in the sector are as follows:

Off-highway haulers**	9.2 per cent
Military vehicles*	9.2 per cent
Truck bodies**	9.2 per cent
Trailers	14.0 per cent
Fire trucks	10.2 per cent
All-terrain vehicles	9.2 per cent
Snowmobiles	FREE

*Covered by Automotive Products Trade Agreement (APTA)
**Special Duty Remission Order-In-Council

Technological Factors:

Canadian manufacturers in the whole sector are flexible and innovative, and their manufacturing processes and engineering standards compare favourably with those of the U.S. and Europe. High technology components (e.g., drive train components etc.) are sourced in the U.S. and Europe. In many cases, technology is of other than Canadian origin and is acquired through joint ventures and licensing arrangements. The industry is moving toward the greater use of CAD/CAM and other automated manufacturing and information processing equipment. With the exception of specialty vehicles such as airport support vehicles, ambulances, all-terrain vehicles and snowmobiles, Canadian products in the three sub-sectors do not enjoy a technological lead.

3. Federal and Provincial Programs and Policies

The sector has made use of government programs e.g. IRDP, DIPP, and PEMD. Some companies are more dependent than others on tax incentives, financial assistance for export marketing, R&D, and new product development. In addition, manufacturers of off-highway haulers and certain specialty vehicles have taken advantage of the Automotive Products

Trade Agreement (APTA) in the U.S. and the special duty remission Orders-In-Council in Canada to rationalize production in North America and facilitate access to the larger U.S. market.

4. Evolving Environment

The expected trend in the markets for specialty vehicles is dependent on the general state of the country's economy and is not expected to show any significant growth. This is a mature industry and will continue to rely principally on domestic demand. The market is highly competitive requiring new product development, innovation, and flexible manufacturing techniques to accommodate generally low volume production.

The future of the military vehicle and equipment industry will depend on how successfully exports can be developed. The industry will experience moderate growth based on concerted export marketing efforts by both the private sector and Government. In the pursuit of export sales, Canadian manufacturers will, however, have to overcome such constraints as: national preferences in purchasing decisions, local content and value added considerations, industrial benefits and off-set agreements.

The off-highway hauler manufacturers will have to match increasing foreign competition such as Komatsu of Japan, which is increasing its world market share through significantly lower wages and overheads and favourable financing packages. The future of the off-highway hauler industry is dependent on the exchange rate of the Canadian dollar vis à vis the U.S. dollar. EDC financing is essential for successful bidding on export projects, including World Bank financed projects.

5. Competitiveness Assessment

The specialty vehicle industry as a whole, with its low volume production, marginal financial resources, many small companies, and limited R&D and product development, is not competitive in export markets. However, since most of the smaller companies are regionally oriented and produce customized products, they do not face competitive pressures from off-shore producers. Certain specialty vehicle producers that are more technological with sophisticated manufacturing facilities and processes will continue to exploit export opportunities in the U.S. and off-shore. Canadian built airport crash trucks, aircraft refuellers, airport snow blowers and runway sweepers, ambulances, all-terrain vehicles, and snowmobiles are some of the products which are expected to retain their present international competitiveness.

Military vehicle and equipment manufacturers are generally not competitive internationally and will continue to rely on government assistance for new product development, marketing activities, and R&D. Canada's military pattern trucks reflect antiquated technology and the industry has had only moderate success in selling these vehicles in offshore markets.

The already rationalized off-highway hauler industry is competitive in export markets and with EDC assistance could be expected to perform well internationally.

Prepared by: Automotive, Marine & Rail Branch
Department of Regional Industrial Expansion

Acting Assistant Deputy Minister
Capital and Industrial Goods

Date: April 29, 1986

FACT SHEET

NAME OF SECTOR: Specialty and Other Vehicles SIC(s) COVERED: 3192, 3199, 3231, 3241, 3242, 3243, 3244, 3299, 3251 SIC used on 1980 basis

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Establishments	373	369	340	305	320	318	325
Employment	16,500	15,525	13,930	10,745	13,500	13,900	14,650
Shipments ($ millions)	1,550	1,512	1,535	1,259	1,550	1,850	1,980
(volume, e.g. tonne where applicable)							
Gross Domestic Product (Constant 1971-$ millions)							
Investment ($ millions)							
Profits After Tax ($ millions)							
(% of income)							

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Export ($ millions)	200	250	270	300	350	362	700*
Domestic Shipments ($ millions)	1,350	1,262	1,265	959	1,200	1,488	1,280
Imports ($ millions)	250	190	180	180	175	160	160
Canadian Market ($ millions)	1,400	1,452	1,445	1,139	1,375	1,648	1,440
Exports as % of Shipments	129	16	17.5	23.8	22.5	19.5	35
Imports as % of Domestic Market	18.5	12.5	11.7	14.2	11.2	10.7	12.5
Canadian Share of International Market	1.0	1.0	1.0	1.5	1.5	2.0	2.2

Source of imports (top 4)	U.S.	E.E.C.	ASIA	OTHERS
1981	95	--	--	5
1982	95	--	--	5
1983	95	--	--	5
1984	95	--	--	5

Destination of exports (top 4)	U.S.	E.E.C.	ASIA	OTHERS
1981	80		15	5
1982	80		15	5
1983	80		15	5
1984	75	2	10	13

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	2	29	32	24	12
Employment - % of total	2	27	35	25	11
Shipments - % of total	4	28	33	22	13

4. MAJOR FIRMS

	Name	Ownership	Location of Major Plants	Concentration (% of domestic market)
1.	Euclid	U.S.A.	Ontario	
2.	Wabco	U.S.A.	Ontario	
3.	Westank-Willock	Canadian	Saskatchewan	
4.	Manac	Canadian	Quebec	
5.	Canadian Foremost	Canadian	Alberta	
6.	SMI Industries	Canadian	New Brunswick/Quebec	
7.	Bombardier Inc.	Canadian	Quebec	

* Increased military vehicle sales

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT - PROJET

COMPETITIVENESS PROFILE

SOFTWOOD LUMBER INDUSTRY

1. Structure and Performance

a) Structure

The softwood lumber industry is one of Canada's leading industrial sectors in terms of sales, employment, and export earnings. Canada is the world's largest exporter of softwood lumber accounting for some 50 per cent of international trade and 15 per cent of world production. Lumber production totalled an estimated 52.6 million cubic metres (22.3 billion board feet) in 1985 and the total value of shipments was $6.6 billion of which some $4.6 billion was exported. Pulp chips, valued at $1.4 billion in 1985, and other residual by-products are an important source of raw material for other wood based industries. Direct employment was about 56,000 people in lumber manufacturing and 35,000 in related forest operations.

The softwood lumber industry is based on an extensive renewable resource and can be divided into 2 major sectors: the Spruce-Pine-Fir (SPF) sector which extends from the Interior of B.C. to Newfoundland and accounts for about 73 per cent of total production; and the B.C. Coast sector comprising the Hemlock-Fir (Hem-Fir), Douglas-Fir (D-F) and Western Red Cedar (WRC) subsectors which account respectively for 13, 6 and 6 per cent of total output. Eastern Pine, Western Sitka Spruce and Yellow Cedar are specialty species subsectors and comprise the balance of 2 per cent. About 90 per cent of Canada's softwood timber is concentrated on provincial Crown lands.

On a regional basis, production is concentrated as follows: B.C. (66 per cent), Quebec (18 per cent), Ontario (8 per cent), Alberta (5 per cent), New Brunswick (2 per cent). The remaining 2 per cent is produced in the other provinces and the Territories. The industry is widely dispersed across Canada in some 1280 establishments, according to Statistics Canada. However, this figure does not include a large number of very small sawmills which are often operated only on a periodic basis and which in aggregate account for an estimated 1 per cent of total sector lumber output.

Some 225 major companies operating about 365 sawmills account for over 95 per cent of total production. While some 25 large integrated forest products companies account for over 50 per cent of total production, no one company dominates the market. Provincial Crown corporations represent 3 per cent of sector ownership and the large number of privately owned firms comprise the balance.

Although relatively small in terms of numbers of firms, foreign ownership (mainly U.S.) accounts for nearly one quarter of productive capacity and is largely concentrated in western Canada.

About 75 per cent of industry production workers are unionized. Collective bargaining in the East is more fragmented than in the West where unions typically have larger memberships.

The industry is highly export oriented: 68 per cent in terms of value and 73 per cent in terms of volume of production. The major export market is the United States which consumed some 63 per cent of total production volume in 1985. Another 10 per cent of production volume was exported to offshore markets in Japan, the EEC (principally the U.K.), the Middle East, North Africa, Australia, and China. U.S. producers are Canada's principal competitors in the U.S., Japan, Australia, and China. In the EEC, the Middle East, and North Africa, Scandinavian and U.S.S.R. exporters are the principal competitors to Canadian exporters.

The Canadian industry supplies about 95 per cent of the domestic market which consumes about 27 per cent of production. Softwood lumber imports, valued at $113 million in 1985, include items for re-export, principally from B.C., and species not indigenous to Canada used for

millwork. The industry faces a situation of abundant lumber supply in North America and intense competition is expected to continue.

b) Performance

During the 1970's, considerable expansion of production and rationalization of facilities occurred and international competitiveness was enhanced. Over this decade, the number of producing units reported by Statistics Canada declined 26 per cent, reflecting a trend towards larger more capital intensive sawmills, while production increased 60 per cent and exports increased 67 per cent.

This rapid growth can be attributed to high levels of lumber demand for housing in North America and to the technological development of systems enabling the economic processing of small diameter logs at high lineal feed rates. The significant expansion which occurred, particularly in the B.C. Interior and Quebec, was further facilitated through integration with the pulp and paper sector which provided an increasingly important source of revenue from by-product pulp chips.

In 1981 and 1982, the industry in all regions went through the deepest market downturn in 40 years. Heavy losses were sustained and debt load was greatly increased. The long term debt to equity ratio for the Wood Industries (about 70% softwood lumber industry) rose from 0.46 in 1980 to 1.16 in 1984 and was 0.91 in 1985. From 1981 to 1985, the trading environment in North America was intense and prices were depressed due to abundant supply. The high value of the Canadian and U.S. dollars relative to other foreign currencies led to loss in competitiveness in offshore markets and to increased supply in North American markets. Over the past five years, many Canadian firms have been facing a tenuous financial situation with operating results generally less than satisfactory.

As a result of the difficult market conditions and poor operating results, there has been little incentive for new investment. A review of corporate investment in the Wood Industries shows that capital investment fell by 53 per cent from 1980 to 1983 and was still 32 per cent below 1980 levels in 1985. While expenditures on repairs have returned to more normal levels since 1983, the capital intentions survey for 1986 indicates that capital expenditures will likely still be about 28 per cent below 1980 levels.

Demand strengthened in 1983 and lumber production reached a new high. New records were again established in 1984 and in 1985. Production in 1985 was 24 per cent higher than in 1980 while employment declined by about 7,000, indicating a significant increase in productivity. Capacity utilization rose to 90 per cent in 1985 from a low of 68 per cent in 1982. Due to the substantial competitive advantage provided by the relatively low value of the Canadian dollar in terms of the U.S. dollar, the domestic industry has been able to increase exports to the U.S. significantly. Also, with the recent weakening of the Canadian dollar vis-à-vis other foreign currencies, competitiveness in most overseas markets has been enhanced and during the first quarter of 1986, prices have shown improvement. Financial operating results have also begun to improve.

2. Strengths and Weaknesses

a) Structural

The scale of lumber manufacturing operations generally compares favourably with that in other producing countries. Economic mill size varies greatly and is governed by log availability, raw material characteristics and location, as well as the regional demand for pulp chips. Generally, sawmills larger than 50,000 cubic metres annual capacity are more efficient than smaller units. There are about 325 mills of this capacity or greater in Canada. While these mills represent a relatively small percentage of the total number, they account for about 95 per cent of estimated total industry capacity.

The large number of small sawmills have limited impact on total capacity but can process pockets of resource unattractive to larger organizations. They often produce specialties or service regional markets, and provide employment in numerous single industry communities.

Their management is considered to be generally effective and entrepreneurial. The majority of small sawmills are located in central and eastern Canada. Further rationalization will likely continue to occur in all regions but mostly in central and eastern Canada.

The industry benefits from proximity to the U.S. market which consumes over 60 per cent of Canadian softwood lumber production. However, it is very sensitive to North American residential construction activity which tends to be highly cyclical. Exports to the U.S. are largely in the standard sizes of structural lumber manufactured in highly productive SPF mills in the B.C. Interior and east of the Rockies. The B.C. Coast producing region has relatively high wood and manufacturing costs and is generally less competitive in North American markets for standard structural lumber.

The Canadian industry is generally cost competitive in U.S. northern and eastern regional markets. The competitive advantage provided by the favourable exchange rate has also been a contributing factor in Canadian producers' penetration of more remote market regions. According to the recent U.S. International Trade Commission (U.S.I.T.C.) Section 332 investigation report, productivity of sawmills in Canada is somewhat higher than in the U.S. While keen competition will likely continue from the U.S. South producing region due to its proximity to the fastest growing regional economies in the U.S., SPF lumber is often preferred over Southern Yellow Pine for residential construction. Also, future growth in production in the South may be restrained by wood supply problems resulting from more attractive alternative forest land use.

Transportation costs are a major factor since Canadian producers are generally located greater distances than their competitors from key export markets. However, because of the U.S. Jones Act, softwood lumber shippers in B.C. are able to utilize lower cost foreign waterborne shipping to the U.S. eastern seaboard than their competitors in the U.S. Pacific Northwest. In addition, a well developed network of distribution centres and reload facilities, as well as competitive overland transportation rates, have contributed to the success of Canadian softwood lumber producers in penetrating most U.S. market regions. Specialized shipping with long term chartering of vessels has enabled penetration of overseas markets.

Wood costs on a delivered mill basis are considered to be generally competitive with those in the U.S. and Scandinavia, although producers in the latter region tend to achieve a higher yield performance. However, due to decreasing log diameters coupled with increasing distances between harvesting and mill sites, Canadian wood costs tend to be rising.

On a national basis, the sustainable rate of forest harvest is considered sufficient to support the present level of lumber production. Some increase may be possible for the SPF subsectors in the B.C. Interior and Alberta, while the potential for increase in other regions is estimated to be more limited. However, the industry in several regions of Canada is operating at the upper limit of economic wood supply.

The large SPF sector has limited scope for product diversification from construction usage due to inherent species characteristics and the large proportion of narrow widths and shorter lengths of lumber. Upgrading through end and edge gluing could provide some opportunities. The B.C. Coast subsectors have valuable species which lend themselves to the production of higher valued cuttings and offer potential for product upgrading.

b) Trade Related Factors

In general, NTB's and currency exchange relationships are of greater concern than tariffs. Exceptions are the 8 per cent (April 1, 1987)

tariff on planed whitewood (SPF) in Japan, the 4 per cent EEC tariff on planed CLS (standard structural) lumber, the 20 per cent tariff in Korea, and significant tariffs on structural sizes in Australia.

The key factors in softwood lumber trade with the United States include:

- The U.S. and Canada are considered by the industry to jointly comprise a common duty-free market for almost all sizes and grades of softwood lumber. The Canadian industry holds a good competitive position in the U.S. which is enhanced by the favourable currency exchange rate. The recent U.S.I.T.C. report found that wood and labour costs are generally lower, that mills are somewhat more productive, and that the average lumber manufacturing cost in Canada is $8 (U.S.) per thousand board feet lower than in the U.S. This would represent about a 5 per cent differential.

- Canadian softwood lumber exporters are facing serious U.S. industry protectionist pressures.

  While the Canadian industry was successful in its defence during the U.S. countervailing duty investigation in 1983, the U.S. industry has continued to seek means to limit lumber imports from Canada. A second fact finding investigation was carried out under Section 332 of the U.S. Tariff Act in 1985. While the U.S.I.T.C. report does not appear to provide a basis for any change to the earlier finding, strong protectionist pressures have persisted and on May 19, 1986 a new countervailing duty petition was submitted and subsequently accepted by the U.S. Department of Commerce on June 6, 1986. Imports from Canada, currently amount to $3.7 billion.

- New U.S. standards on strength and physical performance of lumber are currently being developed.

  The Canadian industry's "in-grade" testing project is being coordinated with similar work in the U.S. and should ensure that Canadian lumber will meet the new standards when adopted.

In the EEC, major factors which impact on trade in softwood lumber include: a 4 per cent duty on planed (CLS) lumber whereas EFTA countries have duty free entry; the need for improved official acceptance within European building codes and product standards; some phytosanitary import regulations; and potential accelerated harvest of acid rain damaged forests in some EEC countries.

The key issues in lumber trade with Japan include: the 8 per cent (April 1, 1987) tariff on imports of planed whitewood (SPF); and lack of Japanese building code acceptance of platform frame construction for 3-storey apartment dwellings.

c) Technological Factors

During the 1970's, the Canadian industry achieved an international reputation for technological development with the high speed processing of small diameter logs which enabled increased throughput and improved productivity. More recently, technological development has tended to shift to the Scandinavian industry where advanced micro-electronics assisted processing equipment is being used more extensively than in Canada or the U.S. to optimize lumber yield and product value. While the Canadian and U.S. industries are similar, productivity in Canadian sawmills is considered to be somewhat higher.

At the present time, the industry is adapting existing technology in the face of increasing wood costs and intense competition. Emphasis is being placed on maximizing yield and product value from wood input, rather than the past thrust which has been directed primarily toward higher productivity. There is also considerable scope to achieve a higher degree of energy self sufficiency in the industry.

The industry is not limited by the availability of technology but rather by its financial capability to invest in the most modern equipment and systems.

d) Other Factors

The economic situation of the Canadian softwood lumber industry is governed largely by external supply and demand factors since some 73 per cent of total production is exported. The single most important lumber end-use application is North American housing which is sensitive to interest rate changes and tends to be highly cyclical.

3. Federal and Provincial Programs and Policies

Federal financial assistance has been available to the softwood lumber sector under a variety of programs including RDIP, EDP, IRDP, PEMD, COMDP, ENFOR and FIRE.

The Cooperative Overseas Market Development Program (COMDP) was established several years ago to diversify the market base of the wood products industry of B.C. through the development of offshore markets. The COMDP is jointly funded by the federal and B.C. governments and the provincial wood products industry. A tripartite agreement was entered into in 1985 to launch a similar 5-year activity for the Quebec industry. Offshore market development is expected to continue to be an important industry thrust.

The Forest Sector Advisory Council (FSAC) provides input to policy development on a range of issues. The Federal/Provincial Forest Industries Development Committee (FIDC) meets twice yearly to discuss forest industry related policy issues and programs at the federal and provincial government levels.

4. Evolving Environment

Private sector forecasts to 1990 indicate an average annual increase in lumber demand in North America of about 1.5 per cent, reflecting the outlook for new housing activity. These forecasts also suggest that, housing starts in both the U.S. and Canada will remain strong in 1986, 1987 and 1988. U.S. consumption is expected to peak in 1988 and then decline to 1983 levels by 1990. Forecasts beyond 1990 show a slower rate of growth than in the 1980's as demographic factors indicate a slowing in housing demand.

While softwood lumber is expected to remain cost competitive in relation to alternative construction materials, additional growth in demand will likely depend on new product development for increased industrial and non-residential construction use which appear to offer potential. There is also some potential for import replacement.

No major changes from current trends are anticipated in the key U.S. and overseas markets. In the longer run, China and Korea hold good potential for increased exports. Further development of traditional offshore markets and penetration of new markets are expected to continue as important industry objectives.

Resource supply parameters are changing and wood costs are rising and, consequently, there is a continuing need for industrial adaptation and modernization of production facilities to maximize material yield and product value. Increased supply potential will be realized through improved lumber yield and the use of less economically attractive resources. Investment in technically advanced equipment and processes, however, will likely take place at a slower pace than in the 1970's, due to financial constraints. Additional integration with the pulp and paper and other wood products sectors will likely take place to achieve further economies with improved material utilization.

Research and the application of new technology are expected to be ongoing. It is also likely that the level of industrial energy self sufficiency will continue to grow with the increased use of sawmill and forest waste. Over the longer term, a new generation of reconstituted and composite wood products for structural applications utilizing new manufacturing techniques could replace sawn lumber products to some degree. Also, the final outcome of "in-grade" testing research work in the U.S. and Canada could have a considerable bearing on residential structural design using lumber.

5. Competitiveness Assessment

While competitive positions vary, SPF structural lumber producers in most provinces have competitive delivered costs to most U.S. markets. SPF lumber is often preferred over Southern Yellow Pine for residential construction even in the U.S. South. The SPF producing regions generally have competitive manufacturing costs and are highly specialized to produce standard structural lumber sizes. Except for producers in western Canada, the SPF sector tends to have a high proportion of production in narrow widths and short lengths. Due to this fact as well as material characteristics, opportunities for product diversification and upgrading tend to be limited.

In offshore markets for structural lumber, SPF producers are generally competitive, but face tariff and non-tariff barriers such as lack of full acceptance of Canadian sizes and grades within building codes.

Given its valuable wood species, the B.C. Coast lumber industry is competitive in certain regional U.S. and in offshore markets such as the EEC and Japan in higher valued lumber items and remanufacturing grades. The region benefits from competitive waterborne transportation costs to the U.S. East Coast and overseas markets. While most B.C. Coast mills also produce standard structural lumber, they are generally less competitive than the SPF producers in these grades. Considerable potential exists for product upgrading within the B.C. Coast subsectors.

Prepared by: Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: June 9, 1986

FACT SHEET March 20, 1986

SOFTWOOD LUMBER SIC: 2512

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Establishments (e)	1,519	1,317	1,313	1,230	1,290	1,280	1,280
Employment (e)	60,000	63,000	60,000	50,000	55,000	55,000	56,000
Shipments ($ millions)(e)	2,327	4,794	4,621	4,033	5,504	5,900	6,600
(Softwood Lumber)	2,127	3,894	3,521	3,033	4,504	4,800	5,200
(Residues)	200	900	1,100	1,000	1,000	1,100	1,400
**Gross Domestic Product (Constant 1971-$ millions)	449	603	554	498	625	645	N/A
*Investment ($ millions)	277	544	509	336	391	473	462
***Profits After Tax ($ millions)	187	133	-28	-165	83	N/A	N/A
(% of income)	9.0	3.3	-0.8	-4.8	1.9	N/A	N/A

Figures shown represent percentages of sawmill and planing mill statistics *90%, **80%, ***100%
(e) estimated
Establishments: It should be noted that the inclusion of very small enterprises would at least double the number of establishments.

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Export ($ millions)	1,574	3,353	3,011	2,945	3,984	4,264	4,603
Domestic Shipments ($ millions)(e)	753	1,441	1,610	1,088	1,520	1,636	1,997
Imports ($ millions)	60	108	130	72	123	108	113
Canadian Market ($ millions)(e)	813	1,549	1,740	1,160	1,643	1,744	2,110
Exports as % of Shipments (Vol)	69	67	70	75	72	76	73
Imports as % of Domestic Market (vol)	6	5	6	5	6	5	5
Canadian Share of International Trade	38	46	47	46	50	N/A	N/A

Source of imports (top 4)	U.S.A.	E.E.C.	ASIA	OTHERS
1982	99	-	-	1
1983	99	1	-	-
1984	99	-	-	1
1985	99	-	-	1

Destination of exports (top 4)	U.S.A.	E.E.C.	ASIA	OTHERS
1982	77	8	10	5
1983	83	5	7	5
1984	84	5	7	4
1985	87	3	7	3

(e) estimated

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	19	31	18	6	26
Employment - % of total	4	22	10	7	57
Shipments - % of total	3	18	7	6	66

4. MAJOR FIRMS

	Ownership	Location Major Plant
1. Canfor Corp., Vancouver, B.C.	Public	B.C., Alberta
2. B.C. Forest Products Ltd., Vancouver, B.C.	Public	B.C., Alberta
3. MacMillan Bloedel Ltd., Vancouver, B.C.	Public	British Columbia
4. Noranda Forest Sales Inc., Toronto, Ontario	Public	British Columbia
5. Normick Perron Inc., La Sarre, Quebec	Public	Quebec, Ontario
6. Rexfor, Quebec, Quebec	Provincial	Quebec
7. J.D. Irving Ltd., St. John, N.B.	Private	New Brunswick

SIC: 2512: The Softwood Lumber and Planing Mill Industry also includes residual products such as: woodchips, sawdust and shavings, slabs, and hogged fuel. Wood chips are considered as a significant by-product and statistics such as value of shipments are shown separately as residues. The other by-products are of much lesser significance.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE

WOOD SHINGLES AND SHAKES

1. STRUCTURE AND PERFORMANCE

a) Structure

Shingles and shakes are premium residential roofing and siding products which are generally selected for their attractive appearance and expected long service life. Shingles are sawn from blocks of wood while most shakes are produced by first splitting very short (i.e. 18 inch, 24 inch) boards from blocks of wood and then diagonally sawing the boards to produce two tapered shakes each having one smooth face.

In 1985, about 3,800 workers in approximately 250 mills shipped $107 million worth of shingles and $166 million of shakes for a total of $273 million, representing about 2.5 per cent of Wood Industry shipments. Exports were $257 million, of which $254 million was shipped to the United States.

British Columbia contains about 90 per cent of the combined Canadian shingle and shake industry, representing around 75 per cent of the nation's shingle production and 100 per cent of shake production. About 94 per cent of 1985 British Columbia production was exported to the United States. California is the largest market for British Columbia shake producers, and it imported $42.3 million worth of shakes and $1.9 million worth of shingles in 1984. The largest market for B.C. shingles was Texas and Oklahoma, which imported $23.0 million of shingles and $9.5 million of shakes. Washington and Oregon were also very important markets, with imports of shingles and shakes reaching $16.3 million and $42.1 million respectively. Some of the shipments to Washington and Oregon were treated with fire retardants and sent on to other markets such as Texas and California. In total, these western U.S. markets accounted for 53 per cent of 1984 B.C. exports to the U.S. British Columbia also served significant markets in the U.S. northeast and southeast. Only about 1 per cent of British Columbia production is shipped to offshore markets.

During the 1970s and 1980s a significant structural change occurred in the industry in B.C. as many small mills opened and several major mills closed. Production is very labour intensive with limited economies of scale. Low capital cost and a ready supply of raw material has facilitated the establishment of many small mills. Production is distributed through many brokers and wholesalers in a free market where competition favours the lowest cost mill.

Quebec and New Brunswick account for about 6 per cent and 4 per cent of Canadian production respectively. The eastern Canadian industry is based on eastern white cedar which is smaller in size than the old growth western red cedar utilized in British Columbia. About 85 per cent of eastern Canadian production is shipped to nearby markets in the northeastern United States where it is used mainly as siding, unlike western red cedar shingles and shakes which are applied principally to roofs. Offshore shipments are less than 1 per cent of production.

b) Performance

Between 1973 and 1985, Canadian production of **shingles and shakes** increased by about 70 per cent by volume to around 5.0 million roof squares. However, this increase was mainly due to an almost 200 per cent increase in production of western red cedar **shakes**, which rose from about 990 thousand roof squares in 1973 to around 2.95 million in 1985. Manufacturing of B.C. western red cedar **shingles** fell slightly by about 6 per cent from 1.6 million squares to 1.5 million over the same period. In eastern Canada, production of **shingles** manufactured from eastern white cedar increased by over 50 per cent from about 350 thousand squares in 1973 to 530 thousand in 1985. While data is not on hand for U.S. production prior to 1978, the **shake and shingle** output by the U.S. industry during the period 1978 to 1984 declined by some 49 per cent

or 2.3 million squares, while Canadian output increased by about 27 per cent or about 1.0 million squares. Apparent consumption in the United States fell by about 19 per cent between 1978 and 1984. Canadian suppliers served about 70 per cent of the U.S. wood shingle and shake market in 1985.

The financial performance of the Canadian industry is extremely difficult to gauge accurately because most operations are small privately owned firms which do not publish financial reports. Statistics Canada does not report separate financial statistics for the shingle and shake industry but includes any data in a large category called "Wood Industries". In general, this industry appears fairly successful in terms of the position of the small mills, which have proliferated in recent years. However, large shingle and shake mills have faced severe competitive pressure and several have been permanently closed. Since 1972, six of the nine larger mills have closed permanently, and a seventh ceased production very recently.

2. STRENGTHS AND WEAKNESSES

a) Structural Factors

Canada is the world's largest producer of wood shingles and shakes. Mills in Canada and the United States vary widely in size, employing between a few and over 70 workers. In general, Canadian mills appear to be on average just slightly larger than their U.S. competitors, reflecting perhaps the larger resource accessible by many Canadian mills.

Over 40 per cent of the cost of production is accounted for by the cost of wood. The North American industry relies heavily on supplies of old growth western red cedar as its primary raw material. About 80 per cent of the continent's western red cedar resource is located in British Columbia, giving the provincial industry a comparative advantage. The primary raw material used by the eastern Canadian industry is eastern white cedar which is in good supply and converts into a different coloured product than is the case with western red cedar. The industry in the United States, where over 93 per cent of Canadian production is marketed, is facing severe difficulties concerning raw material (western red cedar) quantity and quality. Canadian shingles and shakes are often of better quality and consequently sell at higher prices than those produced in the United States, reflecting these resource differences.

A good supply of labour is available to Canadian producers. A shingle or shake sawyer can be trained in a relatively short period of time. The piecework rate or wage rate is sufficiently high to attract suitable personnel.

Both the U.S. and B.C. industries are distant from their major markets in Texas and California. About two thirds of exports to the United States are transported by truck. Some exports act as a backhaul for fruit and vegetables brought north to British Columbia, thereby offsetting somewhat the transportation cost burden.

Manufacturers of concrete tile and asphalt shingles have introduced new products designed to mimic the appearance of cedar shingles and shakes, and due to these products' inherent resistance to fire and in many cases lower cost, increased competition for Canadian shingle and shake producers has resulted.

b) Trade Related Factors

Following a petition by the U.S. cedar shingle and shake industry for protection from imports, and an investigation by the U.S. International Trade Commission, the President of the United States imposed a 35 per cent tariff on western red cedar shingle and shake imports, which took effect June 6, 1986 for a 30-month period. The tariff will then fall to 20 per cent for the next 24 months and to 8 per cent for a final 6 months.

After this 5-year period the tariff is scheduled to be zero. Western red cedar is found in British Columbia and the northwestern United States. This tariff does not apply to the eastern white cedar shingles produced in eastern Canada.

Some cities in the United States, especially in Texas and California, have restricted the use of wood roofing due to concerns regarding fire hazard. These restrictions have been increasingly adopted by other communities. The increase in cost necessary to produce and install fire retardant treated wooden shingles and shakes has given other forms of roofing an opportunity to increase sales.

In the United Kingdom the shingle and shake roofing market is restricted by the building code. In other countries of the EEC, building codes and fire regulations do not affect the use of shingles and shakes. In Australia, code restrictions limit the market. New Zealand is the only significant offshore market where shingle and shake imports are potentially restricted by a duty which would become applicable if total imports exceed a specified value.

c) Technological Factors

Production technology in the shingle industry was developed in the 1920s and relatively few significant changes have occurred in the last several decades. While shake production technology changed very little for many decades, in recent years developments such as hydraulic splitters and automated resaw guides have been adopted. The Canadian industry has more rapidly implemented this new shake technology than its American competitors.

Research undertaken on matters such as exterior fire retardants and wood preservatives will be important to the industry in attempting to maintain its market share in the face of competitive materials. The research done in this area is largely undertaken by the chemical industry rather than the shingle and shake industry.

While much of production is shipped green in strapped bundles, some Canadian producers have developed more sophisticated products. For example, some mills manufacture kiln dried shingles which have been sanded or grooved and sprayed with a base coat of paint and packed in boxes.

d) Other Factors

Wood shingles and shakes are manufactured in many countries. However, in many countries these products are mainly associated with providing minimal standards of shelter in rural areas, and more expensive homes are usually built using concrete. Therefore, market acceptance of Canadian shingles and shakes as a premium product in some developed and developing countries is very limited. In other markets where increased sales appear possible, a very substantial promotional program would be required to increase the awareness of architects, builders and consumers.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

Federal financial assistance has been available to the industry under a variety of programs such as the Industrial and Regional Development Program. Provincial policies concerning maximizing the yield of the resource generally require the harvesting of low grade western red cedar logs which can then be processed by shingle and shake producers. This results in a good supply of raw material to the industry.

The Forest Sector Advisory Committee (FSAC) provides the federal government with input to policy development on a range of issues. The Federal/Provincial Forest Industries Development Committee (FIDC) meets twice yearly to discuss forest industry related policy issues and programs at the federal and provincial government levels.

4. EVOLVING ENVIRONMENT

During the period of adjustment to the new 35 per cent tariff on western red cedar exports to the United States, markets are expected to increasingly draw on U.S. production. However, since it is acknowledged by the U.S. government that the U.S. industry has only about 20 years of suitable western red cedar available and that supply is very unresponsive to price increases, the U.S. producers who can increase production are quite limited. However, other products such as fiberglass roofing material having the appearance of cedar may increase their market share.

The trend toward limiting the use of wood shingles and shakes in residential roofing because of fire concerns is expected to continue.

Since the optimal raw material is from a western red cedar tree over 200 to 300 years old, this industry is processing an essentially non-renewable resource. Some of the raw material processed by the B.C. industry is old growth salvage cedar which was left in the forest during past logging operations because very weak demand existed at that time for this low grade material. In the very long term (over 50 years), much of the salvage and other old growth cedar which can be economically harvested is expected to have been extracted and processed, and the industry will be forced to adjust to a sharply reduced supply of old growth timber. The U.S. industry is in the process of adjusting to a reduced resource supply at the present time.

It is understood that sufficient resource is available to support some small expansion of the eastern Canadian industry.

5. COMPETITIVENESS ASSESSMENT

The 35 per cent tariff on western red cedar shingle and shake imports into the United States which came into effect on June 6, 1986, for 30 months, has affected the competitive position of Canadian producers compared to their U.S. competitors. The higher cedar shingle and shake prices caused by this tariff will give U.S. producers of cedar shingles and shakes and producers of competing products (e.g. fiberglass, concrete, aluminum products) an opportunity to increase their share of the total roofing and siding market. However, the U.S. western red cedar resource supply is very inelastic and as a consequence, even with the 35 per cent tariff, Canadian supplies are expected to be required. By 1991, the tariff is scheduled to fall to zero.

The tariff imposed by the U.S. government does not apply to eastern white cedar shingles and this industry may gain some small advantage as a result. However, eastern white cedar shingles are used mainly as siding and have not competed to a major degree with western red cedar products in the latters' key roofing markets. The eastern Canadian industry is expected to continue to dominate markets for eastern white cedar shingles.

Over the next decade, markets in the United States are expected to become increasingly competitive as building code requirements for fire retardant shingles and shakes may be adopted by more jurisdictions. Current systems for treating shingles and shakes with fire retardants sharply increase the cost of the finished product, and provide a competitive advantage to alternative materials.

To date, offshore markets have not consumed a significant portion of the industry's output. This results, at least in part, from such factors as building code restrictions and a preference by architects and builders for traditional roofing materials.

It should be noted that accurate statistics and published reports concerning this industry are generally not available, and as a result this profile has been based on information obtained from a wide range of sources and considerable judgement has been necessary.

Prepared by: Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: 25.6.86

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: WOOD SHINGLE AND SHAKE SECTOR SIC(s) COVERED: 2511 *

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Establishments	130	210	230	200	240	250	250
Employment	2,300	2,900	2,700	2,700	3,400	3,700	3,800
Shipments ($ million)	88	193	183	170	249	280	273
Gross Domestic Product (Constant 1971-$ millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Investment ($ millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Profits After Tax ($ millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Exports ($ million)	80	179	170	156	232	265	257
Domestic Shipments ($ millions)	8	14	13	14	17	15	16
Imports ($ millions)	N/A	1	1	1	2	2	3
Canadian Market ($ millions)	9	15	14	15	19	17	19
Exports as % of Shipments	91	93	93	92	93	94	94
Imports as % of Domestic Market	N/A	7	8	7	12	13	19
Canadian Share of International Trade	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source of imports (top 4)	U.S.A.	E.E.C.	ASIA	OTHERS
1981	100	-	-	-
1982	100	-	-	-
1983	100	-	-	-
1984	100	-	-	-
1985	100	-	-	-

Destination of exports (top 4)	U.S.A.	E.E.C.	ASIA	OTHERS
1981	98	2	-	-
1982	98	2	-	-
1983	98	2	-	-
1984	98	2	-	-
1985	99	1	-	-

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % Total	8	25	-	-	67
Employment - % Total	4	6	-	-	90
Shipments - % Total	4	6	-	-	90

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants	Concentration (% of Domestic Market)
1. Anglo-American Cedar Products Ltd.	Private	British Columbia	N/A
2. Canfor Corporation	Public	Vancouver, British Columbia	N/A
3. Sovebec Inc.	Private	Quebec	N/A
4. Maibec Industries Inc.	Private	Quebec	N/A

*SIC on 1980 basis

COMPETITIVENESS PROFILE
Name of Sector: Sound Recordings

1. Structure and Performance

a) Structure

The industry is composed of establishments engaged in the creative production and the physical manufacturing of discs and pre-recorded audio tapes (referred to collectively as sound recordings). Production establishments are generally responsible for researching artists and song materials, renting recording studio facilities, making arrangements for the manufacturing of sound recordings, and finally marketing the artists and their products. Manufacturing plants perform the pressing of discs and the duplicating of tapes for production establishments. Excluded from this profile are wholesaling and retailing, sound recording studios and artist/musician activities other than the production of sound recordings, although their impact on producers will be reviewed, where appropriate.

In 1985, the Canadian industry comprised an estimated 110 companies (of which only 12 were engaged in manufacturing), employing about 3,000 people (of which 1,500 in manufacturing) on a permanent basis with shipments of sound recordings totalling $300 million. Sound recordings of an entertainment nature accounted for about 90 per cent of industry's shipments. The balance was composed essentially of educational and religious products. English-language sound recordings accounted for about 85 per cent of all shipments. Finally the industry is a major employer of freelancers (primarily musicians).

Only about 15 per cent of the sound recordings shipped by the industry in 1985 contained indigenous (Canadian) music. The remaining releases were manufactured in Canada from imported "master" tapes (copies of original tapes produced in the recording studio and which, through a number of intermediate steps, are used in the pressing/duplicating of sound recordings).

The industry is located primarily in Central Canada, especially in the Toronto and Montreal Metropolitan Areas.

In 1985, ten of the 110 companies were foreign-owned, primarily by American multinationals. Together they accounted for roughly 60 per cent of industry's employment and 85 per cent of all shipments of sound recordings. Four of these firms had manufacturing departments. Sound recordings derived from "master" tapes imported from their parent organizations generated about $230 million, representing 90 percent of their shipments. Production of indigenous talent accounted for the balance. The companies tend to be vertically integrated downstream; they generated an estimated $150 million in wholesaling/retailing activities in 1985.

In contrast, most Canadian-owned firms are small. Most of them also handle sound recordings derived from "master" tapes imported from companies for which they act as agents. This agency business generated $22 million in 1985, representing about 50 per cent of their total sales. In addition to being an important source of cash-flow to finance indigenous music, agency business provides the additional volume of business required for establishing certain in-house support functions within the company. Finally, the firms frequently have to turn to the foreign-owned companies for the physical distribution of their products which they are unable to afford on their own.

The French-language Canadian-owned segment consists of about 25 companies with sales estimated at between $10-20 million. Average company size is smaller in the French-language segment in comparison to its English-language counterpart, while the foreign ownership level is less extensive. French-language firms do not rely as much on imported "master" tapes as a source of revenue and their output is more concentrated in adult-oriented music as opposed to rock-oriented music.

b) Performance

Industry's volume and value of shipments during the period 1973-79 expanded at annual average growth rates of 11 and 20 per cent (in current dollars) respectively. Since then, the industry's performance has been rather poor. Volume and value of shipments in 1985 were respectively about 15 and 1 per cent below the record levels attained in 1979. Apart from the effects of the recession, this is due in some measure to the aging of the population. In addition, the potential market for sound recordings has been eroded increasingly in the last few years by home taping. Finally, pirating (i.e. the illegal duplication and sale of products), while not as severe in Canada as in some other countries, has nonetheless adversely affected legitimate sales.

Between 1973 and 1985, in response to consumer preferences, audio tapes increased their share of industry's shipments from 30 to 54 per cent in dollar terms. Overall, the share of industry's sales taken by Canadian musical content recordings has fluctuated widely during the period under review. In the past few years, there has been a significant decline in the area of French-language Canadian musical content recordings.

Similar patterns in terms of overall shipments and product shares over the period 1973-1985 occurred in the United States and other developed countries.

Reflecting the combined effects of freight and tariff barriers and the nature of the products, international trade in this field tends to be in the form of "master" tapes to which are associated license payments for their use in manufacturing sound recordings. Exports and imports of sound recordings are limited to deleted products (goods no longer in popular demand and sold at substantially reduced prices) and new items for which demand is not sufficiently large to justify local manufacturing from imported "master" tapes. The Canadian industry has generated an estimated average of $5 million annually from the leasing of "master" tapes to foreign accounts over the last few years. The outflow of payments has averaged $35 million annually. Canada's trade in this field is conducted primarily with the United States.

The most recent information compiled by Statistics Canada based on revenue from all sources (including retailing) indicates that the foreign-controlled firms reported an average after-tax profit on sales of 4 per cent in 1983 while the Canadian-controlled firms registered an average loss of 2 per cent.

Rapid product obsolescence and constantly changing consumer preferences make investment in sound recording production a high risk undertaking. It is understood that only one in fifteen releases recovers its costs. However, those that do succeed can earn high rates of return.

2. Strengths and Weaknesses

a) Structural Factors

In this industry, manufacturing is a secondary factor in determining the level of international competitiveness. More important is the "musical content" factor which is associated with the production segment of the industry. In essence, production firms are engaged in discovering, developing and marketing artists and their song materials.

There is a significant disparity in the capabilities of the Canadian and American sound recording industries to develop and market their respective talent pool successfully on a sustained basis. For example, the largest Canadian-owned and foreign-owned firms in Canada reported revenue from all sources of Cdn $22 million and $90 million respectively in 1985, compared to worldwide revenues of U.S. $1.3 billion for the major American multinational.

Because of their size and inherent economic advantages, which in turn is a reflection of their market base, the multinationals and their subsidiaries in Canada are able to lure away the best musical artists and represent a large number of artists in order to spread their risks. In particular, they have the ability to attract artists that have been uncovered and developed by Canadian-owned firms, as soon as they reach national stardom. In addition, they can mount extensive marketing campaigns and are able to dominate distribution channels.

Overall, the Canadian-owned segment of the industry is subject to the weaknesses usually associated with small scale. Most companies suffer chronic underfinancing. They lack the necessary human and financial resources to take full advantage of market opportunities at home and abroad. Finally, management ranks are quite thin. The impact of these weaknesses is particularly noticeable in French-language Canada, given the small size of the market base.

The United States dominates world production and distribution of sound recordings. Even in countries such as the United Kingdom and France which have large internal markets and are able to support several major domestically-owned companies, the American presence is significant, albeit less pervasive than in Canada.

b) Trade Related Factors

Canada, like most countries, provides duty-free entry to sound recordings of an educational, scientific and cultural character. On the other hand, "master" tapes and pre-recorded audio tapes of an entertainment nature are subject to a Canadian M.F.N. tariff rate of 12.4 per cent while discs are dutiable at 15.0 per cent. The rates will be 11.3 per cent and 13.7 per cent respectively in 1987. However, in the case of "master" tapes, the tariff is computed only on the reproduction costs. Therefore, the effective rate is lower than what might be expected.

In the United States, the tariff rates currently are 3.9 per cent for discs and 0.9 cent per square foot of recording surface for pre-recorded tapes. The rate for discs will fall to 3.7 per cent in 1987. By way of comparison, tariff rates in the E.E.C. fall between the Canadian and American rates.

The Canadian musical content regulation for radio stations is considered as a non-tariff measure by the United States. Many E.E.C. members have minimum requirements in terms of domestic musical content or languages. The United States is not protected by non-tariff measures.

c) Technological Factors

The sound recordings industry, worldwide, relies on suppliers of machinery and equipment to originate technological developments. Manufacturing technologies are available on a worldwide basis. The Canadian industry has kept pace with its counterparts elsewhere in the world in modernizing its manufacturing facilities.

At the product level, the most significant development in the last decade has been the introduction of compact discs. This disc and its player were developed jointly by Philips and Sony. Commercial manufacturing of this disc started in 1982 in W. Germany and Japan. Full-scale manufacturing in Canada began in mid 1986.

3. Federal and Provincial Programs and Policies

Federal government involvement in the sound recording field is relatively modest, compared to the publishing and motion picture industries. The prime objective of federal assistance has been to support the development of a Canadian culture by providing a medium in which Canadian musical artists and creators could flourish.

The principal measure currently in place relates to the use of Canadian music on radio. The Canadian Radio-Television and Telecommunications Commission requires that at least 30 per cent of the musical compositions broadcast by AM stations or network operators between the hours of 6 a.m. and 12 midnight shall be by a Canadian and shall be scheduled in a reasonable manner throughout such period. For FM stations, the percentage varies from 7 per cent for classical music to 30 per cent for popular music. It is generally agreed that the requirements have had a positive impact on the production of Canadian music. Radio airplay and music videos are the two most influential factors in the consumer decision to purchase a sound recording.

In May 1986, the Department of Communications announced a series of new initiatives to assist the industry, at a cost of $5 million annually over a five year period beginning in 1986-87. In particular, the government will provide financial assistance for increasing the production of "master" tapes and music videos, for improving the professional skills of employees and for expanding marketing activities in Canada and abroad. Disbursement of funds is expected to commence in Fall 1986. In addition, we understand the Department of Communications will be examining ways to facilitate access to debt and equity financing.

Copyright legislation is in place in most countries to protect creators against illegal use of their works. The Canadian Copyright Act came into force in 1924 and no major revisions have since been made. Drafting of new legislation is expected to commence in 1986. In comparison, the copyright law in the United States was completely revamped in the late-70's. In particular, it provides better protection against pirating of sound recordings through higher penalties.

Several provincial governments, notably Quebec and Ontario, support the sound recordings industry, notably through grants and contributions to trade associations to undertake special promotional projects.

4. Evolving Environment

Market demand for sound recordings in Canada is projected to grow at a slow rate in coming years. This reflects slower growth rates for both the population and real personal disposable income, the aging of the population and strong competition between leisure products for a share of the consumer's time and money. Finally, the potential market should continue to be eroded increasingly by home taping. Within the sound recordings market, it is expected that pre-recorded audio tapes and compact discs should continue to increase their shares of the market at the expense of singles and albums.

No dramatic changes in the industry's structures are envisaged over the medium term. The larger firms, notably the foreign-owned companies, should continue to dominate the Canadian scene. The smaller Canadian-owned firms, notably those restricted to servicing the Francophone market, will find it increasingly difficult to adjust to slower market growth. Over the medium term, it is anticipated that suppliers of machinery and equipment for the sound recording industry will concentrate their efforts at ameliorating existing technologies, notably in the compact disc area, as opposed to developing new technologies.

In response to the significant domination of American multinational corporations in this field, governments in many developed countries have established measures to protect and assist their domestic industries. For example, a number of European countries have recently introduced a tax on blank audio tapes and home recording equipment, the proceeds of which are used to support creators and producers of sound recordings. Government intervention is expected to continue over the medium term.

5. Competitiveness Assessment

Industry competitiveness relates essentially to the production activity of attracting and marketing artists and song materials with mass appeal, rather than to the manufacturing activity. In the production area, Canadian-owned firms, as a group, are not currently competitive. They suffer significant size-related economic disadvantages vis-à-vis the branch plants in Canada and their parent companies. They are able to survive largely as a result of the Canadian musical content requirements for radio, and by acting as agents for foreign producers of sound recordings.

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DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

DATE: JUL 11 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: SOUND RECORDINGS SIC(s) COVERED: part of 3994 and part of 9631 (1980)

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Companies (E)	75	100	110	118	111	110	110
Employment (E)	1,750	2,900	3,000	2,200	2,600	3,000	3,000
Shipments ($millions) (1)	105	270	291	241	273	294	300
(million units)	54	85	86	69	79	83	80
Gross Domestic Product (constant 1971 $millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Investment ($millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Profits After Tax ($millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(% of income)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985
Exports ($millions) (1)	2	25	25	13	8	8	8
Domestic Shipments ($millions)	103	245	266	228	265	286	292
Imports ($millions) (1)	7	29	30	29	28	33	35
Canadian Market ($millions)	110	275	296	257	293	319	327
Exports as % of Shipments	1.5	9.3	8.5	5.4	3.0	2.6	2.8
Imports as % of Domestic Market	6.3	10.7	10.1	11.3	9.6	10.3	10.7
Canadian Share of International Market	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source of imports (%)

	U.S.	E.E.C.	ASIA	OTHERS
1981	76.8	18.6	3.2	1.4
1982	74.4	20.3	4.0	1.3
1983	65.2	29.3	3.2	2.3
1984	62.2	32.0	3.4	2.4
1985	53.3	40.9	3.1	2.7

Destination of exports (%)

1981	34.8	33.1	0.4	31.7
1982	59.6	12.8	0.4	27.2
1983	69.3	12.4	0.1	18.2
1984	71.9	7.2	0.1	20.8
1985	46.9	6.6	0.1	46.5

3. REGIONAL DISTRIBUTION - 3 yr avg.

	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
Companies - % of Total	1	34	55	5	5
Employment - % of Total	1	18	75	3	3
Shipments - % of Total	1	22	70	3	4

4. MAJOR FIRMS

	OWNERSHIP	LOCATION OF MAJOR PLANTS
1. CBS Records (Canada) Ltd	American	Don Mills
2. WEA Music of Canada Ltd.	American	Scarborough
3. Capitol Records - EMI of Canada Ltd.	American	Mississauga
4. MCA Records (Canada) Ltd.	American	Willowdale

(E): Estimate
N/A: Not available
(1): Covers products only, excludes license payments.

DATE: _____

COMPETITIVENESS PROFILE
Sporting Goods Industry

1) STRUCTURE AND PERFORMANCE

a) Structure

The industry is composed of establishments primarily engaged in manufacturing a broad range of consumer goods for individual and group recreational and fitness activities.

Manufacturing activity can be roughly divided according to the seasonal activity for which the products are produced. For instance summer sports equipment (baseball, football, golf, fishing, bicycles, swimming pools) represents about 44% of domestic manufacturers' shipments, winter sports equipment (skates, hockey equipment, snowshoes, skis) about 29%, all seasons equipment (fitness, gym, playstructures) about 10%, and the remaining 17% is comprised of miscellaneous products and products of small establishments not reporting detail. Excluded are such items as camping equipment, sporting firearms and ammunition, sport tape, skate sharpeners, athletic footwear and jerseys. The individual products representing the greatest manufacturing activity within Canada are bicycles, ice skates and hockey equipment, and swimming pools.

The technologies and processes utilized by manufacturers cover a wide spectrum. The major processes include steel fabricating (bicycles, playground and exercise equipment), plastic and fibreglass moulding (skis, sticks, skates), woodworking (sticks, bats) and cut and sew operations (protective equipment). Noteworthy structural developments occuring during the last decade and now part of an on-going process are the technological advances made in the use of laminates, resins, and state-of-the-art textile materials to produce improved and more durable sports equipment. Materials such as graphite, boron, ceramics and various composites are being introduced in a wide range of products.

Although this industry is more labour intensive than the average Canadian manufacturing industry there is a definite trend towards greater productivity. From 1973 to 1985 real value of shipments per employee rose by almost 40%. In general, labour intensiveness in the sporting goods industry worldwide is still quite high.

In 1985 the industry was composed of an estimated 205 establishments employing 7,400 people with shipments of $545.0 million. Firms employing over 100 represent 8% of establishments and over 60% of employment and shipments whereas firms employing less than 20 account for 67% of establishments, approximately 10% of employment and shipments, and generally specialize in a narrow product range. The six largest manufacturers accounting for an estimated 40% of employment and shipments are located in Ontario and Quebec. These provinces are the site of 73% of the establishments and about 95% of employment and shipments. In addition, the industry has a high degree of private ownership and domestic control.

In general, sporting goods production is characterized by a high degree of country or region product identification and manufacturing specialization. For example, Finland is noted for cross-country ski manufacturing, Austria/France for alpine skis, USA for golf, tennis and baseball, Canada for skating and ice hockey equipment.

Trade is important to the industry. Although the total value of imports represents about 46% of the domestic market a substantial portion is composed of parts and material required for final operation in Canada. While this has little effect on the ice sports and swimming pool manufacturing activity, imported parts and components are necessary for final assembly of bicycles, golf, exercise and fishing equipment.

In addition to supplying much of the domestic market with finished products the sporting goods industry has developed a strong export image in selected product groups such as ice sports, swimming pools and gymnasium and exercise equipment. Exports currently represent about 19%

of industry shipments. The USA absorbed 78% of Canada's exports in 1985 followed by the EEC with 10%.

The ice sports products in particular are most closely associated internationally with the Canadian industry. Accounting for about 35% of total exports its major market is the USA followed by Western Europe. The gymnasium, exercise and playground products represent 15%-20% of exports and are more broadly dispersed. Swimming pools and accessories, accounting for roughly $14.0 million in exports, are shipped almost exclusively to Northern USA.

In the last few years newly industrialized countries (NICs) and centrally planned economies have increased their share of international trade in sporting goods. The Canadian ice sports products especially are encountering stiffer pressure in their traditional overseas markets.

The structure of the U.S. industry, Canada's major trading partner and competitor, is very similar to that of the Canadian industry.

b) Performance

Although there is no pronounced cyclical pattern to the industry it is extremely sensitive to economic conditions, interest rates and personal disposable income. Thus during the recession of 1981/82 industry shipments in real terms fell 14%. All sporting goods sectors were affected especially those firms producing cross-country skis and bicycles. Subsequently, as the economy recovered so did the industry.

During the 1973-80 period, employment remained virtually unchanged at just under 7,500 people. In real terms, shipments increased at an average annual rate of 4.0% while imports fell by 1.9% and exports increased by 2.8%. However in the recent 1980-85 period employment has fallen slightly to 7,400 people, shipments have grown by an annual compound rate of only 1.0%, imports have increased by a rate of 3.3% but exports have fallen by 4.1%. This slower growth rate for shipments and the decline in exports can be explained to a great extent by the effects of the 1981 recession, product saturation in the Canadian market of several major products notably ice sports products, and increased competition encountered in the European markets for hockey skates and hockey equipment. Imports have been aided by the increased popularity of such activities as skiing, soccer, golfing, exercise and fitness in which the Canadian supply capability is either limited or highly dependent on imported parts and components.

Although the import share has fallen to 45.7% of domestic shipments from 55.6% in 1973 it has remained relatively constant since 1980. The shifting of more sourcing from the USA to the Far East constitutes the major change occurring in recent years.

In 1985, the export share of shipments had fallen to about 19% from 26% in 1973. A major factor affecting this decline has been the falling export market share of the industry's most exportable products - skates and hockey equipment. In 1973 this product category accounted for 70% of industry exports versus the current 35%. Within the last five years competitive pressures from Czechoslovakia, Finland and Taiwan, an appreciated Canadian dollar versus European currencies, and maturing markets have hurt exports of skates and hockey equipment. The exports of the industry's other products have not increased rapidly enough to compensate for this decline. The USA is Canada's major export market ranging from 79% of total exports in 1973 to 57% in 1981 and to 78% in 1985. Conversely exports to Western Europe have varied from 12% in 1973 to 25% in 1981 to 14% in 1985 with the EEC market representing bulk of these exports.

A financial analysis of the industry is difficult since the financial statistics for both the Toy and Game Industry and Sporting Goods Industry are combined into one grouping by Statistics Canada.

2) STRENGTHS AND WEAKNESSES

a) Structural

The industry includes 6 large vertically integrated companies which are internationally competitive in the manufacturing and distribution of sports equipment. Many of the smaller units specialize in one product area, serve a particular market niche but do not operate at an efficient scale. As well they are susceptible to both seasonal and market trends. Most of these smaller establishments are privately owned and family operated with many being subject to the constraints of restricted financial resources. There is limited depth in management, administrative and marketing functions.

An important factor affecting the ability of the industry to compete is the consumer demand for brand name products. In many sectors Canadian industry has an excellent product but suffers because it has not yet established a widely known name e.g. swimming accessories, fitness and golf equipment.

Although the Canadian industry substantially reduced the labour intensiveness of its manufacturing process between 1973-85, sporting goods still remains a labour intensive industry. For example, shipments per employee of sporting goods is only about 55% of the average for all Canadian Manufacturing industries. Although the industry will continue to be under cost pressure from NICs and LDCs it has made efforts to be more competitive by moving the production and sourcing of many labour intensive, low cost items to offshore suppliers. However the product mix of the industry will still continue to make major segments of it vulnerable to low wage producers.

In comparison with the U.S. sporting goods industry, shipments per employee are over 25% lower than those of the U.S. industry. In part this can be explained by better economies of scale and also the influence of the major products composing a significant portion of each country's industry. In Canada, hockey equipment characterized by cut and sew operations and bicycles which reflect a high degree of assembly operations are major components of the industry whereas the U.S. industry is influenced by the more capital intensive golf and exercise equipment manufacturing operations requiring greater economies of scale.

Rapidly increasing premium costs for product liability insurance is of concern to many North American manufacturers. It is especially relevant to the Canadian industry in comparison to other countries because Canada's volume is in the more costly insurance premium categories for fitness, gymnastic and hockey protective equipment which represents a significant portion of the industry's domestic and export shipments. These premium rate increases are already having an effect on the Canadian industry's cost structure. In addition, because of proximity to market and the fact that the North American market is invariably the major market for Canadian and U.S. suppliers this extra cost affects them more than off-shore producers.

b) Trade Related Factors

Total imports represent about 46% of the domestic market. An estimated 1/3 of imports enter duty free at the MFN or GPT level with parts and accessories representing the major portion. Snow skis, golf equipment/ parts and bicycles/parts represent almost one half of total imports. Canadian tariff rates on finished sporting goods range between 4%-23% and in general are significantly higher than comparable U.S. & E.E.C. tariffs. For example, a selection of products important to the sector indicate Canadian MFN rates of 22.8% (ice skates), 19.1% (bicycles), 12.5% (skis and golf clubs), 9.9% (exercise equipment) and 4.1% (hockey sticks). In comparison U.S. rates for these products are between 4-6% with the exception of bicycles at 11% and hockey sticks at less than 1%. The E.E.C. rate is 6% except for bicycles at 17%. However, it should also be noted that many sporting goods parts and components enter Canada duty free whereas many similar parts entering the USA are subject to duty. The importation of duty free parts and components has had a significant effect on the bicycle, golf equipment and fishing tackle

manufacturers many of whom are heavily engaged in assembly operations. The USA continues to be Canada's single major source of imported sports equipment.

There are no significant non-tariff measures affecting Canada's trade in sporting goods.

c) Technological Factors

In product technology the Canadian industry has been quite advanced and innovative in ice sports, swimming pools, and fitness equipment. The larger firms producing this equipment have kept pace with their counterparts elsewhere in the world in modernizing their facilities and upgrading their products.

In addition, investment has been made in developing new technology or adapting existing technology from the chemical and resource processing industries to improve current products. Several companies have instituted sophisticated inventory and cost control systems to improve production efficiency. Even the large bicycle manufacturing firms, under stiff cost pressures from the Far East, have recently introduced greater automation and cost improvement programs into their operations.

During the 1973-85 period most major innovative features introduced in skating and hockey equipment, except for the Finnish multi-ply hockey stick, originated with the Canadian industry. It was in the forefront of product innovation and technological improvement with the introduction of the hockey helmet, moulded skate, stainless steel skate blade, and improved protective equipment.

Conversely, many of the other products which are characterized by small production units tend to lag behind or duplicate their competitor's technology.

3) FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

There are no sector specific programs, either federally or provincially, for the sporting goods industry. However federal programs such as IRDP, PEMD and PPP have been used by the industry to maintain an internationally competitive stance. In most instances these federal programs have been complemented by provincial activities such as the organization of trade missions, participation in foreign trade fairs and the development and dissemination of product sourcing directories.

4) EVOLVING ENVIRONMENT

The Canadian industry is being influenced by several major forces which will affect its future direction:

It is expected that there will be an ever-increasing concentration of shipments by the major manufacturers and smaller firms will find it increasingly difficult to adjust to more vigorous competition from within the industry and from other leisure products which compete for consumers' income. In addition, these major manufacturers will continue to develop larger and more sophisticated distribution networks domestically and internationally to sell not only their own manufactured products but also those supplied by foreign manufacturers and the smaller Canadian manufacturers.

The recent emphasis on personal fitness and family recreational activities is expected to sustain growth and popularity in these types of activities at the expense of individual and team sports growth. Also, there has been a virtual disappearance of male-female differences in time spent on physical activities during leisure hours. Not only has increased female participation helped to increase overall participation in many recreational and sporting activities but also it has helped to popularize newer activities resulting in an increased need for either currently available or new equipment.

As the "baby boomers" age, this group is causing major effects on individual and team recreational activities geared towards an adult population interested less in intense competition but more in a fitness

and recreational enjoyment lifestyle. With this aging comes increased responsibilities and a more acute awareness of strains and the danger of injury. A manifestation of this total process is the purchasing of better quality, longer lasting equipment and an increased concern for greater protection and higher performance.

Product liability lawsuits are increasing in North America. In particular, gymnasium and protective equipment manufacturers are not only encountering time consuming and costly litigation but are also having increasing difficulty in obtaining product liability insurance at reasonable rates. In the USA the Sporting Goods Manufacturers of America (SGMA) is lobbying for legislature limits to liability premiums and awards. Nonetheless, this problem is expected to continue, at least in the near future, and result in increasing costs to both manufacturer and consumer.

In all its major international markets, the industry can expect greater competition in skating and hockey equipment which even now is encountering strong international competition from Finland, Czechoslovakia and the Far East. To maintain their competitive position some industry members have initiated joint ventures, licensing, and the establishment of overseas subsidiaries. In addition, other tactics the Canadian industry is implementing include the final assembly/packaging of Canadian products by European distributors and direct shipments of Canadian branded products from Far East contractors to Europe to compete with Czechoslovakian and Far East brands. Conversely, there is a trend by U.S. companies to have products assembled or produced under license in Canada to overcome some of the effect of high duties and the costly U.S. exchange rate on finished U.S. products shipped directly to Canada. A strong export pattern is developing with the U.S. while Canadian exports to Europe are assuming less prominence.

The last decade has seen a rapid and continuing introduction of new and more sophisticated sporting goods worldwide along with the development of improved raw materials and machinery required for the production of these goods. This trend is expected to continue.

5) COMPETITIVENESS ASSESSMENT

Several major firms are competitive with their international counterparts, while some smaller companies have established market niches in supplying specialized items such as skate blades, ski locks, stick shafts, etc. However it will become increasingly difficult for all firms to match in price the products from low cost and centrally planned economies. Given the high labour content of many products the Canadian industry has moved towards sourcing parts from low wage countries.

Import penetration of the Canadian market continues well above 40%. Certain segments such as bicycles, fishing tackle, and more recently some types of exercise equipment are under severe cost pressure from Taiwan and South Korea. In ice skates further pressure is expected from Eastern European and Taiwanese producers in the European markets.

Currently there are several relatively strong export sectors. In particular the ice sports sector, representing 35% of total exports, is selling into primarily mature markets which tend to be restricted by climatic conditions and rink facilities. Any significant export growth is expected to be achieved in greater sales to the U.S. market. Of the remaining 65% of exports, approximately 15%-20% is gymnasium, exercise and playground equipment. This market is growing rapidly and Canadian domestic and export growth is expected to continue.

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Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

DATE: JUL 30 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: SPORTING GOODS SIC(s) COVERED: 3931

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985(E)
Establishments	146	196	195	185	177	202	205
Employment	7,486	7,461	7,325	6,450	6,734	7,341	7,400
Shipments ($millions)	139.2	398.9	465.5	424.4	452.5	534.3	545.0
Gross Domestic Product (constant 1971 $millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Investment ($millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Profits After Taxes ($millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(% of income)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985(E)
Exports ($millions)	36.2	95.7	102.0	94.4	82.0	101.3	101.2
Domestic Shipments ($millions)	103.0	303.2	363.5	330.0	370.5	433.0	443.8
Imports ($millions)	129.3	244.8	251.8	226.1	298.4	344.5	373.8
Canadian Market ($millions)	232.3	548.0	615.3	556.1	668.9	777.5	817.6
Exports - % of Shipments	26.0	23.9	21.9	22.2	18.1	19.0	18.6
Imports - % of Domestic Market	55.6	44.7	40.9	40.6	44.6	44.3	45.7

Source of imports (%)

	U.S.	E.E.C.	ASIA	OTHERS
1981	41	17	36	5
1982	42	13	33	12
1983	36	13	40	11
1984	34	15	41	10
1985	32	17	39	12

Destination of exports (%)

1981	57	14	6	13
1982	66	12	7	15
1983	71	12	5	12
1984	77	8	5	10
1985	78	10	5	7

3. REGIONAL DISTRIBUTION - 3 yr avg.

	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
Establishments - % of Total	1	33	42	8	16
Employment - % of Total	1	43	50	2	4
Shipments - % of Total	1	47	48	1	3

4. MAJOR FIRMS

MAJOR FIRMS	OWNERSHIP	LOCATION OF MAJOR PLANTS
Warrington Inc.	Canadian	St. Jerome, Kitchener, Italy, France
Cooper Canada Ltd.	Canadian	Toronto, Cambridge
Procycle Inc.	Canadian	St. Georges de Beauce, Quebec
Amer Sport Int'l Inc.	Finnish	St. Jean sur Richelieu, Quebec
T.I. Raleigh Ind. Ltd.	British	Waterloo, Quebec
CCM/Sport Maska Inc.	Canadian	St. Hyacinthe, St. Jean sur Richelieu, Quebec

(E): Estimate
N/A: Not available

DATE: _____

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT - PROJET

COMPETITIVENESS PROFILE

SYNTHETIC RESINS SECTOR

1. STRUCTURE AND PERFORMANCE

a) Structure

The Canadian synthetic resins industry comprises 74 establishments that produce a variety of resins and compounds including polyethylenes, polyvinyl chlorides, polystyrenes, polypropylenes, acrylonitrilo-butadiene-styrenes (ABS's), polyamides, phenol-formaldehydes and others. These resins are raw materials for other industries and are usually produced as powders or granules, but may in some cases be in the form of viscous liquids. Raw material inputs required by the resins industry include petrochemicals such as ethylene, styrene, vinyl chloride and propylene. The sector's establishments are classified primarily to SIC 3731.

Major customers for the sector's products are the plastics products industry, which is estimated to consume over half of the sector's output, and a variety of other industries including adhesives, forest products, metals, wire and cable, paint, petroleum products, and chemical specialties. Many of the resins made in Canada are broadly similar to resins made in a number of other countries; and, as commodities, must compete internationally on a price basis. Non-commodity resins are specialized in such properties as heat-resistance, gas permeability, toughness and other properties, and, being higher-cost materials, generally do not attract as large a demand as the commodity resins do. Many of these non-commodity resins are not made in Canada because demand for them does not justify plants.

The value of shipments of synthetic resins by manufacturers in Canada was approximately $1.7 billion in 1985. The industry employed 6,200. 74 per cent of the shipments consisted of thermoplastic resins, polyethylene leading the way with more than 30 per cent of total shipments. Shipments of thermosetting resins accounted for approximately 16 per cent of total shipments. The remaining 10 per cent of shipments consisted of cellulosics, plastics compounds and certain other polymeric materials.

Of the 74 establishments in the sector, 42 are in Ontario, 21 in Quebec, 6 in Alberta and 5 in British Columbia. In terms of production capacity, the distribution is approximately 68 per cent in Ontario, 19 per cent in Quebec, 10 per cent in Alberta and the balance in British Columbia. 59 per cent of the industry's employment is in Ontario, 28 per cent (estimated) in Quebec, 9 per cent in Alberta and 4 per cent in British Columbia.

Canada's exports of synthetic resins, at $800 million, represented 47 per cent of value of shipments in 1985. The industry in Canada added substantially to its manufacturing capacity in the period commencing in 1975 when it enjoyed a world advantage in raw material costs. In recent years, events have reduced this advantage, due to changes in the price of Canadian crude oil and natural gas compared to the United States Gulf Coast. In addition, the demand for resin has not developed as expected. In this capital-intensive industry, it is economically necessary that resin plants be operated at high rates of capacity utilization. The result has been that manufacturers in Canada have sought export orders actively, which have frequently been available only at very low prices. For example, the average price of exported polyethylene resin was only $0.32 per lb. in 1985, compared with $0.50 per lb. for imported polyethylene resin.

The share of the Canadian market held by imported resins was approximately 55 per cent in 1985.

The majority of firms in the sector are subsidiaries of foreign owned companies. An estimated 75 per cent of synthetic resins production in Canada is made by firms which are controlled from outside Canada. Novacor Chemicals and Polysar are two firms owned and controlled in Canada.

Production of synthetic resins is widespread in the world today, amounting to an estimated 68 million tonnes. Of this, Western Europe accounts for approximately 35 per cent; the United States, 27 per cent; Japan, 18 per cent; Eastern Europe, 11 per cent; and Canada, 3 per cent. Western Europe, the United States and Japan produce both "non-commodity" (specialized) resins and commodity resins, whereas most of the remaining world regions, including Canada, produce primarily commodity resins. Canada exports largely commodity resins, although an estimated 10 per cent of exports consist of specialized grades of resins which are preferred by clients because of the superior performance of these products in spite of their premium prices.

b) Performance

The value of shipments increased at a real annual rate of 17.1 per cent between 1975 and 1980, but at only 0.9 per cent between 1980 and 1985. The Canadian market for resins increased at a mean annual rate of 10.5 per cent between 1975 and 1980 and 2.2 per cent between 1980 and 1985. Synthetic resins manufacturers in Canada have been serving a declining proportion of the domestic market, their share in 1980 having been 57 per cent, and, in 1985, only 45 per cent.

Three factors appear to have contributed to this decline in market share:

(a) In the 1980-85 period, there has been an expansion in the use of specialized, non-commodity, resins of types not made in Canada, because high-performance applications have developed in the packaging, automotive and other industries at an increasing rate;

(b) The value of imports of commodity resins of types made in Canada, including polyethylene, polyvinyl chloride and ABS, has increased substantially because of strong price competition; and

(c) Three manufacturers of polyethylenes imported resin for market-development purposes prior to the start-up of their plants in the 1983-85 period. (Now that these plants are in operation, an upward trend in the share of the domestic market held by Canadian manufacturers may be observed in 1986 and beyond.)

A substantial increase in value of shipments occurred between 1977 and 1981, when several large modern resin facilities were commissioned. Since the domestic demand was not sufficient to absorb all of this additional capacity, a substantial portion of the output of these new plants had to be sold in export markets. With world overcapacity in resins, international prices are depressed.

The sector has experienced low profits since 1981. By comparison with a United States case, a Canadian resins manufacturer appears to experience higher costs and also a lower average selling price, this because a) a portion of the industry in the United States enjoys higher earnings from non-commodity, specialized resins not made in Canada that are less subject to the price pressure that characterizes the commodity-resin market; and b) proportionately, the Canadian manufacturer exports a larger proportion of total shipments at depressed world prices with the result that the margin on value of shipments tends to be lower in the Canadian case.

2. STRENGTHS AND WEAKNESSES

a) Structural

Among the strengths of the Canadian synthetic resins industry are lower energy costs and, to a degree, lower raw material costs. Weaknesses include disadvantages in capital-related costs and marketing costs.

Canadian energy costs tend to be lower than at the United States Gulf Coast (USGC); however, this represents but a small advantage since, typically, energy accounts for only 5 per cent of operating cost.

It is reported that resin producers in Eastern Canada, whose feed is derived from crude oil, can purchase raw materials at typical USGC prices, and that Western Canadian producers, whose production is based upon ethylene derived from natural gas liquids, have lower feed costs than USGC producers.

Capital-related charges, understood to represent typically about 18 per cent of total operating costs in Canada, have been higher than at the USGC largely because initial capital costs in Canada have been from 15 to 25 per cent higher due to higher construction costs, arising from climate differences and other factors, and higher financing charges. These costs are manifested by higher depreciation and maintenance charges and lower return on investment.

Unit marketing expenses tend to be higher in the Canadian resins industry than at the USGC since, in many cases, markets are more diffuse than in the United States and shipment volumes are lower.

In terms of scale of operations, it appears that in general, Canadian resin plants, most of which have been built or refurbished within the past 8 years, are large and efficient; and do not suffer materially in comparison with similar plants in the United States.

The net effect of the above-mentioned factors appears to be that, in comparison with a typical producer of synthetic resins at the USGC, the domestic industry experiences operating costs* that are 3 to 5 per cent higher in eastern Canada and 2 to 4 per cent lower in western Canada.

It is estimated that the manufacturing capacity in excess of 1985 domestic demand and available for export by the Canadian industry was 113 per cent for low density polyethylene, 21 per cent for high density polyethylene, 38 per cent for polyvinyl chloride, 18 per cent for polypropylene, and 43 per cent for polystyrene.

b) Trade Related Factors

Canadian import tariffs on synthetic resins range from 9.6 to 10.1 per cent, United States tariffs range from 9.4 to 12.8 per cent, E.E.C. tariffs range from 13.4 to 14 per cent, and Japanese tariffs range from 6.4 to 15 per cent. Under current conditions of intense world competition, these tariffs make it difficult to be competitive in offering commodity resins to these export markets. Non-tariff barriers have not been significant in synthetic resins trade.

c) Technology

Generally speaking, the technology utilized in Canada is up to date. A few manufacturers in Canada have developed positions of technological strength in specific product types. Examples include Dupont Canada Inc. (development of a range of specialized polyethylene resins and products derived therefrom), C.I.L. Inc. (ethylene-vinyl acetate copolymer) and Reichhold Ltd. (development of novel solid phenolic resins for use in the

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* ("Operating costs" include all costs and expenses except delivery costs.)

forest products industry). However, these specialized examples appear to be few, and most Canadian production consists of commodity resins. The majority of specialized resins (such as polycarbonate, polytetrafluoroethylene, polyacetal, polysulfones, and others) are not manufactured in Canada and are imported, mostly from the United States. The opportunity to make such products in Canada seems limited at this time because, with few exceptions, the markets for them are comparatively small and warrant only one or two manufacturing plants in North America.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

There are no federal or provincial government programs or policies which are specific to this sector. However, the cost structure of the sector is sensitive to energy policy.

In September 1981, the federal and Alberta governments signed a Memorandum of Agreement on energy pricing and taxation that provided for Canadian oil prices to rise according to a fixed schedule. Soon after, world oil prices started to fall, while Canadian oil prices did not, thereby effectively eliminating the feedstock price advantage previously enjoyed, relative to the USGC, by Eastern Canadian resin producers. At the same time, the feedstock price advantage for Western Canadian resin producers narrowed appreciably, because the price of natural gas increased in Canada in line with that of crude oil while the price of natural gas in the United States decreased.

In March 1985, the federal, Saskatchewan, Alberta and British Columbia governments agreed to decontrol oil pricing by mid-1985 and to phase out the Petroleum and Gas Revenue Tax by early 1989. This action, coupled with the plan to eliminate, by November 1986, the Alberta border-price policy for natural gas, is expected to result in a more market sensitive pricing system for oil, gas and downstream chemical products including resins.

4. EVOLVING ENVIRONMENT

The medium-term trend is expected to be one of a reduced rate of investment in new and expanded production facilities, since current demand is unlikely to reach Canadian supply capability for a few years. It seems reasonable to predict a long-term growth trend for Canadian synthetic resins shipments in excess of GNP as new synthetic-resin-based products continue to be developed for packaging, construction, communications, machinery, transportation and consumer goods.

To the extent that new applications require specialty resins not made in Canada, e.g. food "cans" based on polyethylene terephthalate (PET) resins, potentially replacing steel and aluminum cans, Canada's resins industry, manufacturing largely commodity resins, may grow less rapidly than that of the United States. Should resin-based food cans become widely used, the opportunity may develop to build a PET-resin plant in Canada.

The commencement of production of polyethylene (in late 1984) and polyvinyl chloride resins (in early 1986) in Saudi Arabia introduces a new low cost source of resin in the world that could impact on Canadian export markets. Since Saudi Arabian resin is expected to be marketed principally in Japan, Western Europe and South East Asia, it should not be a direct threat to Canada's principal resin exports to the United States. It could, however, have a detrimental effect on Canada's exports to South East Asian and European markets which, typically, represent 6 and 2 per cent respectively of total shipments of resins by companies in Canada.

5. COMPETITIVENESS ASSESSMENT

The Canadian synthetic resins industry experiences costs that, in comparison with the USGC, are higher in Eastern Canada and lower in Western Canada when delivery cost is not taken into account. When

delivery cost is taken into account, and if no duty were in place today, the delivered cost of resins shipped is judged to be lower than USGC when delivered from Eastern Canadian plants to clients in Eastern Canada and United States Great-Lakes centres; but higher than USGC when delivered to Atlantic Seabord destinations. The delivered cost of resin shipped from Western Canadian plants to United States Pacific Coast markets appears to be lower than USGC, but when shipped to the United States mid-west (e.g. Chicago) approximately equivalent to USGC.

Prepared by: Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: July 3, 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: Synthetic Resins SIC(s) COVERED: 3731 *

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	Estimate 1985
Establishments	41	64	61	70	74	74	75
Employment	4,322	6,246	6,505	5,997	5,921	6,000	6,250
Shipments ($ million)	211	1,373	1,512	1,368	1,619	1,615	1,708
Gross Domestic Product (Constant 1971-$ millions)	80	170	176	155	176	185	195
Investment ($ millions)	14.7	88.1	100.1	71.2	40.1	45.6	53.4
Profits After Tax ($ millions)	-	118.0	63.5	(19.3)	60.7	-	-
(% of income)	-	8.6	4.2	(1.4)	3.8	-	-

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Exports ($ million)	76	467	513	516	521	629	800
Domestic Shipments ($ millions)	135	906	999	852	1,098	986	908
Imports ($ millions)	168	680	791	712	934	1,063	1,122
Canadian Market ($ millions)	303	1,586	1,790	1,564	2,032	2,049	2,030
Exports as % of Shipments	36	34	34	38	32	39	47
Imports as % of Domestic Market	55	43	44	46	46	52	55

Source of imports (top 4) - %	U.S.A.	E.E.C.	ASIA	OTHERS
1981	89.2	8.3	1.6	0.9
1982	89.7	7.8	1.3	1.2
1983	87.2	9.7	1.2	1.9
1984	86.6	10.2	1.7	1.5

Destination of exports (top 4) - %	U.S.A.	E.E.C.	ASIA	OTHERS
1981	51.7	5.2	15.2	27.9
1982	44.2	5.0	25.6	25.2
1983	59.1	3.2	15.5	22.2
1984	62.8	4.7	14.4	18.1

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % Total	1	28	57	8	7
Employment - % Total	-	-	59	9	-
Shipments - % Total	-	-	58	10	-

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants	Concentration (% of Domestic Market)
1. Polysar Ltd.	Canadian	Cambridge, Ontario & Montreal, Quebec	
2. Dow Chemical Canada Ltd.	U.S.	Sarnia, Ontario	
3. Du Pont Canada Inc.	U.S.	Sarnia, Ontario	
4. C.I.L. Inc.	British	Edmonton, Alberta	
5. Esso Chemical Canada	U.S.	Sarnia, Ontario	
6. Novaco Chemicals Ltd.	Canadian	Joffre, Alberta	
7. B.F. Goodrich Canada Ltd.	U.S.	Fort Saskatchewan, Alberta Shawinigan, Quebec & Niagara Falls, Ontario	
8. Shell Canada Chemical Co.	Netherland	Sarnia, Ontario	
9. Himont Canada Inc.	U.S.	Varennes, Quebec	
10. Borg-Warner Chemicals Ltd.	U.S.	Cobourg, Ontario	

DRAFT

COMPETITIVENESS PROFILE

TELECOMMUNICATIONS EQUIPMENT

1. Structure

The Telecommunications Equipment Sector consists of the manufacturers of equipment needed to transmit voice, data and video information. The major products are radio transmission equipment, multiplex equipment, central office and subscriber switches, cable, both metallic and fibre optic, and subscriber apparatus.

Northern Telecom is by far the largest Canadian telecommunications equipment supplier, with world-wide sales of $4.4 billion in 1984, (1985-$5.8 billion) approximately half of which is produced in Canada. Mitel and Microtel with global sales of $370 million and $170 million respectively are the next largest companies. Included in the remaining 400 odd firms manufacturing in this sector are a few firms in the same size range as Microtel and Mitel, but with only a portion of their output in the telecommunications area (Spar, Canadian Marconi, Motorola) as well as many much smaller firms generally supplying a narrow range of niche products, or supplying components and subassemblies to the major suppliers. Geographically they are concentrated primarily in Ontario and Quebec, with only Northern Telecom represented with plants in all provinces except British Columbia. The industry is primarily Canadian owned with the major exceptions of Microtel, an indirect subsidiary of U.S. based GTE, through B.C. Tel., and Mitel, recently acquired by British Telecom. Management behaviour in this sector reflects the increasingly multi-national nature of the larger firms.

Telephone operating companies provide the principal markets for the telecommunications equipment suppliers. Two of the major suppliers, Northern Telecom and Microtel are closely associated through ownership with the two largest operating companies, Bell and BC Tel respectively. These suppliers have benefitted from this association through access to a steady predictable market and through information gained about future product requirements. Vertical integration has progressed to the point where in many cases everything from components to larger systems to final customer service is provided by various members of large corporate families. The acquisition of Mitel by British Telecom may confer similar benefits on that company.

Performance

Telecommunications shipments by Canadian firms have grown at an average rate of 15 per cent within the past decade, with the exception of a 3 per cent recession induced decline in 1982-83, while the apparent domestic market has been growing at roughly 9 per cent per year. Employment has grown to approximately 47,000, from a low of 37,000 in 1977, with a similar recession induced dip in 1982/83. This growth has been fuelled by the establishment of Northern Telecom as a world class, multinational strength and the emergence of entrepreneurially driven firms such as Mitel and Gandalf.

The strong export growth that the sector has enjoyed in recent years has arisen from opportunities in the U.S. market. The emergence of an interconnect market in the U.S. in the mid 1970's (and in Canada in 1980), which allows business customers to acquire their terminal equipment such as telephones and Private Automatic Branch Exchanges (PABX) from other than the telephone company has opened up a large new market for equipment suppliers such as Mitel, to replace a largely obsolete equipment base, as customers were able to obtain state-of-the-art technology while simultaneously reducing cost.

Latterly, the court-directed restructuring of AT&T, and the establishment of the seven regional Bell holding companies (RHCs), has severed the close link between the local exchange carriers (RBOCs) and Western Electric (now AT&T Technologies) and has enlarged the available market for Northern

Telecom and other foreign suppliers to provide advanced switching and transmission equipment. The deregulation of U.S. long distance services has also provided extra market opportunities for Canadian suppliers as new carriers equipped themselves to enter the market.

Canada's smaller suppliers tend to be technology-driven and niche product oriented. Because of the narrowness of their product lines, early entry into export markets is a necessity. Risk capital is very important to those firms, both early in their development and at the stage when they have become medium-sized and must break-out of their niche or stagnate.

Western Europe and Japan have well developed telecommunications equipment industries, which were established to supply the government owned telecommunications networks. Canadian firms meet these suppliers in the U.S. market and in third world markets, where many of these firms have a long-established marketing presence.

While many U.S.-based manufacturers have been active in world market for years, the largest supplier, Western Electric, has not been. The AT&T divestiture has removed all restrictions on that firm's activities outside the U.S. and it has become very aggressive in accessing foreign markets and in forging strategic alliances (e.g. Philips, Olivetti) in order to improve its competitive position in foreign markets.

2. Strengths and Weaknesses

a) Structural

Northern Telecom, Mitel, and to a lesser extent Microtel, since it is still essentially a domestically oriented supplier, operate on a scale which compares well with their respective worldwide competition. Each has in-house integrated circuit (IC) design facilities representing access to the major cost reduction technology available to the electronics industry. Northern and Mitel go one step further in vertical integration with in-house IC production capability. In addition to cost control, the IC design capability enables these suppliers to rapidly move a new design to production with the speed necessary to compete in the marketplace, which is a key strategic factor in this industry.

The stable domestic market environment, including the close association between leading suppliers and telephone operating companies, and the advanced nature of the Canadian market has been of significant benefit to the development of the Canadian telecommunications supply structure. The association with the operating companies also provides financial strength that is increasingly necessary to pay for growing investments in product development and to convince potential customers of the credibility of the Canadian suppliers.

Although good and internationally competitive at what it does, the Canadian industry's capabilities are relatively shallow. Northern Telecom is a full line supplier; every other supplier specializes in one or more smaller aspects of telecommunications products. Often there is only one Canadian supplier for any particular product.

b) Trade Related Factors

In most developed world markets, the provision of telecommunications services is a government monopoly. The supply of equipment to these monopolies has generally been restricted to domestic suppliers, severely limiting trade opportunities. Equipment standards also differentiate the North American and European markets, requiring additional product development expenditures in order to serve both market areas.

Japan and the United Kingdom are currently going through a period of transition to privatization and limited competition. Other countries so far are holding firm but will come under increasing pressure to

follow similar paths, as major business users in these closed-market countries discover that they are relatively disadvantaged by the non-availability of the most innovative products and services. Still, in the medium term, domestic supply industries will maintain dominant market shares and significant investment in manufacturing and R&D in desirable markets will continue to be the only way to secure and maintain significant market penetration. Mitel's new ties to British Telecom may increase its penetration of the telecom market in the United Kingdom and the E.E.C. Tariffs into the EEC range from 5.1 per cent to 7.5 per cent and into Japan are 5.1 per cent.

In the Canadian domestic market, suppliers have operated behind a similar curtain under which domestic operating companies tend to purchase from their captive associated suppliers. The prairie provinces own and exercise regulatory control over their telephone operating administrations, and often procure their equipment with provincial goals in mind. Canada maintains a high bound (17.8 per cent) tariff on imports, which was not reduced in the Tokyo Round because of the failure to get agreement on the inclusion of telecommunications entities in the GATT procurement code.

The U.S. forms the most open telecommunications market. While tariffs range up to 8.3 per cent, there are few other formal barriers to trade. Most U.S. operating companies, both the local exchange carriers and the interexchange carriers, buy equipment essentially on a price-performance basis, although suppliers perceive benefits in establishing or maintaining a local manufacturing presence. In fact, the only firms to have captured significant carrier business in the U.S. have done so following the establishment of a meaningful presence.

Lesser developed countries also represent an opportunity for Canadian suppliers but for many of these countries purchasing decisions depend upon financing terms, and are influenced by long-standing relationships with existing suppliers who may have established a presence during colonial times. Increasingly, these countries require technology transfer and local manufacturing.

c) Technological Factors

In the absence of a large domestic market, technology is the principal determinant of the competitiveness of Canada's telecommunications industry. Large Canadian suppliers are on a par with their U.S. competition in the use of the latest very large scale integrated circuit (VLSI) techniques, and have a competitive edge in the digital switching and packet switching areas. Canada is also well advanced in the use of satellites and fibre optics for transmission purposes, and the leading firms are increasing their strengths in the application of technology to the automation of their own production. This level of technological advance has not been acquired cheaply and expenditures on R&D continue at about 10-11 per cent of annual sales, with R&D costs more than double capital expenditures. The generally positive fiscal environment for R&D activities in Canada in recent years has been an important factor in this performance.

The leading edge of technological development still remains in the U.S., concentrated in the Boston area in the east and California in the west, and all major world suppliers maintain a laboratory in the California area to maintain contact with the latest developments.

d) Other Factors

Historically, the telecommunications equipment industry has been little affected by swings in interest rates and business cycles. The long term investment programs of the monopoly carriers took little account of short term economic conditions. This did not hold true during the 1982 recession, when the correlation between economic activity and industry sales increased. As markets become more competitive, it is reasonable to expect that short term economic factors will have an increasing effect on the industry.

It should also be pointed out that the Canadian industry is small by world standards. Our largest telecommunications supplier, Northern Telecom, with sales of $4.4 billion, is small compared to the giants of the industry, such as AT&T Technologies with sales of $11.2 billion, and Siemens with sales of $14.5 billion. There is a considerable body of evidence (discussed later) suggesting that the telecommunication and computer industries are becoming increasingly interrelated.

3. Federal and Provincial Programs and Policies

Bell Canada, B.C. Telephone and CN/CP are regulated by the Federal Government through the CRTC. In addition the federal government owns Teleglobe, Canada's international communications carrier and has an equity interest in Telesat, Canada's domestic satellite communications provider. The other major telephone companies are regulated by (and in the prairies, owned by) provincial or municipal utilities commissions or equivalents. This mixed regulatory jurisdiction has caused some fragmentation of the telecommunications environment, notably with respect to different rules for terminal attachment and for systems interconnect, as well as in the supply of equipment to the carriers. The recent establishment of an inter-regulatory task force to look at pricing policies is a positive sign of improvement in the regulatory environment.

The Restrictive Trade Practices Commission (RTPC) led an enquiry into the telecommunications industry, running from 1976-1983. The RTPC examined interconnect and vertical integration. In the case of the former, the RTPC essentially affirmed the process of terminal attachment initiated by the CRTC interim decision in 1980. In the case of vertical integration, the Commission found that the economic benefits clearly outweighed any possible non-competitive detriments.

The Department of Communications is active in supporting the technological developments in this industry, particularly with the resources of the Communications Research Centre, through issuing contracts for technological investigation, through the sponsorship of field trials of new communications technologies and through its sponsorship of the Canadian space communications program. Communications sub-agreements under the ERDAs have been negotiated with Quebec and Manitoba.

Large Canadian suppliers are dependent on EDC financial assistance in bidding on major international projects. The smaller companies engaged in product development are users of the government programs such as IRDP and PEMD although the large companies have generally relied on internally generated funds and the private capital markets for their investment needs. The telecom industry is the major performer of R&D in Canada, and a beneficiary of tax policy incentives which promote R&D investment.

4. Evolving Environment

Trade policy and communications policy have had an important influence on the existing industry structure and potential changes in those policies will impact the industry's environment in the future.

The current trading environment provides significant domestic tariff protection, procurement advantages to domestic suppliers resulting from administrative practices on the part of the two major carriers, relatively easy access to the U.S. market and severe limitations on the access to markets in other developed countries. All these can be expected to change over the next decade.

Communications policy has already permitted the establishment of a $300 million annual interconnect market in Canada, involving the establishment of more than 100 companies to sell, install and service key telephone and PBX systems in Canadian businesses. The initiation of new services on a competitive basis (cellular radio) and the expectation that some form of interexchange (i.e. long distance) competition will eventually be permitted, anticipate further changes that will affect the market opportunities for the equipment manufacturing industry. Other communications policy questions, such as rate rebalancing, (the need for reduction in the price of long distance services and increase in price of local service to more closely match costs) structural separation (the need to separate the regulated and unregulated aspects of telecommunications)

and regulatory rationalization, have the potential to affect the form of telecommunications services in Canada, and accordingly, the equipment needed to offer those services.

Technology is another major factor in the evolving environment. There is a widespread blurring of the lines between the telecommunications and data processing with the adoption of common digital technology. Telecom suppliers are expanding into areas which have been traditionally the province of data processing suppliers, with the major market being electronic office support functions.

This is the product area where competition with the traditional U.S. based EDP suppliers such as IBM, Burroughs, etc., is inevitable and where mergers between traditional telecom and computer suppliers are occurring. As prices of intelligent communicating terminals are reduced, and demand in the office increases accordingly, both the telecom and the computer suppliers will be straining for market share. Each has a base in digital technology, and a different approach to automating the office. Canadian telecommunications suppliers have arranged interface and joint development agreements with U.S.-based computer firms.

The trend toward end-to-end digital networks and the integration of voice, data and video on single networks which will begin to appear in the mid-1990s, will have important implications for the Canadian industry in that it will drastically change the niche markets in which Canadian companies have specialized. New niches will undoubtedly emerge, but it will require a continuing strong technological base, managerial skills, financial resources and flexibility to take advantage of opportunities.

The long term market growth area is expected to be the newly industrialized countries as the North American market becomes saturated with digital technology. There is also a long term trend toward fibre optic land lines as a replacement for satellite transmission in densely populated areas, which may affect Canadian suppliers of earth station and satellite equipment.

5. Competitiveness Assessment

Based upon the technological capabilities that Canada has developed over the past thirty years and the aggressiveness with which Canadian firms are accessing world markets, the medium-term future looks promising for the Canadian telecoms supply sector. Current successes such as central office digital switching and fibre optic cable, serve as a good base for expanding into such future high growth areas such as portable communications, the electronic office, integrated voice and data networking and local area networks. Both the large, integrated suppliers and the smaller niche suppliers can participate in these opportunities.

Canadian industry is very competitive in the telecom equipment sector, having grown to a position of strength by initially serving essentially a captive domestic market. The larger suppliers are of sufficient size to be credible in major project international bidding, but in many cases, in Third World countries, success depends on the availability of financing at subsidized rates.

These large projects often involve establishing offshore assembly of equipment to meet local content requirements. However there is still the potential for employment increase in Canada in the higher skills area of product development, systems design and software development, and in manufacturing the parts needed for the system.

Clouds do appear on the horizon in the longer term. Competition can be expected to increase in the domestic market, in the developed country markets and in third world markets. This competition will come from the major Japanese and European suppliers and AT&T Technologies, unfettered from restrictions previously placed on them as a result of their monopoly or semi-monopoly domestic markets, as well as possibly from new U.S. competition, as the RHCs spread out in new areas. The trend towards the engineering of strategic alliances, both among firms within the

telecommunications sector and with firms in the related computer sector will continue and Canadian firms that do not participate in this activity could find themselves overpowered by the competition. The implications for Canada is the need for ever increasing investment in new product development and for maintaining an environment that encourages entrepreneurial activities.

Prepared by: Electronics and Aerospace Branch Date: 26 March 1986

ADM

FACT SHEET

NAME OF SECTOR: Telecommunication Equipment SIC COVERED: 335 (1970 basis)

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	Estimate 1985
Establishments	235	411	427	443	423	n.a.	n.a.
Employment	44,582	43,300	46,300	45,600	45,087	46,173	47,160
Shipments ($ M)	600	2,329	2,786	3,055	3,125	3,410	3,860
Gross Domestic Product (Constant 1971-$ M)	417.4	607.8	662.7	643.4	669.7	721.1	n.a.
Investment ($ M)	39	139	214	213	254	308	309
Profits After Tax ($ M)	21.7	162.2	216.2	176.9	n.a.	n.a.	n.a.
(% of Shipments)	3.6	7.0	7.8	5.6	9.0		
R & D Expenditures ($ M)	90	264	387	521	657	769	857

2. **TRADE STATISTICS**

	1971	1980	1981	1982	1983	1984	1985
Domestic Exports ($ M)	212	1,041	1,368	1,424	1,656	2,551	2,742
Re-Exports ($ M)	16	97	99	118	149	198	194
Domestic Shipments ($ M)	290	1,288	1,418	1,631	1,469	859	1,118
Imports ($ M)	313	1,690	2,040	1,876	2,280	3,193	3,146
Canadian Market ($ M)	745	2,882	3,360	3,391	3,749	3,854	4,070
Exports as % of Shipments	32	45	49	47	53	73	71
Imports as % of Domestic Market	40	59	61	55	63	83	77
Canadian Share of International market							

Source of imports (top 4)	U.S.	Japan	E.E.C.	Taiwan
1981	1,523	253	82	59
1982	1,431	191	71	56
1983	1,709	241	85	76
1984	2,397	336	125	96
1985	2,317	401	121	86

Destination of exports (top 4)	U.S.	E.E.C.	Turkey	Brazil
1981	1,001	138	19	5
1982	982	178	39	7
1983	1,213	178	60	3
1984	1,934	242	90	93
1985	2,169	192	113	90

3. **REGIONAL DISTRIBUTION - Average over the period 1980-1982**

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	2	20	59	9	10
Employment - % of total	2	27	62	5	4
Shipments - % of total	2	29	60	6	3

4. **MAJOR FIRMS**

Name	Ownership	Location of Major Plants	Concentration (% of domestic market - est.)
1. Northern Telecom	B.C.E., Public	Across Canada except B.C.	65%
2. Mitel	Br. Telecom, Public	Ontario; Québec	3%
3. Microtel	B.C. Telephones	B.C.; Ontario; Sask.	10%
4. Spar Aerospace	Public	Québec; Ontario	2%

DRAFT - PROJET

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

April 25, 1986

COMPETITIVENESS PROFILE

Name of Sector: TEXTILES

1. STRUCTURE AND PERFORMANCE

a) Structure

The Canadian textile industry can be classified into three broad sub-sectors: primary textiles, carpets and miscellaneous textile products. The primary textiles sub-sector comprises fibre, yarn, woven and knitted fabric producers and finishers; the carpets sub-sector includes producers of residential and commercial carpets and rugs; and the miscellaneous textiles sub-sector, which includes a large number of relatively small establishments utilizing cut and sew as a basic operation, produces canvas goods, household and other textile products.

In 1985, the industry employed some 63,000 workers and reported shipments of $5.5 billion, of which about 10% were exported. The industry consisted of approximately 1,070 establishments with about 8% (or 85) employing 200 or more persons and accounting for 60% of total employment. Primary textiles, with 425 establishments, accounted for some 65% of both industry shipments and employment. Miscellaneous textiles, with 610 establishments, accounted for 20% of industry shipments and 27% of employment. Carpets, with 35 establishments, accounted for 14% of industry shipments and 8% of employment.

The latest available data (for 1983) indicate that some 39% of establishments and 52% of industry employment were located in Quebec, 41% of both establishments and employment in Ontario and the remaining 20% of establishments and 7% of employment in other provinces. Unlike the clothing industry, most textile production historically has taken place in smaller communities to take advantage of water resources and a stable labour supply. An estimated 60% of the industry's work force has some union affiliation with the degree of labour organization high among larger establishments and rather low in smaller establishments, especially in the metropolitan areas.

Firms in the primary textile and carpet sub-sectors are larger and more capital intensive with higher economies of scale (and more substantial barriers to entry) than in the miscellaneous textiles sub-sector. The relatively high vertical integration in Canada, especially in woven fabrics, is due partly to the level of tariff protection at various stages of manufacture (yarn, unfinished and finished fabrics) and the small domestic market.

In 1983, roughly 50% of textile shipments was made by foreign controlled firms (mostly U.S.); accounting for over 60% of shipments in the two primary textile areas: man-made fibres and man-made fabrics. Foreign control is also an important factor in the carpet sub-sector, but is less significant in miscellaneous textiles.

The industry supplies three principal markets: apparel manufacturing (40%), homefurnishings (35%) and industrial fabrics (25%).

b) Performance

Since 1971, domestic textile manufacturers have supplied about 70% (in value) of the market with the bulk (over 70%) of textile imports (unlike clothing) sourced from developed countries.

In primary textiles, following a period of rationalization, domestic producers currently supply only about one-half the apparent market; however, in the knitting segment of this sub-sector, which accounts for about 11% of primary textiles shipments, domestic producers supply 90% of the apparent market, due in some measure to the high effective tariff (duty on value added) and versatility of technology which accommodates the production of a wide variety of knitted fabrics. In carpets, domestic producers continue to hold a large share of the market (85%) although stagnating sales in recent years have resulted in excess capacity. In general, in miscellaneous textiles, domestic producers serve local markets and do not face import pressures.

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Employment in the industry declined by 7,400 between 1979 and 1984 due to productivity gains of some 1.5% per year as well as the impact of clothing imports which rose at an annual rate of 9.5% in the same period. The rapid increase in imports contributed to a number of closures in apparel-related textiles including Wabasso Inc. and some large operations of Dominion Textile Inc.

Exports as a percent of shipments rose from 6.5% in 1973 to 10% in 1985 and this share is expected to be maintained over the next few years. In recent years, Canadian exports have been achieved primarily in man-made fibres and filament yarns, carpets and coated fabrics. Textile exports to the U.S.A. currently account for just over one-half of the total (up from 32% in 1981). Canada has lost significant carpet export sales to Australia as a result of an increase in carpet tariffs combined with the removal of import quota and the granting of subsidies to domestic carpet yarn producers.

During the 1970s, the after-tax profit on capital employed in the industry was generally below the average for all manufacturing; in 1979-1981, it either surpassed or approximated the levels for all manufacturing. As with all manufacturing, the industry recorded substantial profit decreases during the 1982 recession. In 1983 the after-tax profit on capital employed in the textile industry was 8.2% versus an all manufacturing average of 4.5%.

Capacity utilization in the industry in 1985 was approximately 95%, considerably higher than the average of 81% recorded in the previous three-year period. Increased demand for carpets and major closures, particularly in primary textiles, that occurred in 1984 and 1985 are significant factors which contributed to achieve the 1985 rate.

2. STRENGTHS AND WEAKNESSES

a) Structural

Capitalizing on the major developments in textile technology since the 1960s, firms in primary textiles in industrialized countries have experienced significant increases in scale economies and, in some cases, developed export markets to justify the large investment expenditures required, particularly in man-made fibre production. The Canadian industry has moved to capital intensive production and currently average plant size in Canada is similar to that in other industrialized countries although there are some considerably larger establishments in the U.S.A. which achieve additional economies through specialization (man-made fibres, carpets or in dyeing and finishing of woven fabrics).

In Canada, due to the difficulties in achieving economies of scale in certain primary textile products (and due in some cases to excess capacity world wide), a number of lines were discontinued in recent years, including acrylic fibre, triacetate and certain polyester filament yarns. As well, the importance of scale economies in spinning and weaving of man-made and cotton fabrics and the increased imports of textiles in the 1950s and 1960s and apparel in the 1970s and 1980s have led to considerable rationalization to the point where there are only one or two domestic suppliers of certain primary textile products.

While carpet production also has become capital-intensive, it remains fragmented (35 establishments) due in part to high tariffs and a significant amount of regional production protected in some measure by high transportation costs. The technology for miscellaneous textile production (canvas, household textile) has not kept pace with that of primary textiles or carpets and there is less need for larger scale plants partly because its products are in many cases custom made or service local or specialized markets.

In 1983 (the latest year for which detailed comparative data are available), unit labour costs were on average about 17% lower in Canada than in the U.S. Unit labour cost differentials varied by industry segment. For example, Canadian firms in the wool area had a significant unit labour cost advantage of almost 30%, whereas firms in the man-made fibre and filament yarn segment, where scale economies are highly significant, suffered a unit labour cost disadvantage of 12%.

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In 1984, the Textile and Clothing Board reported that for some selected textile items, production costs in the textile industry were higher in Canada than in the U.S.A. The differences reflected largely the constraints of a much smaller domestic market and shorter production runs of a larger variety of products. These factors also led to generally higher selling and administrative expenses in Canada. As well, raw material, transportation and construction costs were found to be higher in Canada than in the Southern U.S. states where the industry is concentrated. The Board's findings were based on prevailing trade and market conditions, including an 80 cent Canadian dollar.

The growth of the textile industry depends to a large extent on demand from the clothing industry, its major customer.

b) Trade Related Factors

International trade in textiles and clothing is regulated by the Multi-Fibre Arrangement (MFA), negotiated under GATT auspices, which permits some derogation from GATT principles. The MFA permits the negotiation of import restraint agreements on a bilateral basis or, under certain conditions, the unilateral imposition of quotas (without compensation) against imports from particular sources which cause market disruption.

With the improved competitiveness of the Canadian industry opposite low-wage countries, the proportion of textile imports governed by bilateral agreements has declined to 6%. Nevertheless, apparel-related textiles remain vulnerable to low-wage apparel imports and there are a few sub-sectors (worsted fabrics and household textiles) which still face direct import competition from low-wage countries primarily because of their higher labour content.

Canada maintains high tariff protection on textiles and like most developed countries, excludes textiles and clothing from the General System of Preferences (GSP). Canada's average rates of duty (post MTN) will be 18% for textiles and 9% for all manufacturing. Corresponding average rates in the U.S. will be 10.4% for textiles and 5% for all manufacturing, and in the EEC, 6.4% for textiles and 6% for all manufacturing. The U.S. tariffs in some industry segments (e.g. 40% in wool fabrics) constrain Canadian exports.

c) Technological Factors

The primary textiles and carpets sub-sector of the industry have adopted the latest technologies and are as modern as any of their counterparts in developed and low-wage countries. There have not been the same types of advances in technology world-wide in the case of miscellaneous textiles production.

d) Other Factors

Partly due to the importance of maintaining long production runs to achieve scale economies, world trade in textiles often includes abrupt and sporadic sales at prices which do not reflect total cost. The negative impact of such sales on the domestic industry is compounded because of the small market and Canada's proximity to the world's largest textile industry.

3. GOVERNMENT PROGRAMS AND POLICIES

In addition to tariff protection and bilateral restraint arrangements, this sector, together with the clothing and footwear industries, has benefitted from a wide range of programs directed both to the industry and to workers. Since inception, of total commitments amounting to $141.1 million for the textile industry, approximately $54.4 million in assistance has been paid to March 31, 1986 under the Canadian Industrial Renewal Program (CIRP). Assistance to workers in the three industries under various CEIC and Labour Canada programs since late 1981 to date totals just over $122 million.

CIRB's five-year mandate to support the industrial adjustment process in the textiles, clothing and footwear (TCF) industries expired on March 31, 1986. Following the termination of CIRB, TCF firms and CIRB special areas became eligible for assistance under DRIE's Industrial and Regional Development Program (IRDP) available to all industries.

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4. EVOLVING ENVIRONMENT

The future of the textiles sector depends to a large extent on the demand for its products by the clothing industry; the renewal of the MFA will be an important factor in this regard. Assuming no fundamental change in current trade policies, it is expected that Canada will continue to experience large trade deficits in textiles in the next 5-10 years. Major breakthrough technologies for the industry are not anticipated in the medium term although textile machinery manufacturers are expected to continue introducing changes increasingly incorporating computer technology and involving more rapid production processes. If recent productivity growth rates continue and if import growth in apparel continues to outpace market growth it is expected that the industry's employment would continue its longer term decline with the bulk of the reduction in the primary textile sub-sector.

5. COMPETITIVENESS ASSESSMENT

A competitiveness assessment for this sector needs to be seen in the light of key global considerations, most notably the significant impact on textile producers in all developed countries of apparel imports from low-wage sources.

As a result of upgrading technology and moving to capital intensive production, the textile industries in the developed countries, including Canada, are now competitive in most products with producers in low-wage countries. In some textile sub-sectors, such as worsted fabrics and household textile goods where the labour content remains high, the low-wage countries continue to have an advantage. The developed countries maintain quantitative restraints to cope with low-wage pressures in these product areas but the degree of protection is much less than in the case of clothing. The moderate to high tariffs maintained by developed countries, while offering added protection against low-cost imports, are primarily relevant to textile trade amongst themselves.

The Canadian industry has also rationalized and with negotiated quantitative restraints that affect some 6% of Canadian textile imports, and current tariff protection of 18%, Canadian firms are able to compete with low-cost and developed country imports in the domestic market. However, the existence of border measures affecting apparel imports is a critical factor in maintaining the domestic textile industry.

Given the diversity of the textile industry segments, it is difficult to provide a meaningful statement of international competitiveness for the industry as a whole. There are indications that significant tariff reductions would lead to increased import pressures in certain industry areas such as carpets. At the same time, however, some segments such as wool fabrics have the potential to increase exports to the U.S. if not constrained by the high U.S. tariffs.

Prepared by: Textiles, Clothing and Footwear Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: 28.4.86

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

April 1986

FACT SHEET
(1980 SIC)

NAME OF SECTOR: TEXTILES SIC(s) COVERED: Major Group 18, 19 and SIC 3993

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Establishments	979	1,014	1,012	1,046	1,072	N/A	N/A
Employment	72,868	69,806	67,475	58,892	62,576	63,000	63,000
Shipments ($ millions)	1,797	4,559	5,147	4,471	5,289	5,323	5,534
(volume, e.g. tonne where applicable)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gross Domestic Product (constant 1971-$ millions)	655.9	860.0	890.0	720.0	883.5	884.3	887.9
Investment ($ millions)*	115.9	261.5	261.2	242.2	256.5	301.9	317.9
Profits After Tax ($ millions)*	51.8	216.5	168.7	27.5	205.6	N/A	N/A
(% of income)*	N/A	4.2	3.0	1.2	3.4	N/A	N/A

* Exclude Knitting Mills

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Export ($ millions)	114	423	472	429	427	519	561
Domestic Shipments ($ millions)	1,683	4,136	4,674	4,042	4,861	4,803	4,973
Imports ($ millions)	613	1,622	1,848	1,525	1,902	2,192	2,312
Canadian Market ($ millions)	2,296	5,758	6,522	5,567	6,763	6,995	7,285
Exports as % of Shipments	6.3	9.3	9.2	9.6	8.1	9.8	10.1
Imports as % of Domestic Market	26.7	28.3	28.3	27.4	28.1	31.3	31.7
Canadian Share of International Market	--	--	--	--	--	--	--

Source of imports % Share of Total Imports		U.S.	E.E.C.	Other Developed	Low Cost
	1981	59	14	8	19
	1982	57	15	8	20
	1983	55	15	8	22
	1984	51	18	7	24

Destination of exports % Share of Total Exports		U.S.	E.E.C.	Other Developed	Low Cost
	1981	32	18	8	42
	1982	40	16	6	38
	1983	47	12	7	34
	1984	54	10	6	30

3. REGIONAL DISTRIBUTION - 1983

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments - % of total	3	39	41	10	7
Employment - % of total	(x)	52	41	(x)	(x)
Shipments - % of total	(x)	53	41	(x)	(x)

(x) Confidential Data

Source: For 1971: 1983 Census of Manufacturers (Annual). For 1984 and 1985: Employment and Earnings (survey of all manufacturers on monthly basis).

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4. MAJOR FIRMS

Name	Ownership	Plant Location	Concentration % of Domestic Market
1. Dominion Textile Inc.	CANADA	Quebec and Ontario	n.a.
2. Dupont Canada Inc.	U.S.A.	Kingston, North Bay, Ont.	n.a.
3. Celanese Canada Inc.	U.S.A.	Drummondville, Que. Millhaven, Ont.	n.a.
4. Peerless Carpet	U.S.A./ CANADA	Actonvale, Que.	n.a.

DRAFT - PROJET

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE

TOILET PREPARATIONS

1. STRUCTURE AND PERFORMANCE

a) Structure

The toilet preparations sector manufactures a wide range of products used on or about the human body to clean, beautify and promote attractiveness. The products can be classed broadly into five categories: cosmetic, fragrance, hair care, personal care, and miscellaneous preparations.

Manufacturing in Canada consists largely of batch-type operations, involving blending of raw materials, filling into retail-size containers, packaging for shipment to retailers and testing for quality. In Canada, manufacturing and packaging equipment is semi-automated, flexible in operation and low in capital intensity. The production facilities tend to be quite small, while the associated finished product warehouses tend to be many times larger. On the other hand, typical U.S. operations are much larger and employ more sophisticated, highly automated computer-controlled equipment designed for large production runs.

In 1984, the Canadian industry employed some 8,900 persons (4,300 persons in production-related activities) and generated shipments amounting to some $960 million.

The Canadian toilet preparations industry is heavily oriented to the domestic market which is evidenced by the fact that the Canadian market consumes some 97% of the domestic shipments. It is located almost exclusively in Montreal and Toronto, close to the major Canadian markets.

The Canadian industry may be seen as consisting essentially of two major segments which are distinguished by ownership and nature of activity. The larger segment consists of Canadian subsidiaries of foreign-owned multinational companies. These companies produce and market a wide range of products and account directly for over 75% of Canadian shipments. Thirteen of the 14 largest firms operating in Canada are foreign-owned, 11 by American and 2 by European companies. Avon is the largest company in Canada (and in the world), and such names as Revlon, Clairol, Fabergé and L'Oreal are widely known. The domestically-owned segment of the industry generally consists of relatively small manufacturers, typically with sales of less than $5 million. These include firms which produce and market for their own account, firms which are licenced to manufacture and distribute on behalf of foreign-owned companies, and firms which manufacture on a custom basis, principally for major multinationals, and, to a lesser extent, small Canadian marketers of toilet preparations who do not manufacture themselves. An exception, in terms of size, is CCL Industries Inc., a large diversified Canadian custom manufacturer which produces a complete range of toilet preparations. Domestic manufacturers tend to be very flexible, versatile and specialize in smaller production runs.

Vertical integration in the Canadian industry is not significant. Concentration ratios in the industry are 28% market share for the top 3 firms and 76% for the top 16 firms. Horizontal integration is more prevalent in this industry since some toilet preparations overlap or are similar to products produced by the pharmaceutical and soap and cleaning products industries.

By way of comparison, the American toilet preparations industry, with shipments of $10.2 billion U.S. in 1984 is approximately 15 times larger than the Canadian industry. This industry is highly concentrated as four large firms account for 40% of industry shipments.

b) Performance

The real average annual growth rate of shipments by the industry in Canada was 3% from 1974 to 1979 and 5% from 1979 to 1984. Exports which accounted for $5 million or 1.6% of shipments in 1974 increased to $31 million or 3.3% of shipments in 1984. While imports, which were $23 million or 7% of the Canadian market in 1974, increased to $116 million or 11.1% of the Canadian market in 1984. Employment in the industry was 8,900 in 1984 up from 6,160 in 1974.

Although the industry was previously viewed internationally as recession-resistant, industry unit sales are now expected to level off. Industry forecasts are currently 2% or less real growth in Canada over the next two or three years, with higher growth rates being exhibited by only a few products such as hair mousse and health-related products. Industry representatives have attributed the slower projected growth to a decline in discretionary income of its prime target market and to changing consumer behaviour. Investment in the toilet preparations sector in the last decade has been relatively insignificant and has been in the $10-20 million range each year.

The overall financial health of the industry is good. After-tax profit on captial employed averaged 10% over the five-year period ending 1982. The sector is responding to lower growth in unit sales by introducing fewer major new products with high marketing costs and utilizing extensions of existing lines or complementary products to build new sales.

2. STRENGTHS AND WEAKNESSES

a) Structural

The Canadian industry is essentially a branch plant sector oriented to serve the relatively small domestic market. Canadian companies do not benefit from meaningful economies of scale as most characteristically operate one shift at a single manufacturing facility, regardless of its size.

The Canadian industry currently has a slight disadvantage in some input costs. For example, raw materials used by Canadian manufacturers of toilet preparations, which on average account for some 15-20% of the value of shipments, tend to be more expensive due to smaller quantity purchases as well as applicable import tariffs. Almost all scent materials are imported through subsidiaries of specialty fragrance houses which formulate fragrances on a world-wide basis. About 50% of other raw materials are also imported, often in the form of bulk concentrates from the parent organization. Packaging materials used by Canadian manufacturers, which on average account for 15% of the value of shipments are primarily sourced in Canada. With the exception of some relatively more expensive imported containers and components, packaging costs to Canadian manufacturers would be comparable to those incurred by U.S. manufacturers.

By contrast, the large U.S. plants are fully automated in both manufacturing and packaging, utilizing the latest in high speed production and packaging equipment. The large U.S. firms have a few massive rationalized facilities and up to 6 distribution centres located strategically across the country. One very large firm has 3 U.S. facilities, each producing 300 products instead of the 850 produced at its subsidiary's plant in Canada. The economies of scale for production and packaging enjoyed by larger U.S. plants are not available to Canadian plants. In most cases, the capacity at U.S. plants is so great that a 10% increase to a production run in order to satisfy Canadian demand would not be difficult.

Transportation costs can be an important factor in favouring local production for many low-value, relatively bulky products such as shampoos, conditioners, creams, toothpaste and toilet water. However, this would not be important in the case of high-value products such as perfumes.

For this highly consumer-oriented sector, however, production and packaging costs represent only some 40% of the value of domestic shipments. Recognizable brand names, advertising and marketing costs are equal if not more important factors than production and packaging costs in determining commercial success. In this context, the small independent Canadian toiletry manufacturer suffers a major disadvantage in relation to the Canadian subsidiaries of U.S. multinationals. The latter benefits from both the financial strength of the parent company as well as the spillover effect of advertising promotion in the North American media.

At the same time, there are several major custom manufacturers which produce a wide range of products and are quite efficient. In fact, some are internationally competitive with U.S. custom manufacturers in certain areas such as aerosol filling and certain medicated skin creams. For custom manufacturers, flexibility, versatility and the ability to respond quickly to fill special orders is more important than the lower costs associated with economies of scale. Custom manufacturers are often asked to manufacture new products until the latter gain sufficiently wide market acceptance for the multinational companies to commence manufacturing themselves. The major market for Canadian custom manufacturers are the Canadian subsidiaries of the U.S. multinationals.

b) Trade Related Factors

Canadian tariffs are currently 15% ad valorem and are being gradually reduced to 10 or 11% ad valorem by 1987 as a result of the last round of GATT negotiations. Rates for the corresponding toiletry tariff items in the United States start at 7.5% ad valorem and will be reduced to 5% ad valorem by 1987. Competition by lesser developed countries and newly industrialized countries in finished toiletry products is almost non-existent although many are the source of naturally occurring fragrance essences.

Metric sizing, labelling requirements and Health and Welfare regulations are viewed by the industry as a minor deterrent to trade, since U.S. and other foreign requirements and regulations are not totally compatible with those which exist in Canada.

c) Technological Factors

Product formulations are generally developed in the research centres of multinational corporations, specialty fragrance houses and in Canada by custom manufacturers to the specifications of their customers. Since subsidiaries have ready access to the formulations of their parents and do not carry out research and development activities in Canada, few if any truly unique products or fragrances have been developed in Canada.

Canadian research and development in this sector is very insignificant and is essentially comprised of blending various proportions of known raw ingredients to formulate a slightly different product.

The applicable technology to meet Canadian production, packaging and warehousing requirements is freely available from the relevant equipment manufacturers, and thus, does not pose any barrier to potential entrants to this industry.

d) Other Factors

Changes in Canadian consumer demand or the introduction of new competing products require quick reactions and close control of inventory. Since Canadian requirements often differ from U.S. requirements, these factors encourage foreign companies to maintain more than a simple warehousing presence in Canada.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

One of the most important federal policies impacting on the cosmetics industry is the Food and Drugs Act administered by Health and Welfare Canada. This Act controls the sale of cosmetics to safeguard the health of the user and to ensure good manufacturing practices. There are also specific requirements on the labelling of food, drugs and cosmetics in pressurized (aerosol) containers. Part E of the cosmetic regulations of the Food and Drugs Act specifies cautionary labelling, packaging and notification requirements, and prohibits certain raw materials and advertising claims.

In 1981, the federal sales tax was changed from a tax at the manufacturers' sales level to a wholesale tax system where the taxable event is the last sale to retailers or users. Companies who sell directly to the public, such as Avon and Mary Kay, could incur federal sales taxes which are 30% higher than those companies who sell through wholesalers or to retail stores. This is due to the fact that the wholesale costs of direct sellers include marketing and promotion costs. This results in less competitive prices and thus sales and profits for these companies have as a consequence declined.

With regard to federal financial assistance, the industry has made little use of programs except for a few grants under the IRDP for expansion of facilities in the Montreal area.

4. EVOLVING ENVIRONMENT

This industry sector is primarily consumer driven and, as such, changing consumer demands, whether influenced by advertising expenditures or not, dictate what products will be successful. Given the rapidly changing demographics, the numbers of re-entrants to the single lifestyle, and the continuing focus on physical attractiveness, there will be increasing demand for new products to meet the needs of older consumers, who are likely to have more disposable income than the current younger customers. Products which are expected to enjoy particularly high growth potential are those which have a health orientation or are intended for the older consumers, for example, plaque removers, wrinkle removers and hair growers.

Because of testing costs and the relatively low return, few new materials will be especially developed by or for the toilet preparations industry anywhere in the world. Any new materials will likely arise as a side-effect of research in the pharmaceutical industry, and efforts are likely to be concentrated on developing only a few products. Thus Canadian subsidiaries would be better situated to compete in this changing environment than the small Canadian-owned firms since the former generally have greater financial resources and will benefit from the research and development activities carried out by their parent companies.

5. COMPETITIVENESS ASSESSMENT

The Canadian toilet preparations sector is essentially a domestically-oriented sector consisting mainly of branch plants of foreign multinational companies manufacturing in Canada. Plants in Canada are typically small and produce a large number of products on short production runs using semi-automated equipment.

Given the relatively high tariff protection, the importance of quick responsiveness to changing consumer needs, and other marketing and distribution considerations to achieve commercial success in this sector, most multinational firms have found it advantageous to maintain a major presence in Canada, even when faced with poor production economics for existing plants. With the exception of certain custom manufactured niche products, Canadian operations generally are not internationally competitive.

Prepared: Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
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Date: JUL 11 1986

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DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: TOILET PREPARATIONS **SIC COVERED:** 377

1. PRINCIPAL STATISTICS

	1974	1980	1981	1982	1983	1984
Establishments (SIC 377)	60	80	80	74	84	88
Employment (SIC 377)	6,161	6,966	7,280	7,769	8,785	8,900
Shipments ($ millions)*						
SIC 377 - Toiletries	236.9	503.8	587.8	652.4	742	805
SIC 376 - Soaps	42.8	85.2	100.8	109.5	109	130e
SIC 374 - Pharmaceuticals	33.1	35.4	29.8	23.7	20	25e
Total	312.8	624.4	718.4	785.6	871	960
GDP (1971 = 100)	108.0	138.6	149.4	142.6	154.6	145.5
Investment ($ millions)	10.8	15.8	18.6	18.9	18.7	21.9
Profits After Tax ($ million)	11.1	22.6	33.8	30.5	36.4	30.0e
(% of income)	4.7	3.0	4.1	3.6	3.9	3.1e

2. TRADE STATISTICS

	1974	1980	1981	1982	1983	1984
Exports ($ millions)	4.9	12.6	19.6	21.2	30.4	30.6
Domestic Shipments ($ millions)	307.9	611.8	698.8	764.4	840.6	929.4e
Imports ($ millions)	22.6	83.9	80.7	81.3	98.8	115.8
Canadian Market ($ millions)	330.5	695.7	779.5	845.7	939.4	1,045.2e
Exports as % of shipments	1.6	2.1	2.8	2.8	3.6	3.3
Imports as % of domestic market	6.8	12.1	10.4	9.6	10.5	11.1

		U.S.	E.E.C.	ASIA	OTHER
Imports - % Total	1981	72	26	1	1
	1982	72	26	1	1
	1983	67	30	1	2
	1984	61	36	1	2
Exports - % Total	1981	72	4	2	22
	1982	74	5	3	18
	1983	80	3	2	15
	1984	84	2	3	11

* - The industry is well-defined statistically, falling primarily within SIC 377 - Manufacturers of Toilet Preparations, which accounted for 83% of manufacturers' shipments. The remaining shipments originate from enterprises classified to SIC 376 - Manufacturers of Soap and Cleaning Products (14%) and SIC 374 - Manufacturers of Pharmaceuticals and Medicines (3%). About 7% of the production of enterprises in SIC 377 consists of products such as toilet soaps and medicated preparations which could be attributed to the other two industries.

e - estimated

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments (% of total)	-	39	52	1	8
Employment (% of total)	-	46	53	-	1
Shipments (% of total)	-	48	52	-	-

4. **MAJOR FIRMS**

Name	Ownership	Location of Major Plants
A) 500 - 999 Employees		
Avon Canada Inc.	U.S.A.	Montreal
Gillette Canada Inc.	U.S.A.	Montreal
Warner-Lambert Canada Inc.	U.S.A.	Toronto
B) 200 - 499 Employees		
CCL Industries Inc.	Canada	Toronto
Cosmair Canada Inc. (L'Oreal)	France	Montreal
Revlon Canada Inc.	U.S.A.	Toronto
Kolmar of Canada Inc. (Private Brand)	U.S.A.	Barrie, Ontario
Fabergé of Canada Ltd.	U.S.A.	Toronto
Chesebrough-Ponds (Canada) Inc.	U.S.A.	Toronto
Beecham Canada Inc. (Yardley)	Britain	Toronto
Bristol-Myers (Clairol)	U.S.A.	Knowlton, P.Q.
Estée Lauder Cosmetics Ltd.	U.S.A.	Toronto
Richardson-Vicks Ltd.	U.S.A.	Toronto
Noxzema Inc.	U.S.A.	Toronto
C) Other Large Firms Outside SIC 377		
Colgate-Palmolive Canada	U.S.A	Toronto
Lever Detergents Ltd.	U.S.A	Toronto
Procter and Gamble Inc.	U.S.A	Toronto
Johnson and Johnson Baby Products	U.S.A	Guelph, Ontario

N.B. SIC codes are based on the 1980 revision

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DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE
Toys and Games Industry

1. STRUCTURE AND PERFORMANCE

A) Structure

The toy and game industry comprises three broad product groups. The first covers a wide range of board, skill/action and video games, puzzles and play toys (73% of 1985 industry shipments). The second consists of dolls, dolls' clothing and stuffed animals (21%). The third includes children's vehicles such as bicycles (wheels under 14" in diameter), tricycles, sleighs, toboggans, scooters and plastic ride-ons (6%).

In 1985, there were an estimated 98 establishments employing 3,900 workers with shipments of approximately $340 million. Imports in 1985 were $325 million which represented 53% of the domestic market. Exports were $56 million representing 17% of shipments. The industry is concentrated in Toronto (51%) and in Montreal (30%) which offer access to large labour pools as well as to input materials and sub-contracting facilities such as plastic moulding, packaging and sewing.

The majority of toy and game companies are domestically-oriented, manufacturing products under license whose export rights tend to be controlled by the licensors. The production of labour intensive output (dolls, stuffed animals, highly specialized/sophisticated toys) is being relocated to low cost offshore producers while the majority of production domestically is for bulky items where transportation becomes a significant cost consideration. The industry has shifted much of its activity to assembly and packaging operations. Canadian operations are also often used to satisfy short-term U.S. and offshore MNE capacity constraints.

The industry is dominated by a few large operations which produce a wide range of product lines under license and account for the largest proportion of output. In 1985, 21 of the 98 companies produced 88% of industry shipments. As well, there is a preponderance of small privately-owned, family-operated companies. In 1985, 68% of all companies employed less than 20 people but together they accounted for only 7% of total employment and industry shipments. Most of the smaller Canadian-owned firms specialize in one or two product lines.

Foreign ownership is significant in the industry with most larger firms being subsidiaries of U.S. MNEs. In 1985, foreign controlled companies represented 40% of domestic establishments and 68% of industry shipments. Both foreign ownership and dominance of larger operations have increased since 1973.

The structure of the U.S. industry is comparable to that of Canada in some respects and is also under similar import pressures. For instance, it is dominated by a small number of relatively large manufacturers. Of the 1,031 establishments only 13% have 100 or more employees but account for more than 85% of the value of industry shipments. New York, California, Illinois and Ohio are the major producing states and account for 73% of industry shipments.

B) Performance

The demand for toys and games is highly cyclical as well as seasonal. Sales are heavily influenced by changes in personal disposable income, the level of consumer confidence and fads (Trivial Pursuit, Cabbage Patch and Wrinkles).

During the 1973-85 period industry shipments grew at a real average annual rate of less than 2 per cent. During this period the industry became more capital intensive as the more labour intensive activities were, and continue to be, shifted to lower cost offshore producers. Consequently, employment declined by more than one per cent annually, from about 4400 to 3900 persons over the period.

The number of establishments has increased erratically from 63 in 1973 to 98 in 1985. These new establishments are primarily small operations, with up to four employees, set up to take advantage of new consumer demands such as the renewed board game market created by Trivial Pursuit. It is expected that in the medium-term the number of establishments will decline to more traditional levels.

Prior to Trivial Pursuit (1973-83) exports grew more slowly than shipments (7 per cent versus 7.5 per cent in current dollar terms). As a result, the industry's export orientation declined from 14 per cent to less than 12 per cent. Subsequently, exports as a share of shipments have increased significantly as a result of the Trivial Pursuit phenomenon but are already showing signs of returning to more traditional levels.

Over the past ten years the U.S. has been the major market for Canadian manufactured or assembled toys and games, accounting for 91 per cent ($51 million) of exports in 1985. In the years prior to 1980 exports to the U.S. were mainly products where the North American demand was not sufficient to be economically produced by their U.S. parents (splasher pools, table top hockey games, plastic injection molded parts, board game parts and metal vehicle lines).

The U.K. and Australia are the second and third largest, but declining, markets for Canadian produced toys and games. In 1985 exports were $2.3 million (4%) and $0.9 million (2%) respectively.

In contrast to exports, imports have increased faster than Canadian consumption (15 per cent versus 12 per cent in current dollar terms). As a result, imported products are taking an increasing proportion of the apparent Canadian market for toys and games (42 per cent in 1973 to more than 53 per cent in 1985) and continue to place a severe strain on domestic producers.

Prior to 1981 the U.S. was the major supplier to the Canadian market. In 1985, imports of toys and games from the United States ($82 million) contained a large proportion of parts to be used in manufacturing products. However, in the past three years low-wage countries (such as Hong Kong, Taiwan and South Korea) have significantly increased their share of the apparent Canadian market. The structural shift of labour intensive activities to low cost, offshore producers is reflected in the increasing importance of imports from Asian countries. In 1985, 63% of Canadian imports were from Asian Countries, largely made up of finished items, including dolls, stuffed animals and die cast metal toys. These imports have displaced Canadian manufacturing.

The financial situation within this industry is difficult to assess since information is very limited at this level of detail. However, it is generally believed that the return on investment in this industry is less attractive than in many other industry sectors.

2. STRENGTHS AND WEAKNESSES

A) Structural Factors

The world toy and game industry is dominated by a few large (mainly U.S.) MNEs making allocation of production and promotional/marketing decisions on a global basis. This industry is characterized by increasing rationalization and concentration of manufacturing activity to enhance market shares and global MNE distribution systems. This has resulted in the North American industry being under severe import pressures as the manufacturing of the more labour intensive products are relocated offshore to lower-cost Asian countries and the North American industry becomes more and more assembly, packaging and distribution oriented.

The Canadian industry is basically a branch plant sector established to serve the relatively small domestic market behind high tariff walls. The industry benefits neither from meaningful economies of scale, nor from production cost advantages, nor from any other inherent attributes. As a result, the Canadian industry suffers major disadvantages not only in the global context but also in the North American context.

The impact of the differences in raw material costs (33% of the value of manufacturing shipments), labour rates (20%), transportation (up to 15%) and economies of scale between Canadian producers and their foreign competitors are significant factors when determining "make or buy" decisions. In this context, Canadian industry suffers significant disadvantages.

Material costs tend to be lower in the U.S. than in Canada due mainly to volume discounts. Many of the components and parts are U.S. sourced via intra-corporate transfers and are subject to tariffs and exchange rate differentials. In addition, there are several anomalies in the tariffs on imported toy parts where the finished products have a lower duty rate than the parts for these same complete toys. Shorter production runs and more frequent changeovers all contribute to higher costs of manufacturing. While labour rates are significantly lower in Asian countries, there is no significant difference between labour rates in Canada and U.S. for toy and game production workers. Transportation costs, on the other hand, may encourage production in Canada of larger, bulky toys.

Promotion in the form of sophisticated, costly advertising campaigns (Saturday morning T.V., films) and licensing is a critical element in creating demand for and selling toys. The U.S. industry is a world leader in the development of toys and games and is considered to be the most sophisticated country in introducing marketing, advertising and promotional efforts to support sales. This has resulted in spillover benefits for subsidiaries but also puts the smaller Canadian operations at a further disadvantage, and severely limits the potential success of new entrants.

In the above global and North American context, U.S. companies tend to license the manufacturing of large toys for the domestic market to Canadian operations, to offset short-term U.S. and offshore MNE capacity constraints or to give Canadian operations North American mandates for more mature and/or lower demand products.

The majority of larger firms in this sector are subsidiaries of large U.S. MNEs. This corporate linkage results in enhanced technology transfer, management skills, marketing skills, advertising, promotional and financial resources. In addition, these subsidiary companies bring in moulds (utilized for more than 25 per cent of domestic production) from their parent companies, under Temporary Entry Remission. This arrangement eliminates the costly duplication of dies and moulds for short production runs. On the other hand the foreign ownership has resulted in lack of independent marketing, constraints on exporting, low indigenous R & D, and restriction of product mandates to mature products.

B) Trade Related Factors

In 1987 the Canadian M.F.N. tariff rate on toys and games will vary from a low of 3.9% to a high of 17.6% and G.P.T. rates from 0% to a high of 11.5%. It is estimated that at least 63% of imports enter Canada under G.P.T. tariff rates. In 1985 more than fifty-five per cent of imports entered under the tariff item for which the 1987 M.F.N. and G.P.T. rates will be 12.5% and 8.0% respectively; another 23 per cent for which the 1987 M.F.N. and G.P.T. (dolls and stuffed animals) rate will be 15 and 10 per cent respectively. In 1987 M.F.N. tariff rates in the U.S. will range from 7% to 12%, the EEC from 6.9% to 10.5% and Australia from 10% to 25%.

There are no significant non-tariff barriers affecting Canada's trade in toys and games.

C) Technological Factors

With the dominance of foreign ownership the level of indigenous research, development and product promotion within the industry is at a very low level in comparison with the industries in the United States, Western Europe and Hong Kong. As a result, very few products are originally developed within the Canadian industry and/or first introduced into the Canadian market. The Canadian industry (both foreign and domestic controlled) depends upon outside sources, notably the United States, for purchased or licensed technology, new product ideas, inventions and fads.

D) Other Marketing Factors

The Canadian Toy Testing Council (C.T.T.C.) is a non-profit, quasi-government council which produces annual toy buyers guides for consumers based on safety, design, durability but most importantly "play" value. Because of its limited budget, the C.T.T.C. is not able to test all new toys entering the market. The industry has expressed concern that, if their toys are not recommended in the annual guide, by their exclusion, it puts some producers at a disadvantage and could mean loss of sales or consumer acceptance.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

There are no specific federal nor provincial government programs for the Canadian toy and game industry. In the area of industrial development, adjustment and international trade, horizontal programs such as IRDP, PEMD and PPP have been utilized.

The major regulations affecting the Canadian toy and game industry are the Packaging and Labelling Act as it applies to bilingual packaging, and the Hazardous Product Act which ensures toys are safe for children's use. In addition, the Province of Quebec introduced a law in April of 1980 banning TV advertising aimed at children under thirteen years of age.

In October of 1980, the Excise Tax Act was amended to expand the definition of a manufacturer to include the term marginal manufacturers (i.e. assemblers) for sales tax purposes and is considered to be a factor when determining whether or not to assemble products domestically or simply import finished goods.

4. EVOLVING ENVIRONMENT

The level of real personal disposable income is a major determinant of consumer expenditures on toys and games. With evidence of continued consumer optimism in early 1986, total personal expenditures are forecasted to show a strong gain of 4.5 per cent in 1986 with more modest increases of 2.3 per cent and 1.3 per cent for 1987 and 1988 respectively. As well, the number of children under 15 is increasing with baby boomers as delayed parents takes effect. Both these factors will push the demand for dolls, toys and games.

Recent trends in this sector indicate that toys are emerging as an important child development tool. Faced with less time to spend with their preschoolers but more money to spend on them, working parents are demanding toys that, in their absence, develop, educate and teach rather than merely entertain.

The restructuring of the North American industry with mergers, acquisitions and divestitures by MNEs to expand global distribution will produce a more concentrated industry composed of larger and stronger companies to be better able to exploit economies of scale. However, it is expected that domestic production will not keep pace with demand as the shift to low-wage, offshore facilities will continue to displace domestic production and employment, and exert strong import pressures.

5. COMPETITIVENESS ASSESSMENT

The Canadian toy and game industry is essentially a branch plant sector serving the domestic market and is dominated by a few large foreign MNEs which in effect control the industry world-wide. Plants in Canada are relatively small and do not benefit from meaningful economies of scale, production costs nor any other inherent advantages. With the increasing allocation of the more labour intensive production to low cost, offshore manufacturing facilities, the Canadian industry is becoming more and more oriented to packaging and distribution.

More specifically, due to the high labour content in most new toys and games, the importance of massive, sophisticated promotional campaigns, the important role licensing plays in the industry and the lack of any identifiable niche, the Canadian industry is not considered to be internationally competitive and will continue to be at a competitive disadvantage for the foreseeable future.

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DATE: JUL 24 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

FACT SHEET

NAME OF SECTOR: TOYS AND GAMES SIC(s) COVERED: 3932[A]

1. PRINCIPAL STATISTICS

	1973	1980	1981	1982	1983	1984	1985(E)
Establishments	63	80	81	76	74	96	98
Employment	4,408	4,156	3,860	3,241	3,000	3,878	3,900
Shipments ($millions)	98	240	250	215	240	330	340
Gross Domestic Product (constant 1971 $millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Investment ($millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Profits After Taxes ($millions)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(% of income)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. TRADE STATISTICS

	1973	1980	1981	1982	1983	1984	1985(E)
Exports ($millions)	13.7	31	36	31	28.4	84.6	56.3
Domestic Shipments ($millions)	99.9	219	214	184	211.6	245.4	283.7
Imports ($millions)	60.3	181	217	287	293.8	337.8	325.0
Canadian Market ($millions)	160.2	400	431	501	505.4	583.2	608.7
Exports - % of Shipments	14.0	12.9	14.4	14.4	11.8	25.6	16.5
Imports - % of Domestic Market	41.8	45.3	50.3	57.3	58.1	57.9	53.4
Canadian Share of International Market	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source of imports (%)

	U.S.	E.E.C.	ASIA	OTHERS
1981	38.7	7.2	49.7	4.4
1982	35.4	10.4	51.3	2.9
1983	43.0	10.7	44.0	2.3
1984	34.3	6.0	50.7	9.0
1985	25.3	5.9	63.0	5.8

Destination of exports (%)

1981	57.3	25.8	1.0	16.2
1982	55.1	18.8	2.0	26.0
1983	67.3	14.4	4.0	10.6
1984	92.9	3.8	2.6	0.7
1985	90.7	4.8	0.5	4.0

3. REGIONAL DISTRIBUTION - 3 yr avg.

	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.
Establishments - % of Total	4.1	30.2	51.1	8.3	6.3
Employment - % of Total	0.2	29.7	68.7	0.4	1.0
Shipments - % of Total	0.1	24.7	71.6	0.1	0.5

4. MAJOR FIRMS

	OWNERSHIP	LOCATION OF MAJOR PLANTS
Irwin Toy Ltd.	Canadian	Toronto
Coleco (Canada) Ltd.	U.S.	Montreal
Parker Brothers	U.S.	Toronto
Hasbro Canada Inc.	U.S.	Montreal

A: Based on 1980 SIC
(E): Estimate
N/A: Not available

DATE: _____

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DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE

WHOLESALE TRADE

1. INTRODUCTION

As with many service industry sectors where firms must be located close to their clients, the wholesale sector is largely a domestic industry which faces little direct international competition. Except for trading houses, competition in this sector occurs among firms serving the same domestic market. Hence, an examination of this sector at the macro level, as is done here, must concentrate on its efficiency, as this affects the costs of wholesale services and ultimately, the cost of goods handled by the wholesale sector. References to the wholesale sectors of other countries are included for comparison only, not as an indication of direct competition.

2. STRUCTURE AND PERFORMANCE

a) Structure

Wholesalers are classified either as wholesale merchants, who take ownership of the products they distribute and may operate warehouse facilities, or as agents and brokers, who for a commission, sell goods owned by others. Wholesale activity which primarily involves international trade is carried out by trading houses.

The function of wholesalers is to ensure that other businesses can buy products at the required time and place. Wholesalers are the market channel linking production and consumption. They are primarily engaged in buying merchandise for resale to retailers; to industrial, commercial, institutional, or professional business users; to other wholesalers; to farmers for use in farm production, or for export; or acting as agents in such transactions. In addition to the physical handling of goods, they also provide such services as buying for customers, selling for suppliers, assembly, warehousing, transportation and delivery, credit, assumption of risk, and advice on various aspects of marketing a product in Canada or abroad. Wholesalers of machinery and equipment may also service, repair, or lease the products they distribute. The importance of providing these services, coupled with the need for an indepth knowledge of their market, requires that wholesalers be located close to the market they serve. As a result, competition is regional, not international, in scope, and the right of establishment becomes the primary issue in international trade discussions.

Wholesale markets tend to be regional or provincial in size. At times, they extend to neighbouring provinces. The location of wholesale business is closely linked to the distribution of population and the geographic concentration of industry in Canada. Those involved in international trade frequently locate their business near shipping points. In Canada, this increases the wholesale activity of Ontario, Quebec and British Columbia.

In 1985, some 55,000 wholesale establishments provided employment for 513,000 people, or about 4.4% of the employed labour force, and generated sales of about $250 billion. Approximately 80% was generated by wholesale merchants, with agents and brokers accounting for the remainder. Sales by subsector in 1983 (the latest year for which data are available) were:

Sub-Sector	% of Sector Sales
Food products	17.3
Petroleum products	16.1
Machinery, equipment & supplies	15.7
Farm products	13.4
Motor vehicles and accessories	6.0
Lumber and building materials	6.4
Metal products	5.2
Hardware, plumbing & heating	2.6
Tobacco and drugs	2.4
Other wholesalers	14.9

The wholesale sector is heavily concentrated. Although the majority of firms are small businesses, the sector also contains some of Canada's largest companies. In 1983, 91% of sector sales were generated by 6% of wholesalers. Data is difficult to get, but using 1979 as an example, the leading 100 wholesale firms accounted for 48% of sector sales, while the top 25 firms were responsible for 30% of sales. That same year, the eight leading firms generated between 51% and 76% of sales in such subsectors as petroleum products, farm products, paper products, tobacco and drug products and metal products. In the other subsectors, the 8 leading firms generated from 13% to 39% of sales.

Foreign ownership in the wholesale sector has been declining over the last 10 years, due in large part to the acquisition of foreign firms by Canadians, especially in the petroleum sector. Foreign controlled firms accounted for 25% of wholesale sales in 1983, a decline from 29% in 1974. The wholesale merchant segments of the industry (excluding brokers and agents) is more highly concentrated. The most recent data for this segment show that 35% of total sales were generated by foreign controlled firms.

The wholesale industry contains some of Canada's leading export merchants and trading houses. The largest are foreign controlled, with the sector being dominated by Japanese trading houses, for example Mitsubishi and Mitsui. In 1983, direct exports (goods for which they take ownership) by wholesale merchants were $18.4 billion or 13.2% of net sales up from 11% in 1977. In addition, wholesale merchants, agents and brokers facilitated the movement of an additional $3.4 billion in exports on a commission basis for other companies. Together, this amounted to over 24% of total Canadian exports in 1983. Large trading houses account for a significant portion of the exports of the wholesale industry.

In 1983, wholesale merchants directly imported (goods which they take ownership of) $15.8 billion in goods and, together with agents and brokers, handled another $2.8 billion on a commission basis. This represented 15.3% of total wholesale purchases and 20.5% of total Canadian imports. Machinery and equipment, food, and motor vehicles and accessories are the principal import items.

b) Performance

The industry's share of real GDP (1971) was 5.3% in 1984. From 1971 to 1980, annual growth in GDP for wholesale trade averaged 6.0%, compared to 4.7% for all industries. For the 1980 to 1984 period, annual growth in GDP for wholesale slowed to 1.7%, slightly better than the 1.5% average for all industries. Gross profit margins for the industry stood at 15.9% in 1983, an improvement over the previous few years, but below the peak established in 1975.

The recession of the early 1980's caused many firms to undertake major restructuring programs, shedding marginal product lines, closing warehouses and reducing staff. Most have since recovered with leaner operations. Industry sales increased 10 - 16% annually since 1983. Productivity, as measured by sales to inventory and real GDP output per employee hour, is improving.

3. STRENGTHS AND WEAKNESSES

a) Structural

In general, the Canadian wholesale industry compares favourably with other industrialized countries, including the U.S., in terms of productivity, and efficiency. To maintain this level of performance while serving a small population over a large geographic area, the industry has become highly concentrated to take advantage of economies of scale. Large multi-million/billion dollar firms have emerged, capable of assembling and maintaining adequate levels of inventory and with the facilities and equipment necessary to distribute goods in an efficient manner.

Many wholesale firms are integrated into the manufacturing or retail sectors, using these direct linkages to strengthen their market positions. In some sectors of wholesaling (food, farm products) co-operative marketing organizations exist to assemble and market the products of their members or to supply members with products. Petroleum product wholesalers are often part of large vertically integrated oil companies (Petro Canada) or act as their agents. Wholesalers in the plumbing (Emco), food (Loblaws/Weston) and other sectors are often conglomerates with manufacturing and/or retailing operations. Wholesalers of consumer products in the food (Provigo), hardware (Howden), drug (Drug Trading) and automotive (Canadian Tire) sectors often sponsor franchised or voluntary retail groups(1).

b) Trade Related

Sector exports to the U.S. tend to be handled by merchants, agents or brokers. The successful penetration of other foreign and overseas markets requires specific knowledge of products and market conditions, and are usually served by trading houses which specialize in related goods and selected countries. To acquire the required expertise, the more successful trading houses develop a presence at both ends of the export chain, either through establishment or by developing close ties with organizations, often other trading houses, in other countries.

The Canadian trading house sector is dominated by multi-billion dollar, foreign-owned (usually Japanese) organizations which have chosen to establish here rather than use the services of existing firms. Initially established here to source Canadian resource products and to distribute foreign made goods, they are now diversifying the range of goods exported from Canada and placing more emphasis on worldwide markets. Many are also expanding their services to include export financing, contracting and consulting. At the root of much of their success are the policies of their home countries, some of which restrict the right of establishment or encourage a strong domestic industry through special legislation and financing arrangements. As trading houses rely on domestically produced goods for their exports and on manufacturers as consumers of their imports, a strong domestic trading house industry can positively impact a country's producing industries.

Canadian trading houses lack the linkage to industry which has allowed Japanese firms to evolve and develop a broad revenue base. The lack of domestic expertise in international marketing, the small size of many Canadian trading houses and the lack of financial resources inhibit them from achieving their export potential, while the industrial structure of Canada and its dependence on resource industries limits the type, size and number of companies in a position to export. In addition, manufacturers have only recently recognized the export capability of trading houses, a situation which delayed the development of the sector.

(1) A group of independent businesses joined together on a horizontal basis to benefit from a common name, advertising and bulk wholesale purchasing.

The sale of other wholesalers who export to the U.S. market have been strengthened by the lower value of the Canadian dollar.

Entry into the export/import market is seen by an increasing number of wholesalers as a means of offsetting slower growth in domestic consumer or industrial markets. In sectors where Canada is not competitive, or where little manufacturing capacity exists, wholesalers are likely to be actively involved in importing. Foreign controlled wholesalers have a higher propensity to import than domestically controlled firms (25% of sales versus 9% by Canadian firms in 1978). U.S. controlled firms have historically accounted for a significant portion of these imports (up to 23%).

c) Technology Related

Large firm size in the automotive, construction equipment, hardware and plumbing, drug, and food sectors has enabled Canadian wholesalers to keep abreast of changes in distribution technology. The potential impact of automation on the industry's operations is likely to become more dramatic with the recent advances in micro-processing technology and the intersection of computer and telecommunication technologies. There is a growing interest in electronic order taking for example, to link the manufacturing, wholesale and retail sectors.

Fully automated warehousing is in its infancy and is found only in larger firms due to its high costs. As an alternative, many wholesalers have found that the efficiency of conventional warehouses can be improved significantly by establishing standards of performance for each job, incentive programs for workers and computerized inventory control and information systems. These developments offer opportunities for improving the competitiveness and efficiency of wholesalers, allowing them to strengthen their position in the marketplace.

4. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

Much of the legislation (e.g., labour, transportation) affecting the wholesale industry comes under provincial jurisdiction. At the federal level, the tax system and trade policies are of significance. There are no sector specific assistance programs designed solely for the wholesale industry. However, the industry does benefit from a number of more broadly based programs, some of which are outlined below.

Federal Business Development Bank (FBDB) has provided financial services and management services such as counselling to a variety of small businesses including the wholesale industry. A number of provinces have similar programs.

The Small Businesses Loans Act encourages lenders in the private sector to make term loans to small businesses. The wholesale industry makes some use of this program and in 1983 accounted for 3.3% of the funds borrowed. Retailers sponsored by wholesalers through franchised or voluntary groups make extensive use of this program.

Government export programs (PEMD, PPP, EDC) have been utilized by wholesale organizations and trading houses. In 1984, trading houses, including agents, accounted for 5% of the applications and 3% of the funds allocated under PEMD. A large majority of the users were small trading companies handling manufactured goods. With respect to trade fairs and missions (PPP activities) trading houses have participated only marginally.

5. EVOLVING ENVIRONMENT

Slow population growth has increased competition for distributors of consumer products and distinctions between wholesalers of these items and retailers are becoming increasingly blurred as both expand into the other's market. Some wholesalers have moved more heavily into sponsoring franchised retail outlet (Acklands), while a growing number

of retailers (Steinberg) have expanded into wholesaling. One new concept known as a "wholesale warehouse club outlet" sells to other businesses as well as to consumers.

Manufacturers are evaluating their wholly-owned and operated wholesaling operations and in some cases are switching to independent wholesalers if this will allow goods to be delivered more efficiently. To stay competitive and keep abreast of more rapidly changing markets, wholesalers are being forced to improve their marketing capabilities. To assist in this process they are investing more heavily in computer systems to allow a more rapid flow of information about inventory and orders.

Following a sales increase of about 16% in 1985, wholesale sales are expected to moderate somewhat in 1986. Although growth will vary by sector, wholesaling is likely to continue to outperform overall growth in the economy during the rest of the 1980s as well. The expected strong growth in retailing, particularly of consumer durables, will benefit wholesalers of consumer goods. Although some wholesale markets in the resource industries (mining, lumber and farming) are still experiencing weakness, the investment intentions of industry are improving which bodes well for wholesalers. The recent drop in the Canadian dollar against a number of foreign currencies (Japan, Europe) and continued weakness against the U.S. dollar should enable wholesalers to maintain or increase export sales and make it easier for them to find new markets. However, protectionist trends in the U.S. are an area of concern.

An increasingly important feature of global trade is countertrade, which encompasses all transactions where a sale to a public or private sector importer is conditional upon a reciprocal purchase or undertaking by the exporter (e.g., barter, buyback, offset and bilateral agreements). Countertrade accounts for an estimated 10% of global trade, and involves countries in all stages of development, including the U.S., Japan, Korea and a number of Eastern European countries.

6. COMPETITIVE ASSESSMENT

The wholesale sector faces competition from manufacturers and retailers for its position in the distribution channel. Since the early 1980s, wholesalers have been adjusting to the more competitive environment and have been making efforts to improve their productivity. Although the sector is generally healthy and well positioned to meet this competition, the industry must continue to improve its performance including output per employee and inventory turnover. This will require more sophisticated management, better trained employees and continued investment in computerized inventory control and information systems.

The large wholesalers who dominate sector sales have the resources to meet these challenges; small firms which comprise the majority of establishments will face greater difficulties. Canadian owned wholesalers face the additional challenge of competition from foreign-owned wholesalers, many of whom are larger and more capable of meeting these challenges.

Expansion in foreign markets is expected to continue as more firms outgrow their Canadian market and as others, such as trading houses, increase their international networks. As countertrade becomes increasingly important in international trade, Canadian owned trading houses and other exporters will be required to increase their expertise in this area, as well as develop the large financial base needed to transact this type of trading activity.

Prepared by: Service Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: JUN JUIN 6 1986

DRAFT - PROJET

FACT SHEET

THE CANADIAN WHOLESALE INDUSTRY

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984
Establishments	N/A	N/A	55,955	49,522	52,288	N/A
Employment	356,000	478,000	495,000	480,000	474,000	489,000
Sales ($ billions)	N/A	N/A	176.4	172.7	189.9	212.7[1]
GDP (% of total-constant $)	4.8	5.4	5.4	5.0	5.1	5.3
Exports ($ billions)						
a) Own Account Basis	N/A	N/A	15.9	16.82	18.4	N/A
b) Commission Basis	N/A	N/A	N/A	N/A	3.4	N/A
Imports ($ billions)						
a) Own Account Basis	N/A	N/A	N/A	N/A	15.8	N/A
b) Commission Basis	N/A	N/A	N/A	N/A	2.8	N/A

Note 1: Estimated

2. FINANCIAL STATUS

	1971	1980	1981	1982	1983	1984
Investments (constant 1971$)						
Capital (millions $)	87.3	237.3	237.8	218.2	295.4	304.1
Repair (millions $)	27.2	50.3	45.1	53.3	48.0	52.9
Profitability (after tax)						
Total Income (%)	2.1	1.9	1.6	0.8	1.2	N/A
Equity (%)	9.8	13.3	10.3	4.9	6.9	N/A
Capital Employed (%)	8.3	11.0	8.6	4.1	5.8	N/A
Debt						
Long Term Debt to Equity (%)	15.6	13.5	17.4	18.1	16.8	N/A
Productivity						
Sales to Inventory (Times)	6.0	6.6	6.4	6.5	6.7	N/A
Real GDP Output Per Employee Hour ($)	N/A	6.89	6.84	6.30	7.29	7.62

3. REGIONAL DISTRIBUTION 1982

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments	6.5	25.2	36.0	19.3	13.0
Employment	6.7	23.3	23.3	22.3	12.3
Sales	4.2	20.1	27.5	27.5	11.2

4. FOREIGN TRADE

	U.S.	E.E.C.	ASIA	Others
Imports - % of Total 1981				
1982		Not Available		
1983				
Exports - % of Total 1981				
1982		Not Available		
1983				

5. MAJOR FIRMS - See Attached List

Source: Statistical information is based on Statistics Canada data.

MAJOR FIRMS

THE CANADIAN WHOLESALE INDUSTRY

NAME	ANNUAL SALES [1] ($000)	OWNERSHIP
Automotive		
Canadian Tire	2,077,742	Canadian
Acklands	377,086	Canadian
Drugs		
Drug Trading Co.	375,117	Canadian
Farm Products		
Canadian Wheat Board (Crown Corp.)	4,121,000	Canadian
Saskatchewan Wheat Pool	2,023,491	Canadian
Cargill Ltd.	1,557,399	American
Food		
Loblaw Co. Ltd.	6,931,000	Canadian
Provigo Inc.	4,746,100	Canadian
Oshawa Group Ltd.	3,102,447	Canadian
Core-Mark International Inc.	2,284,590	Canadian
Machinery & Equipment		
Finning Tractor & Equipment Co. Ltd.	533,819	Canadian
Wajax	289,944	Canadian
Metals		
Marshall Drummond McCall Inc.	289,715	Canadian
Plumbing and Heating		
United Westburne Industries	1,133,342	Canadian
Trading Houses		
Mitsui & Co.	1,817,064	Japan
Mitsubishi Canada	1,279,564	Japan
Marubeni	779,000	Japan
Sumitomo	724,000	Japan
C. Itoh & Co.	677,388	Japan

Note 1: Sales may include U.S. sales of Canadian firms as well as some non-wholesaling activities.

Source: The Financial Post 500, Summer 1986.

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

COMPETITIVENESS PROFILE (REVISED)

WIRE AND WIRE PRODUCTS

OCTOBER 1986

DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION

DRAFT - PROJET

COMPETITIVENESS PROFILE

WIRE AND WIRE PRODUCTS, S.I.C. 305 (REVISED)

1. STRUCTURE AND PERFORMANCE

a) Structure

The wire and wire products industry includes the operations of establishments primarily engaged in drawing wire from rods and in manufacturing nails, spikes and staples, bolts, nuts, rivets, screws, washers, wire fencing, screening, wire cloth, barbed wire, welding wire, coil chain, uninsulated wire rope and cable, kitchen wire goods and other wire products. Electrical wire and cable are not included.

The Canadian wire and wire products industry is dominated by three primary steel producers (Stelco Inc., Sidbec-Dosco and Ivaco Inc.) which both manufacture and distribute wire products and supply most other non-integrated producers with raw input in the form of wire rod and wire itself. Imported wire rod is also a significant factor on the Canadian scene. The relationship with rod suppliers is the important backward linkage of this industry.

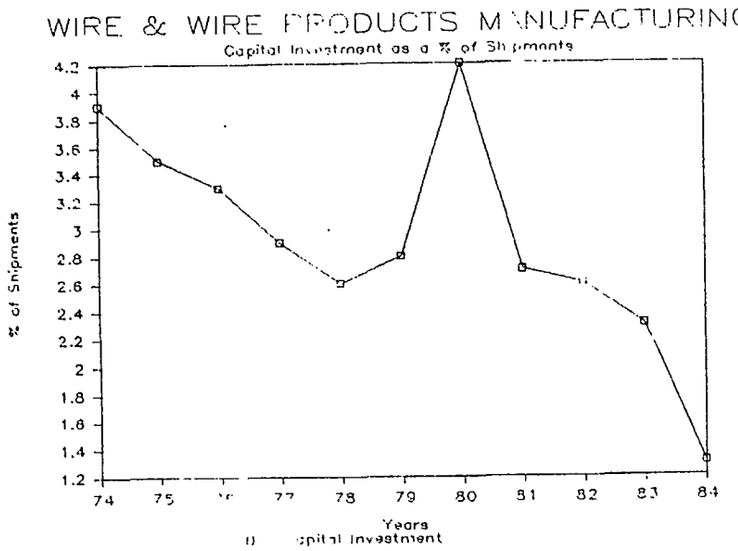
Activity in the wire and wire products industry is cyclical, being closely tied to the demand for manufacturing, particularly consumer durables, and to the tempo of the construction industry. Early in the 20th century sales to the agricultural sector were a significant factor in the demand for wire products, however, at present less than 3% of shipments are farm-related.

The wire sector consists of 309 establishments with 13,000 employees and shipments of $1.3 billion, with about 24% being exported. Imports supply about 25% of the Canadian market. Manufacturing activity is distributed across all provinces except Newfoundland, P.E.I., New Brunswick and Saskatchewan. Ontario accounts for 57% of shipments (60% of employment), Quebec for 38% of shipments (34% of employment). Manufacturing plants tend to be small, 78% employing fewer than 50 persons. The three major firms, however, produce over 40% of the total national output. The industry is 80% Canadian controlled and privately owned except for that part represented by the Sidbec-Dosco wire, nail and industrial fastener operations.

b) Performance

Little data is available by which to measure the financial health of individual companies since none of the major Canadian firms report financial information on wire and wire products operations alone. Statistics Canada Catalogue 61-207 indicates that the industry annual after tax profit over the 10 years ending 1983 has averaged 5.3% of revenue, with a high of 12.9% in 1978 and a low of 1.0% in 1982. By comparison the average annual after tax profit for all metal fabricating industries over the same period was 4.4%. In the past year industry sources have reported "good" financial results for those facilities shipping into the automotive market but "disappointing" results for plants serving the construction and appliance industries. Employment has been lost in establishments producing wire rope, nails, wire shelving and trays, chain link fence and reinforcing wire mesh. Employment appears to have increased in the chain producing area through the resumption of operations of Columbus McKinnon Limited.

Although shipments have virtually doubled in dollar value over the period '73 to '82, capital investment has not reflected the same growth. The following table (over) illustrates the gradual decline in wire producing investment expressed as a percentage of total shipments.



The lagging pace of investment has been due principally to the fact that the 3 major producers had other interests. Stelco's major expansion in the past decade has been a new primary steel plant on Lake Erie. Ivaco has grown rapidly in the U.S. Sidbec Dosco chose to integrate backwards into ore production.

2. STRENGTHS AND WEAKNESSES

a) Structural

Wire and wire-based products are produced by almost all countries having a primary steel industry. Rod rolling and wire drawing are normal first steps in the forward integration of an expanding steel sector. As a consequence the rapid post-war growth of the Japanese steel industry was accompanied by vigorous export marketing of the standard wire products such as industrial fasteners, common configurations of wire rope and the most widely used grades of wire itself. The burgeoning steel industries of the Republic of Korea, Brazil and China are now following the same export strategies, competing for a share of the world market for conventional wire products. At the same time some countries which urgently need hard currencies are encouraging the export of common wire items. As an example, Polish nails and barbed wire have had a depressing effect on prices in North America.

Canadian manufacturers are generally not capable of competing profitably against off-shore producers of mass produced wire products such as common fasteners. The major weaknesses of the industry include uncompetitive labour costs relative to low labour cost of off-shore producers, a small dispersed domestic market and a strong currency relative to that of off-shore competitors. Although Canadian producers generally remain competitive with American manufacturers the North American market is being increasingly penetrated by products produced in countries with significantly lower labour costs. Certain of these products (i.e. fasteners) enter Canada largely from U.S. distributors. As a result import statistics do not accurately reflect the country of origin.

As a result of these competitive forces Canadian firms are tending more and more to specialize in the production of low volume, technically complex, high value products. To the purchasers of these products quality, prompt and dependable delivery and customer service are often as important as price. Special custom-designed industrial fasteners are a case in point. North American automotive manufacturers insist upon a level of service which has not been provided by off-shore fastener producers; 46% of Canadian fastener exports in 1983 were covered by the Auto Pact.

b) Trade Related Factors

There is a wide range of tariffs applicable to wire products. Canadian 1987 MFN rates range from 15% downward, most goods bearing about 5%. U.S. duties on wire products are generally lower than Canadian, most industrial fasteners, nails and brads bear less than 1% duty, few wire items pay more than 5% though certain special items such as fourdinier

wires bear 13.8% duty. Coil and stud anchor chain, a growing Canadian export to the U.S. generally faces less than 1% duty.

The Canadian-U.S. Auto Pact plays an important part in bilateral wire-related trade. For example 65% of Canadian industrial fasteners exported to the U.S. are duty-free automotive items.

Over 90% of Canadian wire and wire products exports go to the U.S. Over the past 10 years the U.S. industry has been injured by increasing import competition from many parts of the world and has sought shelter under the wide variety of American statutory provisions related to import relief. Section 201 of the U.S. Trade Act of 1974 was used successfully by American manufacturers to impose a 3-year additional tariff of 15% against industrial fasteners. Attempts to invoke other import relief measures have forced Canadian exporters to take expensive legal counter-measures and have created disruptive uncertainty among U.S. importers and distributors.

Canadian products have not been able to penetrate the EEC and Japanese markets in recent years due mainly to the high relative value of the Canadian currency and to transportation costs.

c) Technological Factors

In general new technology in wire drawing and wire product manufacture originates with machine builders who design and supply equipment to the manufacturing firms. The latest developments in direct production are usually available to the purchaser of the latest design of production machine. The significant proprietary technology now tends to reside in such functions as quality assurance, inventory control, order processing and similar management-related activities. In these areas Canadian producers have a mixed record. An example of Canadian progress is the automated warehouse recently built by Stelco Inc. to serve the industrial fastener market. This new facility has resulted in improved order processing, rapid assembly of complex orders and immediate shipment, and has enabled Stelco to become one of the major suppliers to the U.S. and Canadian auto industries.

d) Other Factors

Two other factors will continue to have an impact on the competitiveness of the Canadian industry.

1) The value of the Canadian dollar in U.S. currency plays a larger role in sector competitiveness than do tariffs; Canadian producers would be hurt by an increase in the value of the Canadian dollar since it would immediately encourage imports and significantly throttle Canadian exports to the U.S.

2) Interest rates have a direct effect on the ability of producers to make the capital investments necessary to take advantage of technical improvements offered by new machines or available through the adoption of the latest in electronic data processing and communication techniques. Many Canadian producers are convinced that market share has been lost to offshore producers whose modernization and expansion projects have received favourable financing treatment through their governments.

3. FEDERAL AND PROVINCIAL PROGRAMS AND POLICIES

- The Canada-U.S. Autopact has had a major positive effect on Canadian exports of industrial fasteners and control cables.

- The Canada-U.S. Defence Sharing Agreement has encouraged Canadian wire-related companies to compete for U.S. defence supply contracts.

- The Program for Export Market Development has assisted Canadian chain and wire rope companies expand their business in the U.S. and in the Pacific Rim countries.

- The Defence Industries Productivity Program has been used by several wire companies to acquire the facilities to compete successfully in the defence market.

Of the above programs, the Autopact and the Defence Sharing Agreement are the most vital to the Canadian wire industry.

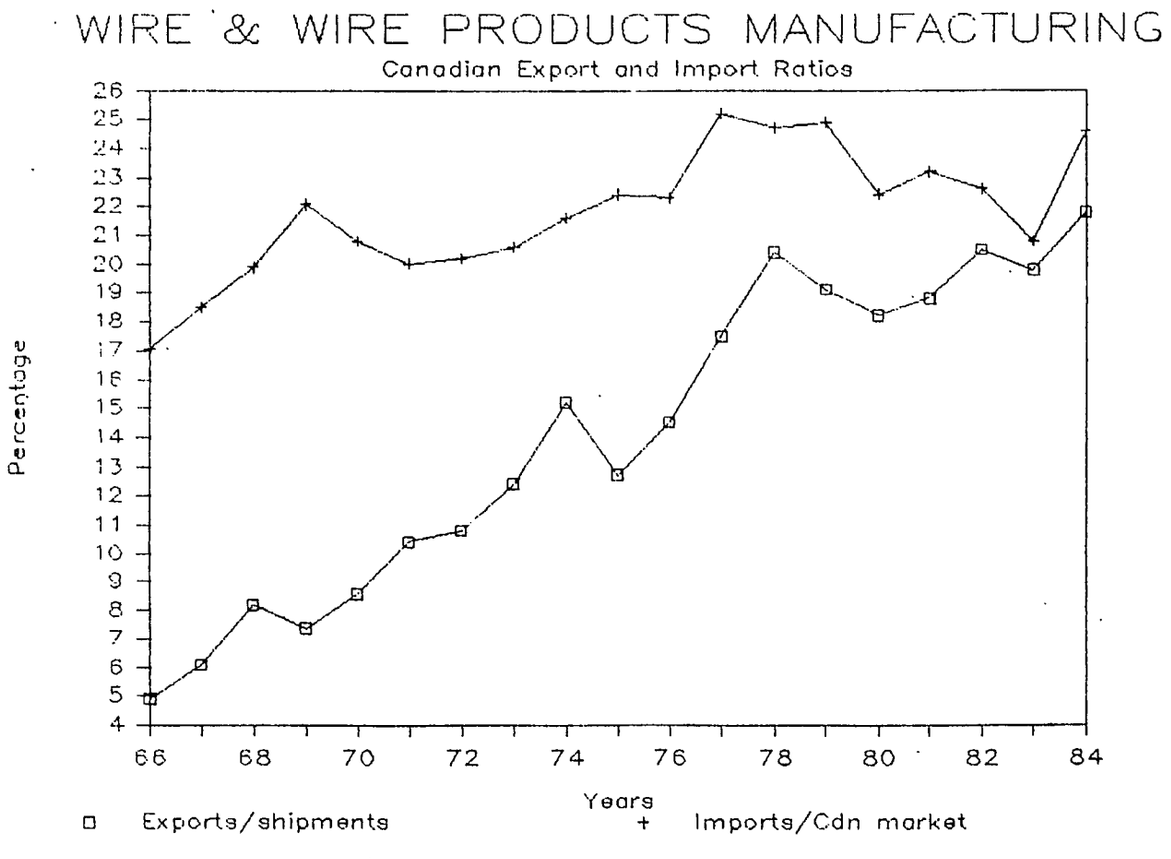
4. EVOLVING ENVIRONMENT

Wire and wire related products have linkages to all other manufacturing, construction, and resource sectors so that the activity in the wire industry has tended to mirror overall economic growth. Wire related products are important to the control and transmission of physical force between objects, to the assembly of components, to the reinforcement of construction and the control of access to property, among other functions.

It is projected, that the demand for wire products will increase rapidly in third world countries, and marginally in North America. The long-term outlook for the North American wire industry is for slower growth than the economy as a whole.

5. COMPETITIVENESS ASSESSMENT

Over the past 15 years the Canadian wire industry as a whole has demonstrated an increasing competitiveness. While imports have remained a fairly constant percentage of the Canadian market, exports have risen from 8.6% to 24.5% of Canadian shipments.



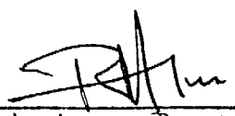
During the years 1974 to 1983 wire industry exports as a percentage of shipments rose from 15.2% to 19.8%, an increase of 4.6 percentage points. Exports of industrial fasteners played the major role, but significant contributions were made by nails, chain and galvanized wire. In the more recent past the competitive strength of some wire products has been undermined by the growing presence of imports from Pacific Rim N.I.C.'s. Canadian producers can no longer compete against South Korean small diameter wire rope. Similarly imports of standard fasteners (common screws, nuts and bolts) have driven the North American product from the market. The largest Canadian producer no longer stocks non automotive fasteners.

In the foreseeable future, in the context of continued duty free access to the U.S. market under the Auto Pact, the Canadian wire industry will remain competitive in the North American market for specialized high quality products. This competitive strength will continue to be based upon the close relationship between purchaser and supplier coupled with the ability of Canadian producers to provide fast reliable delivery of items specifically designed for the customer.

Canadian and American producers will continue to have difficulty competing against off-shore produced, low technology, mass demand products such as nails, common screws, barbed wire and the lower grades of wire rope and chain. This situation will be changed only by a significant realignment of wage rates and relative values of currencies.

NOTE: This profile is based on limited data available from Statistics Canada, a few annual reports and contact by DRIE officers with companies and associations on particular facets of their business. Therefore some aspects of this diverse sector are not covered in-depth. As additional information becomes available, this report will be updated.

Prepared by: Resource Processing Industries Branch
DEPARTMENT OF REGIONAL INDUSTRIAL EXPANSION



Assistant Deputy Minister
Consumer Goods, Services and Resource Processing

Date: MAY MAI 15 1986

FACT SHEET May 7, 1986

NAME OF SECTOR: Wire & Wire Products 1980 SIC(s) COVERED: 305

1. PRINCIPAL STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Establishments	239	327	330	307	309	n/a	n/a
Employment ('000)	16.2	18.5	17.3	14.6	13.4	17.4	16.8
Shipments ($ millions) (volume, e.g. tonne where applicable)	479	1,423	1,517	1,327	1,336	1,857	1,489
Gross Domestic Product (Constant 1971-$ millions)	n/a	240	233	196	195	206	n/a
Investment ($ millions)	31	109	83	72	81	73	91
Profits After Tax ($ millions)	22	54	49	14	32	n/a	n/a
(% of income)	6.8	9.6	8.3	2.5	5.6	n/a	n/a

2. TRADE STATISTICS

	1971	1980	1981	1982	1983	1984	1985
Exports ($ millions)	51	263	289	277	328	413	n/a
Domestic Shipments ($ millions)	428	1,160	1,228	1,050	1,008	1,444	n/a
Imports ($ millions)	109	340	375	313	348	482	n/a
Canadian Market ($ millions)	537	1,500	1,603	1,363	1,356	1,926	n/a
Exports as % of Shipments	10.6	18.5	19.1	20.9	24.6	22.2	n/a
Imports as % of Domestic Market	20.3	22.7	23.4	23.0	25.7	25.0	n/a
Canadian Share of International Trade							

Source of imports (top 4)		U.S.A.	E.E.C.	JAPAN	OTHERS
% of Total	1981	70.6	11.8	8.1	9.5
	1982	71.3	11.6	8.0	9.1
	1983	69.8	12.8	7.9	9.5
	1984	69.4	11.8	6.9	11.9

Destination of exports (top 4)		U.S.A.	E.E.C.	JAPAN	OTHERS
% of Total	1981	93.6	1.1	0.1	5.2
	1982	94.6	1.0	--	4.4
	1983	96.0	0.7	--	3.3
	1984	96.0	0.3	--	3.7

-- Indicates small amount of Trade.

3. REGIONAL DISTRIBUTION - Average over the last 3 years

	Atlantic	Québec	Ontario	Prairies	B.C.
Establishments - % of total	2.8	24.7	58.8	6.3	7.5
Employment - % of total	x	25.4	52.0	x	x
Shipments - % of total	x	27.8	59.6	x	x

x Confidential

4. MAJOR FIRMS

Name	Ownership	Location of Major Plants	Concentration (% of Domestic Market)
Stelco Inc.	Canadian	Hamilton, Ontario	together these three companies produce 40% of Canadian output.
Sidbec Dosco Ltée	Prov. of Quebec	Montreal, Quebec and Rexdale, Ontario	
Ivaco	Canadian	Marieville, Quebec	