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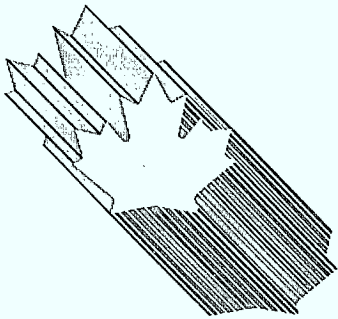


Industry, Science and
Technology Canada

Industrie, Sciences et
Technologie Canada

**Folding Cartons and
Set-Up Boxes**

Canada



I N D U S T R Y

P R O F I L E

FOLDING CARTONS
AND SET-UP BOXES

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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

Introduction

The folding carton is the product of a cutting and creasing operation on relatively lightweight boxboard. The carton usually is folded flat for shipment, then formed up, filled and closed by the user. Set-up boxes are also produced from boxboard but are shipped to the user in the form and shape in which they are to be used. A typical example of the folding carton is the cereal container; the old-fashioned shoebox typifies the set-up box.

Folding cartons are used primarily to package consumer products (i.e., non-durables) for sale, generally at the retail level. The cartons account for almost 14 percent of the total value of containers used in the manufacturing sector. The use of set-up boxes continues to decline and, in 1986, was estimated to account for barely one percent of total industry shipments. Consequently, for all practical purposes the set-up box is not a significant item in this profile.

Design, quality, graphics (i.e., printing) and other aesthetic features are important to users of folding cartons. The largest user is the food and beverage industry, with tobacco products a remote second, followed closely by chemicals. These three groups together account for about 75 percent of folding carton demand. The balance comes from a wide range of users, none of which accounts for more than one to two percent of the market.

There are a number of substitute products for folding cartons. These are primarily plastics such as laminates, styrofoams and films. The threat of substitution has pressured folding carton manufacturers into keeping prices low and this has adversely affected their profit margins.

1. Structure and Performance

Structure

In 1986, the industry comprised an estimated 106 establishments, which has remained relatively stable since 1973 when there were 105. The industry is concentrated in Ontario and Quebec, together accounting for about 90 percent of the industry's shipments. The balance is shared among several other provinces. In 1986, industry employment totalled approximately 5500 persons. Total shipments were valued at \$784 million, most of which (about \$750 million) were to the domestic market.

Three companies account for a major share of this market, which they service from 16 plants strategically located across Canada. The balance of the demand is served by the 90 remaining small and medium-sized plants. They often supply small local or specialty markets and are usually managed directly by the owner. For all practical purposes, the industry is 100 percent Canadian-owned.

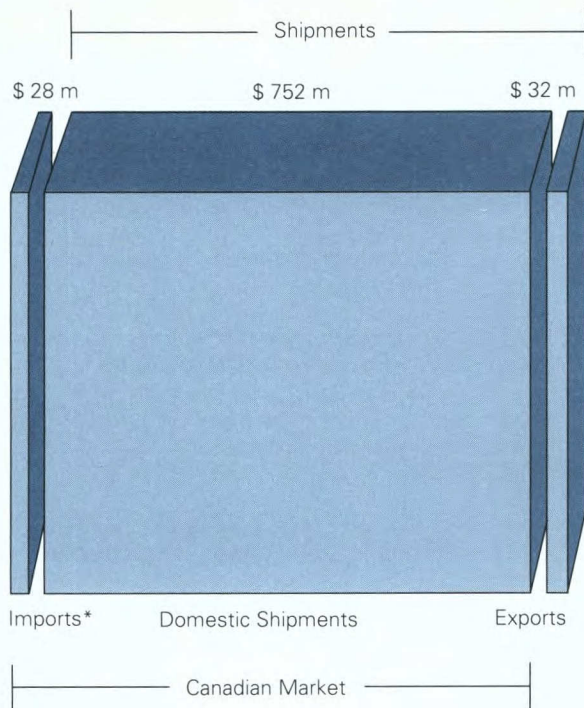
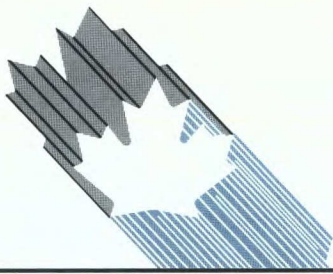
The industry's heavy reliance on the domestic market has developed under tariff protection which currently stands at 10.2 percent. Exports have never been significant as a percentage of shipments and continue to be low, valued at an estimated \$32 million in 1986. There are signs, however, that a few companies are probing for niches in the large U.S. market. It should be noted that, either for reasons of price or board properties, these cartons are invariably made from U.S. boxboard. When they are exported, there is a refund of the Canadian duty. Imports, in 1986, were estimated to be worth \$28 million, or about four percent of the apparent Canadian market.

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*Imports, Exports and Domestic Shipments
1986*

* *ISTC estimate*

Boxboard is the principal raw material used in the production of folding cartons and, in Canada, accounts for about 65 percent of direct manufacturing costs. Consequently, the purchase price of boxboard is a critical competitiveness factor for the carton producer. For the U.S. carton maker, boxboard costs average about 55 percent of direct manufacturing costs.

Traditionally, Canadian boxboard producers and the carton makers have been highly dependent on each other. In recent years, this dependence has become increasingly more formal with the establishment of corporate links through integration of mill and carton operations. Some 65 percent of domestic folding carton capacity is integrated backwards to mill production of boxboard. A large share of this integration occurs within one corporate group.

Performance

Folding cartons, mainly for consumer packaging of non-durables, are now in the mature stage of the product life cycle. Real growth in demand has averaged less than one percent per year between 1973 and 1986 and employment levels have been relatively stable since 1982. Early in the 1973-86 period, the industry invested in new equipment which improved its productivity, but also increased its production capacity substantially. As a result, the industry suffers from chronic overcapacity, particularly in the central regions of Ontario and Quebec. Overcapacity, low real growth and the threat of product substitution have combined to produce a highly competitive environment within which price increases have often failed to recover rising costs. Profit margins have been squeezed, reducing the ability of the industry to finance modernization. On average, the industry's pre-tax earnings are estimated at between two and three percent of net sales, compared to five to six percent for Canadian manufacturing as a whole.

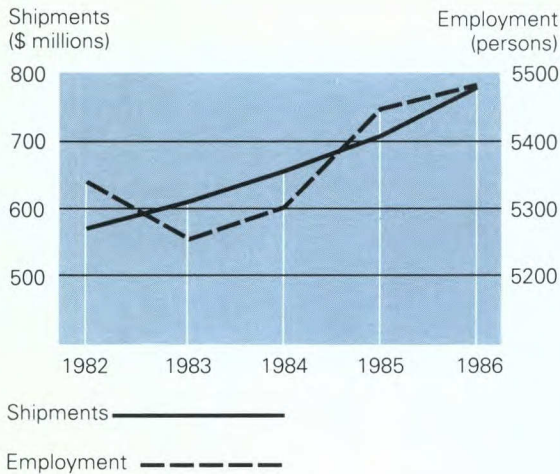
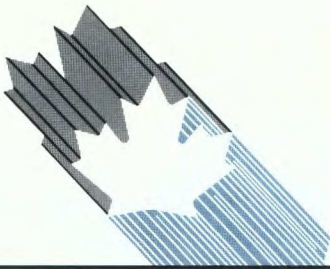
2. Strengths and Weaknesses

Structural Factors

The size of the Canadian folding carton market is relatively modest; the number of production plants is relatively large. Almost without exception, none is specialized. Based on the current industry structure, Canadian producers have no opportunities to achieve efficiencies of scale and specialization. In the continuing scramble for available business, producers must meet a wide range of customer demands. On the other hand, this experience and ability in short-run operations can be useful in tapping American market niches.

The United States is the only meaningful export market for Canadian carton producers, while U.S.-based producers are the principal potential competitors in the Canadian market. The design capability of the Canadian industry is fully competitive by world standards, but labour and raw material costs are higher than those in the United States. Canadian producers thus find themselves at a disadvantage against U.S. carton makers — especially in Ontario and Quebec.

Boxboard, adhesives and inks are the basic raw materials for the industry, with foils and films also used as laminates for special-purpose containers. Boxboard costs account for almost 50 percent of the net sales dollar, with adhesives and inks together taking an additional four to five percent.



Total Shipments and Employment

The U.S. competitive advantage lies mainly in the cost of boxboard. American labour wages are lower and less labour is used in the production process. Currently, the Canadian producer relies on the Canadian tariff and the relative weakness of the Canadian dollar against the U.S. currency to be competitive against U.S.-based producers on a landed-cost basis. This apparent advantage is offset by American firms' tactics in the transfer pricing of boxboard within the vertically integrated U.S. mills and converters. In summary, the U.S. carton producers are more competitive, on average, than those in Canada and, on a landed-cost basis, the advantage to the U.S. producer in his home market approximates eight to 10 percent of the sales price.

Trade-related Factors

The folding carton industry developed behind a substantial tariff wall and is heavily oriented to the domestic market. Imports and exports are modest, each estimated at less than four percent of the domestic market and total shipments.

The Canadian tariff on folding cartons and boxes is 10.2 percent and that of the United States is 2.8 percent. Boxboard has duty-free entry into the United States and a 6.5 or 9.2 percent tariff into Canada, depending upon the grade. Non-tariff barriers (NTBs) are virtually non-existent.

The Canada-U.S. Free Trade Agreement (FTA) will remove Canadian tariffs on folding cartons and the principal raw material, boxboard, in five equal steps, commencing on January 1, 1989. The U.S. tariff on cartons will be removed in the same manner.

Technological Factors

Japan, Europe and, to a lesser extent, the United States supply production equipment to folding carton producers throughout the world. There is no indigenous equipment industry in Canada. The level of basic technology is comparable in the major carton-producing countries. Canadian capability in functional design and graphics is second to none.

Other Factors

In addition to the higher Canadian tariff, the currency exchange rate, in recent years, has been an important factor favouring Canadian carton producers against U.S. penetration of the domestic market. Nevertheless, U.S. producers can and do overcome that protection from time to time and penetrate the Canadian market by using pricing techniques that may not always reflect total costs.

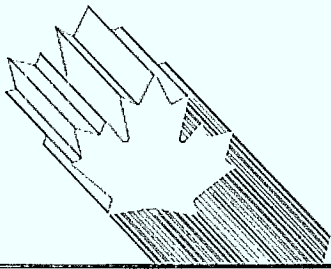
3. Evolving Environment

Over the long term, the average real growth of this industry is expected to be about one percent per year in Canada and about 1.5 percent in the United States.

Plastics, in particular, along with other materials, are increasingly expected to be competitive as substitution products for the folding carton in the Canadian manufacturing industry. These substitutes are expected to generate additional pressure on prices. In combination with the industry's chronic excess capacity (especially in Ontario and Quebec), this competition will likely constrain price increases in the period ahead. In turn, this situation is expected to continue to curb the rate of capital formation in the industry. Such modernization as the industry may be able to afford, therefore, is not likely to be effective in achieving a significant improvement in productivity. Rationalization of production facilities has been undertaken already and no substantial benefit is likely from this in the future.

Under the FTA, the removal of the relatively high (10.2 percent) Canadian tariff will significantly improve the competitive position of the U.S. carton producer in the Canadian market — particularly in Ontario and Quebec. By contrast, the removal of the modest U.S. tariff (2.8 percent) will do little or nothing for the Canadian producer seeking to sell to the United States.

As noted earlier, Canadian carton producers are barely competitive in the domestic market against U.S. cartons, especially in Ontario and Quebec. As a result, they have little or no freedom to defend their market position by price reduction. Neither can carton operations be subsidized for any extended period by the domestic boxboard mills. Their competitive position closely parallels that of the carton producers. Low margins severely limit their response to the import threat and their ability to preserve tonnage throughput.



Marginally competitive at best in their major domestic markets, both groups are particularly vulnerable to substantial loss of domestic market share if there is any pronounced move toward parity between the Canadian and U.S. currencies.

4. Competitiveness Assessment

Canadian folding carton producers are generally not competitive in the U.S. market and are barely competitive in their domestic market against U.S. producers, by reason of higher material and labour costs. Under the FTA, the relatively long-run, integrated Canadian carton producers likely will lose domestic market share to U.S. imports. To preserve their position against the import threat, these domestic carton producers, regardless of established corporate links, will need to be free to obtain their boxboard requirements from lower-cost U.S. suppliers. Smaller, non-integrated, domestic carton producers, with their more specialized local markets, are not likely to suffer from import penetration. Most, however, will probably buy their boxboard increasingly from lower-cost U.S. mills as the Canadian tariffs on boxboard are removed. By contrast, the elimination of the low U.S. tariff will provide little competitive benefit for Canadian producers seeking U.S. market penetration.

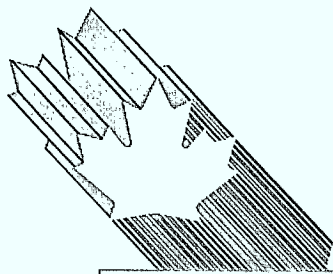
The net effect on Canadian boxboard mills will be a loss of domestic sales. It is an open question as to how long they could continue to operate at rates of capacity utilization even lower than the marginal levels of recent years.

A stronger Canadian dollar would weaken further the position of domestic producers in both the Canadian and the U.S. markets.

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

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FOLDING CARTONS AND SET-UP BOXES

PRINCIPAL STATISTICS

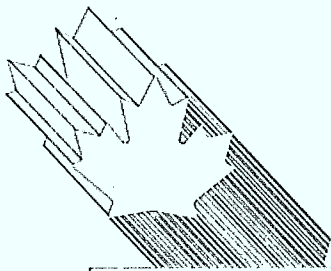
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	1973	1982	1983	1984	1985	1986
Establishments	105	114	107	104	104	106
Employment	6 264	5 330	5 260	5 300	5 450	5 490
Shipments (\$ millions)	231	578	603	664	704	784

TRADE STATISTICS

	1973	1982	1983	1984	1985	1986
Exports (\$ millions)	—	9	16	18	26	32
Domestic shipments (\$ millions)	230	569	587	646	678	752
Imports (\$ millions) ^e	9	21	24	26	27	28
Canadian market (\$ millions) ^e	239	590	611	672	705	780
Exports as % of shipments	—	2	3	3	4	4
Imports as % of domestic market	4	4	4	4	4	4
Source of imports ^e (% of total value)			U.S.	E.C.	Asia	Others
		1982	60	2	—	38
		1983	86	2	—	12
		1984	90	2	—	8
		1985	95	1	—	4
		1986 ^e	96	2	—	2
Destination of exports ^e (% of total value)			U.S.	E.C.	Asia	Others
		1982	98	2	—	0
		1983	98	2	—	0
		1984	95	4	—	1
		1985	93	5	—	2
		1986 ^e	95	3	—	2

(continued)



REGIONAL DISTRIBUTION — Average over the last 3 years

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments — % of total	5	29	55	7	4
Employment — % of total	2 ^e	31	61	3 ^e	3 ^e
Shipments — % of total	2 ^e	29	62	3 ^e	4 ^e

MAJOR FIRMS

Name	Ownership	Location of Major Plants
Lawson Mardon Group Ltd.	Canadian	British Columbia, Ontario, Quebec
Reid Dominion Packaging Ltd.	Canadian	Ontario
Somerville Packaging	Canadian	British Columbia, Alberta, Manitoba, Ontario, Quebec, Newfoundland

e ISTC estimate

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

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