INDUSTRY PROFILE

Industry, Science and Technology Canada
Industrie, Sciences et Technologie Canada

Boxboard

Canada

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BOXBOARD

1988

FOREWORD

In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to survival and growth. This Industry Profile is one of a series of papers which assess, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological and other key factors, and changes anticipated under the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the papers.

The series is being published as steps are being taken to create the new Department of Industry, Science and Technology from the consolidation of the Department of Regional Industrial Expansion and the Ministry of State for Science and Technology. It is my intention that the series will be updated on a regular basis and continue to be a product of the new department. I sincerely hope that these profiles will be informative to those interested in Canadian industrial development and serve as a basis for discussion of industrial trends, prospects and strategic directions.

Minister

1. Structure and Performance

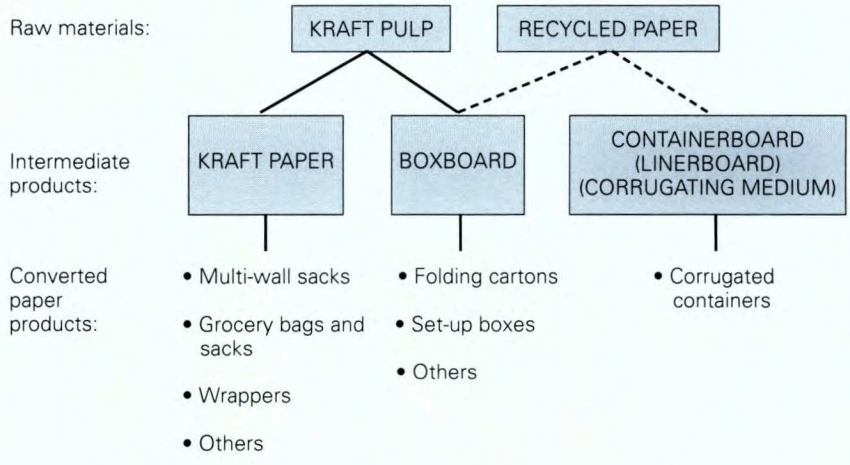
Structure

Boxboard is a general term designating the paperboard intermediate product used to fabricate folding cartons and set-up boxes. A folding carton (e.g., a cereal box) is folded flat for shipment to the user, while the set-up box (e.g., the old-style shoebox) is shipped in the form and shape of the end use.

Boxboard may be plain, lined or coated, and is made from virgin fibre, secondary fibre or a combination of the two. Secondary fibre is any fibrous material that has undergone a manufacturing process and is recycled as the raw material for another manufactured product. Boxboard produced from secondary fibre is the principal grade and accounts for just more than 90 percent of total boxboard production in Canada. Boxboard produced from virgin fibre, usually by the kraft process, accounts for the balance. Its main product is the solid bleached board used to package beverages and food.

The relationship of boxboard to other materials and products in the packaging industry is outlined in the following diagram.

PAPER-BASED PACKAGING



In 1986, Canadian shipments of boxboard were estimated at 778 000 tonnes. Of this, only eight percent, or 64 000 tonnes, were exported, almost exclusively to the United States. In that year, Canada imported 214 000 tonnes, which represented 23 percent of the domestic market.

Bulky and with a relatively low value, boxboard is normally not sold offshore by Canadian or other producers. For the most part, it is marketed to domestic carton and box manufacturers generally located in urban centres. Canadian production of boxboard represents an estimated five percent of world production and about 10 percent of the North American total.

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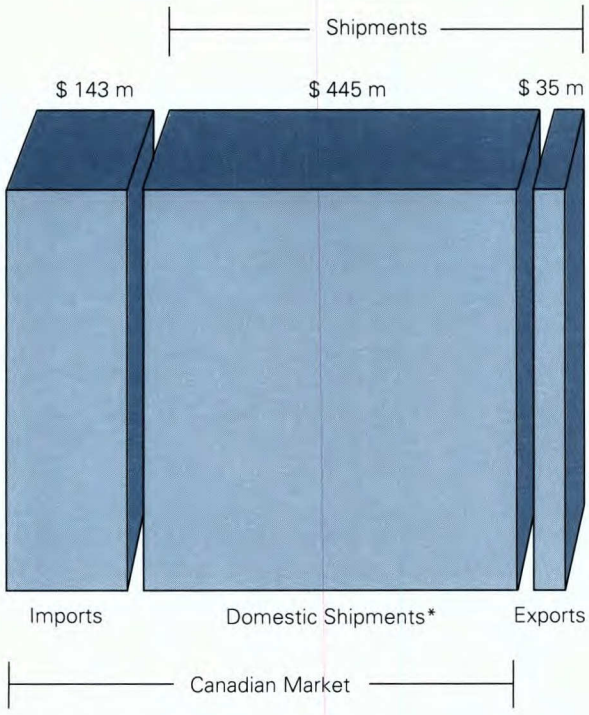


Imports, Exports and Domestic Shipments 1986

** ISTC estimate*

The industry consists of 16 mills wholly or partially engaged in the production of boxboard grades. There are five large plants, each with an annual production between 70 000 and 125 000 tonnes; nine intermediate companies (25 000 to 50 000 tonnes); and two small firms (5000 to 15 000 tonnes). Production capacity is — Ontario, 51 percent; Quebec, 33 percent; British Columbia, 11 percent; and the Atlantic provinces, five percent. Direct mill employment in 1986 was estimated at 2600 persons, and was distributed in approximately the same ratio as capacity.

About 80 percent of the boxboard production capacity is Canadian-owned, with approximately 60 percent of total capacity integrated forward to boxmaking operations. One corporate group accounts for almost 65 percent of the industry's integration.

Performance

Growth in demand for boxboard has been negligible in recent years. The major market is the folding carton industry, which is mature and losing a share of its market to other materials, mostly plastics.

Since 1975, there has been almost no overall change in Canadian boxboard capacity, although there has been an observable shift in the production of the principal grades of solid bleached board and recycled board. The solid bleached board capacity has fallen by approximately 26 percent from the 1975 level, while recycled board production has risen by some 24 percent. No greenfield project was involved in the increase. Rather, it was the result of modest but steady improvements in mill efficiencies over the period.

Historically, boxboard mills have operated at less than 90 percent of capacity, a level which represents moderate but chronic overcapacity compared to other paper and paperboard products. Despite this low use of rated capacity, Canada has become a net importer of boxboard because of price, quality or a combination of both. The principal supplier has been the United States.

Imports of boxboard on a tonnage basis have been increasing since 1975 and between 1982 and 1986 the rate of growth accelerated. In 1982, approximately 95 000 tonnes of U.S. boxboard were imported to Canada. By 1986, imports had risen to some 214 000 tonnes. Export figures, by contrast, have varied and show no evidence that Canadian mills have attained an established position in any market, including the United States. This is in spite of their duty-free access to the American market for a number of years and a favourable exchange rate.

Excess capacity and the competitive threat of lower-cost, American-based producers have partly constrained domestic prices for boxboard. The result has been relatively poor profit margins for Canadian producers.

2. Strengths and Weaknesses

Structural Factors

The industry is unable to achieve economies of scale because of the need to produce several grades in short production runs. This inability, raw material costs and labour productivity are the main factors affecting the competitive cost of producing boxboard in Canada. This country has no world-scale boxboard mill. The relatively small size of the domestic boxboard market, together with its requirement for a wide range of products, has prevented this industry from developing world-scale production units.

By contrast, the U.S. market is large. Many American producers take advantage of economies of scale by specializing in a few grades of boxboard. In addition, American wage rates are lower than those in Canada. Supported by higher labour productivity due to long production runs and minimal machine changeovers, U.S. labour unit costs are substantially lower than Canada's. Canadian boxboard plants are also generally older and less efficient than those of their U.S. competitors.

Both Canadian and American mills compete for U.S. secondary fibre. The cost of this raw material accounts for between 35 and 40 percent of the variable production cost. Canadian mills import approximately 45 to 55 percent of their secondary fibre from the United States. This is because Canada's low population density has prevented the establishment of economically viable wastepaper collection systems. Canadian boxboard producers buy American secondary fibre through U.S. "exporters" who charge their Canadian customers up to 30 percent more than the U.S. domestic price. This percentage includes transportation costs and the general pricing policy of American suppliers toward the Canadian market.

In summary, Canadian boxboard is not competitive with the U.S. product because of lower American fibre and labour costs and the economy-of-scale advantages enjoyed by American mills.

Trade-related Factors

Since January 1, 1987, the duty on solid bleached boxboard entering Canada has been 6.5 percent, and the tariff on all other boxboard is 9.2 percent. Solid bleached boxboard is a virgin fibre product used in milk cartons. Boxboard entering the United States has enjoyed duty-free access to that market for some years. The European Community (E.C.) tariff on boxboard is eight or nine percent, depending on the grade. Boxboard enjoys duty-free access into Japan, but because of transportation costs, the Canadian product is not competitive in that market.

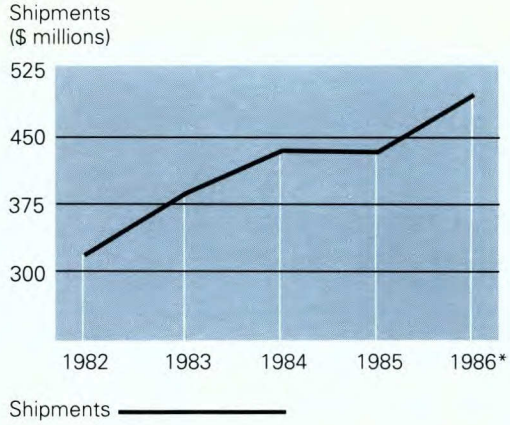
The Canadian tariff on folding cartons is 10.2 percent, while the U.S. tariff is 2.8 percent. There are no non-tariff barriers (NTBs) to trade in boxboard between Canada and the United States.

Technological Factors

Boxboard manufacturing technology is available throughout the world. It is continuously evolving, resulting in higher productivity in new or modernized plants. The Canadian industry has access to new technology but so far the industry has made no substantial investment in this area. Canadian equipment is older, with lower operating speeds. Modernization of the Canadian industry is not proceeding at a rate comparable to that of international competitors.

Other Factors

The exchange rate has been an important factor in maintaining the competitiveness of Canadian mills domestically against U.S. imports. However, the exchange rate in the last decade has not been effective in making the Canadian product competitive in the U.S. market, despite duty-free access.



Total Shipments

** ISTC estimate*

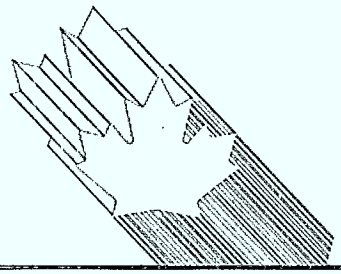
3. Evolving Environment

Over the long term, real growth in demand for boxboard in Canada and the United States is expected to be marginal (averaging about one percent per year). It should be noted that Canadian boxboard demand depends heavily on the domestic folding carton industry, which is mature and in the process of losing a share of its traditional markets to other packaging materials.

In Canada, the small but steady development of excess capacity will likely keep a downward pressure on boxboard prices, to the detriment of mill margins, cash flow and capital formation.

American producers are expected to add almost 1.3 million tonnes of capacity between 1987 and 1993 due to machine improvements and additions. It seems unlikely that this capacity growth will be fully absorbed by the U.S. market for some time. This situation could put additional downward pressures on prices in the Canadian market.

Under the Canada-U.S. Free Trade Agreement (FTA), Canadian boxboard producers will have to offer competitive boxboard prices to Canadian boxmakers if those firms are to remain competitive in the Canadian market with U.S. boxmakers. Mill competitiveness will be essential whether or not the mill is integrated forward to folding carton production. About 35 percent of domestic demand comes from "open-market" purchases of independent, non-integrated boxmakers. This segment of the market would be particularly vulnerable to low-cost, duty-free boxboard imports from the United States.



4. Competitiveness Assessment

At best, Canadian mills are marginally competitive in the domestic market. With their higher fibre and labour-cost inputs, they operate with low profit margins. This situation leaves them little room for price reduction to retain market share and tonnage throughput. Nor can mills afford to subsidize their major downstream users, the converters, on a continuing basis. Boxmakers face the same competitive problem. A major increase in the value of the Canadian dollar against its American counterpart would, therefore, have a substantial adverse impact on the industry's competitiveness.

Under the FTA, existing tariffs for boxboard and folding cartons will be eliminated in five equal annual stages beginning on January 1, 1989. The Canadian industry will become increasingly vulnerable to a major loss of market share when tariffs are eliminated. Its lack of financial resources to modernize will aggravate this situation. Canadian mills, therefore, are expected to lose tonnage. With no alternative market available, their reduced operating rates may lead producers to leave this market, either by shutting down or converting to a more profitable product.

For further information concerning the subject matter contained in this profile, contact:

Resource Processing Industries Branch
Industry, Science and Technology Canada
Attention: Boxboard
235 Queen Street
Ottawa, Ontario
K1A 0H5

(613) 954-3043

PRINCIPAL STATISTICS

SIC(s) COVERED: 2713 (1980)

	1973	1982	1983	1984	1985	1986
Establishments	16	16	16	16	16	16
Employment[e]	2 800	2 300	2 600	2 600	2 600	2 600
Shipments ($ millions)	137	333	380	440	439	480[e]
(volume '000 tonnes)	612	626	704	757	751	778[e]

TRADE STATISTICS

	1973	1982	1983	1984	1985	1986
Exports ($ millions)	4	14	24	40	33	35
(volume, '000 tonnes)	21	28	57	86	64	64
Domestic shipments ($ millions)	133	319	356	400	406	445[e]
(volume, '000 tonnes)	591	598	647	671	687	714[e]
Imports ($ millions)	N/A	65	78	106	119	143
(volume, '000 tonnes)	N/A	95	121	161	171	214
Canadian market ($ millions)	N/A	384	434	506	525	588[e]
(volume '000 tonnes)	N/A	693	768	832	858	928[e]
Exports as % of shipments (tonnes)	3	4	8	11	9	8
Imports as % of domestic market (tonnes)	N/A	14	16	19	20	23

Source of imports (% of total value)		U.S.	E.C.	Asia	Others
	1982	99	—	—	1
	1983	99	—	—	1
	1984	100	—	—	—
	1985	98	—	—	2
	1986	99	—	—	1

Destination of exports (% of total value)		U.S.	E.C.	Asia	Others
	1982	99	—	—	1
	1983	99	—	—	1
	1984	93	—	—	7
	1985	93	—	—	7
	1986	95	—	—	5

(continued)

REGIONAL DISTRIBUTION — Average over the last 3 years

	Atlantic	Quebec	Ontario	Prairies	B.C.
Capacity – % of total	5	33	51	—	11
Establishments – % of total	12	44	38	—	6
Employment – % of total	6	35	49	—	10

MAJOR FIRMS

Name	Ownership	Location of Major Plants
Paperboard Industries Corporation	Canadian	Burnaby, British Columbia Toronto, Ontario Trenton, Ontario Montréal, Quebec
The Beaver Wood Fibre Company Limited	American	Thorold, Ontario
Canadian Pacific Forest Products Limited	Canadian	La Tuque, Quebec
Cascades Inc.	Canadian	Jonquière, Quebec East-Angus, Quebec

e ISTC estimate
N/A Not available

Note: Statistics Canada data have been used in this profile.

Regional Offices

Newfoundland

Parsons Building
90 O'Leary Avenue
P.O. Box 8950
ST. JOHN'S, Newfoundland
A1B 3R9
Tel: (709) 772-4053

Prince Edward Island

Confederation Court Mall
Suite 400
134 Kent Street
P.O. Box 1115
CHARLOTTETOWN
Prince Edward Island
C1A 7M8
Tel: (902) 566-7400

Nova Scotia

1496 Lower Water Street
P.O. Box 940, Station M
HALIFAX, Nova Scotia
B3J 2V9
Tel: (902) 426-2018

New Brunswick

770 Main Street
P.O. Box 1210
MONCTON
New Brunswick
E1C 8P9
Tel: (506) 857-6400

Quebec

Tour de la Bourse
P.O. Box 247
800, place Victoria
Suite 3800
MONTRÉAL, Quebec
H4Z 1E8
Tel: (514) 283-8185

Ontario

Dominion Public Building
4th Floor
1 Front Street West
TORONTO, Ontario
M5J 1A4
Tel: (416) 973-5000

Manitoba

330 Portage Avenue
Room 608
P.O. Box 981
WINNIPEG, Manitoba
R3C 2V2
Tel: (204) 983-4090

Saskatchewan

105 - 21st Street East
6th Floor
SASKATOON, Saskatchewan
S7K 0B3
Tel: (306) 975-4400

Alberta

Cornerpoint Building
Suite 505
10179 - 105th Street
EDMONTON, Alberta
T5J 3S3
Tel: (403) 495-4782

British Columbia

Scotia Tower
9th Floor, Suite 900
P.O. Box 11610
650 West Georgia St.
VANCOUVER, British Columbia
V6B 5H8
Tel: (604) 666-0434

Yukon

108 Lambert Street
Suite 301
WHITEHORSE, Yukon
Y1A 1Z2
Tel: (403) 668-4655

Northwest Territories

Precambrian Building
P.O. Bag 6100
YELLOWKNIFE
Northwest Territories
X1A 1C0
Tel: (403) 920-8568

For additional copies of this profile contact:

Business Centre
Communications Branch
Industry, Science and Technology Canada
235 Queen Street
Ottawa, Ontario
K1A 0H5

Tel: (613) 995-5771

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