

# Value-Added Paper Products

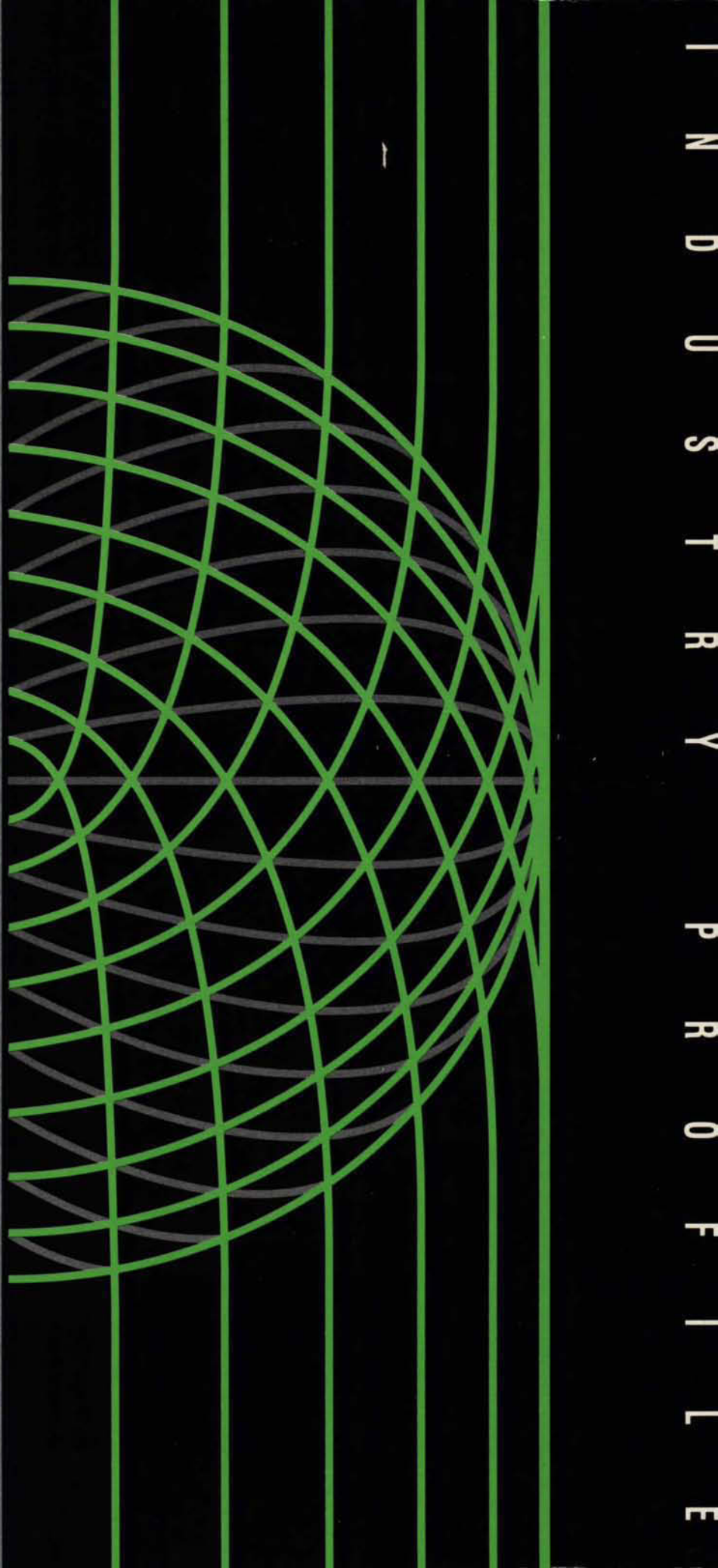
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INDUSTRIE, SCIENCES ET  
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*In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to growth and prosperity. Promoting improved performance by Canadian firms in the global marketplace is a central element of the mandates of Industry, Science and Technology Canada and International Trade Canada. This Industry Profile is one of a series of papers in which Industry, Science and Technology Canada assesses, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological, human resource and other critical factors. Industry, Science and Technology Canada and International Trade Canada assess the most recent changes in access to markets, including the implications of the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the profiles.*

*Ensuring that Canada remains prosperous over the next decade and into the next century is a challenge that affects us all. These profiles are intended to be informative and to serve as a basis for discussion of industrial prospects, strategic directions and the need for new approaches. This 1990-1991 series represents an updating and revision of the series published in 1988-1989. The Government will continue to update the series on a regular basis.*



Michael H. Wilson  
Minister of Industry, Science and Technology  
and Minister for International Trade

**Introduction**

The forest products sector is a major component of the Canadian economy. In 1991, the Canadian forest products sector had shipments totalling \$32.5 billion in current dollars excluding \$2.3 billion shipped from lumber companies to pulp and paper manufacturers and market pulp shipped to the Canadian paper manufacturers. Exports were \$20 billion, of which 65 percent went to the United States. While the total annual shipments are exceeded by the transportation (automobile) industry and the food industry, the forest products sector is the greatest net contributor to Canada's trade balance at \$17 billion.

The forest products sector is of crucial economic importance to all regions of the country and is most prominent in British Columbia where it accounts for 45 percent of manufacturing shipments. Single-industry communities across

the country depend on it for their economic well-being. It provides direct employment for almost 250 000 people, including over 40 000 people in logging activities.

The forest products sector is composed of two major industry groups: paper and allied products industries, and (solid) wood industries. The paper and allied products industries account for approximately 62.2 percent of the value of total shipments and employ approximately 130 000 people inclusive of those in related logging operations. This group is made up of two distinct segments: firms producing pulp and paper (market pulp, newsprint, fine papers, paperboard and tissue) and those making converted or value-added paper products (packaging, business forms, stationery and other consumer paper products).

Wood industries account for 37.8 percent of the value of total shipments and employ approximately 120 000 people





inclusive of those in related operations. This group consists of two segments: firms making commodity products (lumber, plywood, shakes and shingles, veneer, particleboard, medium-density fibreboard and oriented strandboard (OSB)/waferboard), and those manufacturing value-added wood products (manufactured housing, doors, windows, kitchen cabinets, hardwood flooring, pallets and millwork).

Related profiles dealing with *Pulp and Paper Equipment* and *Forestry Equipment* as well as the following lumber and allied lumber products industries are available:

- Lumber
- Value-Added Wood Products
- Wood-Based Panel Products
- Wood Shakes and Shingles

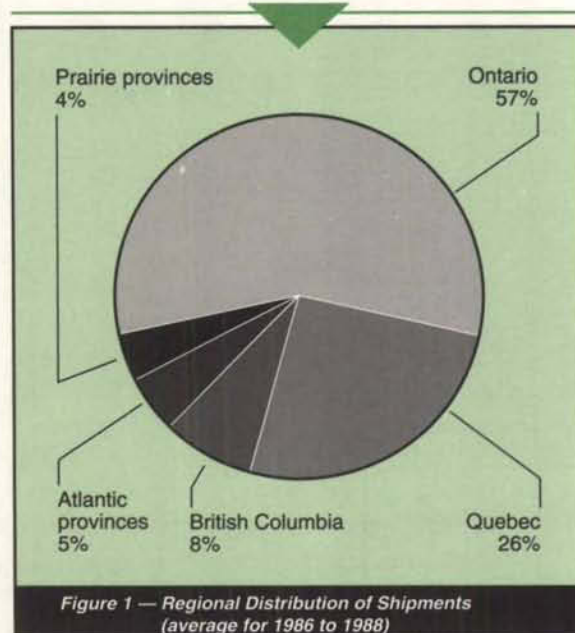
## Structure and Performance

### Structure

The value-added paper products industry is made up of firms that convert primary paper produced by the pulp and paper sector into a range of paper products used in industry, offices and households. It comprises five major subsectors:

- The paper packaging subsector makes paper-based products used to contain and protect goods shipped through the distribution system, including corrugated containers, folding cartons, multiwall sacks and paper bags.
- The paper consumer products subsector makes paper stock (jumbo rolls of paper), then converts it into consumer disposable items such as bathroom tissue, facial tissue, paper towels, paper napkins and other paper disposables, including commercial wipes and towels.
- The stationery paper subsector converts paper stock into adding machine and cash register rolls, stationery papers, envelopes, writing papers, index cards and other miscellaneous paper products used in offices and in the publishing industry.
- The coated and treated papers subsector converts paper stock to value-added products such as gummed paper and paper tape, plastic-coated paper, tracing paper, wall-paper, waxed paper, and magazine and book sheets.
- The other value-added papers subsector converts paper stock into a range of paper products such as paper spools, cones and cores, cups, plates, egg cartons, fast-food containers, gift wrap, paper tubes and drums, and some forms of publishing papers.

In 1991, the value-added paper products industry employed over 38 000 people at an estimated 497 establishments. Firms in the industry range in size and structure from



small, non-integrated and labour-intensive enterprises to multiplant, integrated, capital-intensive operations that manufacture a wide range of intermediate and end-use products. While production is dispersed across Canada, most is concentrated in Ontario and Quebec, which account for 57 per cent and 26 per cent, respectively, of industry shipments (Figure 1). With few exceptions, plants are located in or close to major urban markets.

The industry is largely Canadian-owned and Canadian-operated, but foreign multinationals are present in almost all subsectors. Some Canadian producers of corrugated containers and folding cartons have acquired firms in foreign markets such as the United States and Europe in order to establish an operating presence in these regions. Changes in ownership are an ongoing occurrence in the industry.

Total shipments of the value-added paper products industry in real terms (constant 1988 dollars) were estimated at about \$5 962 million in 1991, down 9.1 per cent from a peak of \$6 561 million in 1988. In current dollars, total shipments in 1991 were estimated by Statistics Canada at \$6 125 million.

In 1991, exports were approximately \$758 million (Figure 2). In terms of volume, 66 per cent went to the United States. Imports totalled about \$1 024 million, of which 91 per cent of the volume was from the United States. Principal products included corrugated sheets, corrugated containers, sanitary tissue, publishing papers and office papers such as facsimile and self-copy paper.



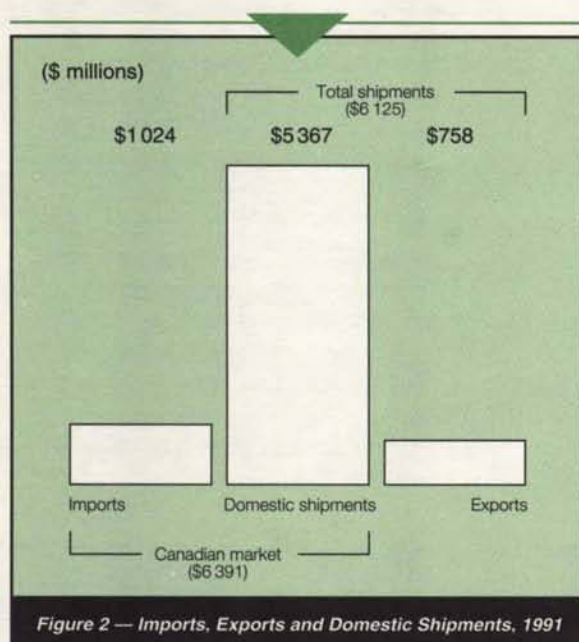


Figure 2 — Imports, Exports and Domestic Shipments, 1991

Subsector shipments, exports and imports for 1991, are shown in Table 1. Paper packaging subsector shipments worth \$2 753.1 million accounted for nearly one-half of the industry's total shipments. The paper merchant trade, a diverse group engaged in the conversion (coating and treating) and distribution of paper used in the publishing of books and magazines, also had significant shipments.

The value-added paper products industry is largely oriented to serve the domestic market. The industry's domestic focus stems from the nature of the products; for the most part, they are bulky and have a low value-to-weight ratio, which limits the distances the goods can be transported while remaining price-competitive. The exception is wallpaper, which is internationally competitive. Canada exports between 65 and 75 percent of its production of wallpaper, mostly to the United States.

The pulp and paper industry and the value-added paper products industry each add a similar share of value to raw materials in the manufacturing process. For instance, the pulp, newsprint and paperboard (packaging papers) subsectors of the pulp and paper industry increased the value of raw materials such as roundwood (raw logs) and chips by between 34 and 48 percent of the value of shipments in the primary paper manufacturing process in 1989. In the same year, the value-added paper products industry added another 34 to 48 percent of the value of primary paper products converted by it into final paper products.

Table 1 — Subsector Shipments, Exports and Imports, 1991

Products	Shipments	Exports	Imports
Paper packaging			
• corrugated containers	1 568.4	12.0	94.5
• folding cartons	945.0	121.5	129.2
• paper bags and sacks	239.7	13.0	31.3
Paper consumer products	568.0	109.7	133.4
Stationery paper	434.9	91.6	175.9
Coated and treated papers	651.1	297.6	300.6
Other value-added papers	711.6	19.4	85.4
Other paper industries (including tissue paper)	1 006.7	93.5	74.0
<b>Total</b>	<b>6 125.4</b>	<b>758.3</b>	<b>1 024.3</b>

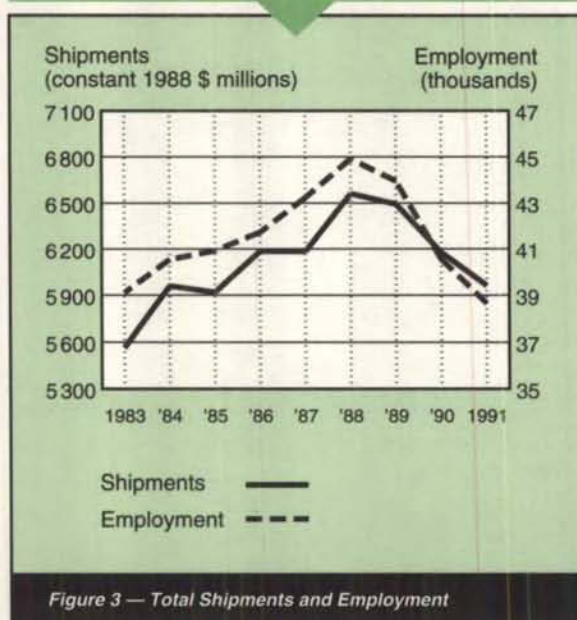
Source: Canadian Socio-economic Information Management System (CANSIM) data base, Statistics Canada.

## Performance

Generally, Canadian production of value-added paper products is closely tied to the business cycle. About half of the industry is very sensitive to swings in the economy, particularly those subsectors serving the production of consumer durable goods (such as the appliances and furniture sectors) as well as residential construction and renovation. Highly sensitive subsectors also include the coated and treated papers and stationery paper subsectors as well as 40 to 50 percent of the paper packaging subsector serving those industries that vary most with the business cycle. Performance in the balance of the industry is influenced by consumer purchasing patterns associated with the food and beverage and restaurant industries, which for the most part face income-inelastic demand. Paper consumer products, 50 to 60 percent of paper packaging (folding cartons, corrugated containers and paper grocery sacks) and many of the products in the other value-added papers subsector are not very susceptible to the influence of the general business cycle. These subsectors usually show more resilience during downturns in the economy than do those value-added paper subsectors serving the construction industry and the consumer durables industry.

The value-added paper products industry for the most part is a mature industry. Real shipments, measured in constant 1988 dollars, grew by 3.4 percent annually between 1983 and 1988, the peak year, but then declined by 1.2 percent annually from 1989 to 1991 with the recent recession. Growth rates in shipments for each of the subsectors of the





industry after the 1981–1982 recession varied significantly. Demand for paper bags and sacks fell sharply over the period of growth for the industry as plastic products and bulk shipping increased their share of the market. On the other hand, demand for stationery and paper consumer products rose quickly.

Shipments from 1985 to 1988 grew faster than employment, thus leading to improved output per person-year of work. Since employment fell more steeply than real shipments from 1988 to 1991 (Figure 3), output per person-year has continued to rise.

Imports of some value-added paper products are increasing, most noticeably in corrugated containers, publishing papers and sanitary tissue. Despite their faster growth since 1988, the value of exports still is less than that of imports.

Since the implementation of the Canada-U.S. Free Trade Agreement (FTA) on 1 January 1989, total imports (measured in constant 1988 dollars) rose from \$783 million in 1988 to \$997 million in 1991, an increase of 27.3 percent. Total exports, measured in constant 1988 dollars, rose from \$517 million to \$738 million during the same period, an increase of 42.7 percent. This shift is indicative of rationalization and product specialization emerging in both countries.

Some producers, particularly folding carton manufacturers, are entering the U.S. market through direct exports or through production at facilities established in the prime market areas.

Plants in the industry are currently operating below capacity. During the 1970s, considerable production capacity

was added in many subsectors. Demand for sacks and paper bags declined significantly from 1983 to 1990 as a result of changes in the method of transportation, as more products were shipped in plastic substitutes including flexible intermediate bulk containers. Although published industry statistics regarding capacity utilization are not available, individual companies have made estimates for some subsectors. These estimates indicate that 1990 capacity utilization varied from a low of 60 to 65 percent on average for paper packaging, to 60 to 70 percent for coated and treated papers, to 75 to 80 percent for paper cups and plates, and to more than 90 percent for self-adhesive labels and paper consumer products. During the period 1989 and 1991, 100 000 tonnes of tissue production was installed and this will have a temporary effect on capacity utilization rates in this subsector.

## Strengths and Weaknesses

### Structural Factors

Historically, the key weaknesses affecting the performance of the industry involve the low scale of production, market fragmentation, the high cost of materials, and low spending on research and development (R&D) specifically designed to meet Canadian needs. Key strengths include production flexibility and service to clients.

The largest 15 to 20 companies in the industry account for over 80 percent of production in any given year. These firms enjoy the longer production runs made possible because they supply large-volume lines of packaging products for major clients such as those in the food and beverage or tobacco industries. However, the high cost of transportation of these products and earlier U.S. tariffs have generally resulted in the fragmentation of the Canadian industry into small units serving the plants' immediate geographic regions. As a result, firms typically must offer a full range of products, making it difficult to realize full economies of scale. The relatively small scale of all but the largest Canadian manufacturing operations is a disadvantage for the industry and causes many domestic firms to suffer competitive disadvantages in terms of productivity, cost performance, financial resources and marketing capability relative to foreign suppliers. However, some of these producers have been adjusting under the FTA, as indicated in the increase of 46.6 percent (measured in current dollars) in exports from 1988 to 1991 in spite of the recent recession.

For some producers, however, their small size may provide an opportunity. The shorter production runs of Canadian producers have encouraged them to develop production flexibility and the ability to manufacture high-quality products for niche markets on a competitive basis. Wallpaper producers





have been successful in international markets by exploiting this characteristic, and folding carton manufacturers are beginning to capitalize on it as well. New technology strengthens the productivity of small-scale manufacturing.

Based on information obtained from the industry, material, especially recycled fibre, and labour costs appear higher for some Canadian producers than for their counterparts in the United States. For other producers, however, these factors are not major impediments to international competitiveness. Smaller, non-integrated firms may lack secure access to steady raw material supplies and prices. As a result, these companies also lack bargaining power and must compete for these products at prices set by international market forces.

Up-to-date technology is readily purchased, primarily from foreign machinery manufacturers. Although the Canadian industry resources being committed to ongoing R&D, technology development and innovation activities are low, the Canadian industry is considered to be as technically advanced as its foreign competitors. Product innovation in the industry has occurred mainly in response to customer requirements.

Service to clients is an important aspect of the value-added operations, especially in the paper packaging subsector of the industry. For instance, producers work closely with clients in determining the structural design and graphics of products. As well, many manufacturers of paper packaging offer clients mechanical packaging machinery systems and service support. This equipment is designed to be placed in the client's plant to automatically process cartons at high speeds to complement the client's packaging line while improving production and saving labour.

### Trade-Related Factors

Canadian tariffs on value-added paper products imported from countries having Most Favoured Nation (MFN) status range from zero to 10.2 percent, double most rates levied by the United States. Under the FTA, Canadian tariff rates on these products were phased out in five annual, equal steps ending on 1 January 1993. Rates assessed by member countries of the European Community (EC) are comparable with those in Canada. Although the EC has not traditionally been a major player in the Canadian market, it is a supplier of certain specialty papers in the stationery paper and the coated and treated papers subsectors. The MFN tariff rates on selected value-added paper products are shown in Table 2. These tariffs apply on trade that does not meet content requirements under the FTA and on all trade originating outside the FTA countries.

Historically, the higher Canadian tariffs relative to those in the United States and the advantage of close proximity to customers have provided some measure of protection for

**Table 2 — Tariffs on Selected Value-Added Paper Products, 1993**

(percent)

	MFN tariff		
	Canada	United States	European Community
Paper packaging (cartons and boxes)	9.2 to 10.2	2.8	12
Sanitary tissue	10.2	5.3	9 to 11
Wallpaper	7.5	free	7 to 12.5
Paper cups and plates	10.2	4.3	11
Envelopes	10.2	4	12
Self-copy paper	8	3	9

the Canadian industry, particularly for the smaller companies. Tariff protection of domestic raw materials has also perpetuated the situation of higher raw material costs in Canada than in other countries. Canada's exports to offshore countries have been low in most subsectors because of the need to be extremely sensitive to clients' requirements, including just-in-time (JIT) criteria. The exception to the limited global trading patterns is the wallpaper subsector, which is internationally competitive and which continues to export a significant portion of its production.

### Canada-U.S. Free Trade Agreement

Although imports have not historically accounted for a large share of the Canadian market, the elimination of tariffs under the FTA has increased competition in both the Canadian and U.S. market. As noted earlier, both imports and exports increased in 1991 relative to 1988 levels. The Canadian industry imports a considerable portion of paper raw material, mainly from the United States. For instance, the volume of imports in 1990 increased over 1989 levels by 7 percent for containerboard and by 18 percent for publishing papers. In part, increased imports from the United States during the late 1980s displaced other imports. Imports from the United States grew by 26 percent in 1988, whereas total real imports grew by 21 percent.

The removal of U.S. tariff barriers against Canadian goods, while they remain largely intact against goods from most other countries, affords Canadian producers access to protection in the U.S. market. Some Canadian firms are penetrating U.S. markets, although post-FTA strategies vary from firm to firm. Some Canadian folding carton producers are exploring new markets in the United States with food and beverage manufacturers, and as a result are inclined to establish





operating/service facilities near these clients. Some packaging firms are exporting and a number are developing U.S. markets. Two major corrugated container producers are using production facilities and affiliated companies in the United States to establish links to sources of raw materials such as recyclable fibre and specific grades of containerboard. Restructuring of the Canadian industry is continuing and is resulting in the consolidation of some plants.

### **North American Free Trade Agreement**

On 12 August 1992, Canada, Mexico and the United States completed the negotiation of a North American Free Trade Agreement (NAFTA). The Agreement, when ratified by each country, will come into force on 1 January 1994. The NAFTA will phase out tariffs on virtually all Canadian exports to Mexico over 10 years, with a small number being eliminated over 15 years. The NAFTA will also eliminate most Mexican import licensing requirements and open up major government procurement opportunities in Mexico. It will also streamline customs procedures, and make them more certain and less subject to unilateral interpretation. Further, it will liberalize Mexico's investment policies, thus providing opportunities for Canadian investors.

Additional clauses in the NAFTA will liberalize trade in a number of areas including land transportation and other service sectors. The NAFTA is the first trade agreement to contain provisions for the protection of intellectual property rights. The NAFTA also clarifies North American content rules and obliges U.S. and Canadian energy regulators to avoid disruption of contractual arrangements. It improves the dispute settlement mechanisms contained in the FTA and reduces the scope for using standards as barriers to trade. The NAFTA extends Canada's duty drawback provisions for two years, beyond the elimination provided for in the FTA, to 1996 and then replaces duty drawback with a permanent duty refund system.

Specific schedules provide for a 10-year phase-out of Mexican tariffs on converted paper products.

### **Technological Factors**

Although technology in Canadian mills for the most part is state-of-the-art and compares favourably with that of counterparts in the United States and Europe, R&D is not in the forefront of the Canadian value-added paper products industry. With the exception of a few large, competitive producers of corrugated containers, folding cartons, flexible packaging and sanitary tissue, industry innovation stems chiefly from the suggestions and ideas of clients and equipment suppliers. Considerable investment has occurred in acquisition of modern

technology over the past 10 to 15 years, but much of the equipment is made in the United States, Japan and Europe.

Although the industry has spent little on formal R&D and technological development, Canadian firms have invested in sophisticated technology and process capability, and they have established a reputation for quality.

Canadian capability is very high in functional design and graphics, which supports the industry's international success in wallpaper and the emergence of folding cartons in particular.

## **Evolving Environment**

Environmental issues and the resulting programs are also of great concern to the industry. Two Canadian industry-oriented programs that have been introduced and have the potential for significant impact on the industry are the National Packaging Protocol (NAPP) and the Environmental Choice Program (ECP).

The NAPP, under the direction of the federal-provincial Canadian Council of Ministers of the Environment, has set a target of a 50 percent reduction in packaging materials going to landfill by the year 2000, using 1988 as the designated base year, with a 20 percent reduction by January 1992. The program places the burden of meeting these objectives on the packaging producers and users by instituting a practice of reduction of materials at source, container reuse and the recycling of wastes after commercial or consumer use. This program, while voluntary, is far-reaching in that it proposes to introduce a code of practice for packaging design and materials and solid-waste management regulations if NAPP targets are not met. Industry has responded with the implementation of the Canadian Code of Preferred Packaging Practices, and the Grocery Products Manufacturers of Canada in Toronto is in the process of developing a packaging stewardship model. In any case, the initiatives may promote a shift toward paper.

The ECP has a more general focus and applies to all products to lessen the burden on the environment. The voluntary program grants "EcoLogos" to products identified as "environmentally friendly" because of their compliance with specific product and production guidelines. For instance, three guidelines have been issued and another three are proposed based on recycled fibre content and production process criteria. These guidelines could have a significant impact on industry production techniques and on investment decisions having an environmental component. Given the level of public concern about the environmental impact of products and processes, any product not carrying the "EcoLogo" could be at a disadvantage in the marketplace.





## Outlook

At the time of writing, the signs of an economic recovery are showing, though still uneven. The medium-term outlook in the industry will correspondingly improve. The overall impact on the industry will depend on the pace of the recovery. Manufacturers of paper consumer products used in the restaurant trade and those areas of the packaging industry serving the food and beverage industry expect to experience annual growth rates of 1.5 to 2.5 percent in the short term. Performance in those areas of the industry serving the consumer durables and building industries could be sluggish, ranging from a drop of 1 percent to a modest growth of 1.5 percent. This performance may improve slightly if the North American economy strengthens and if firms are able to adjust and respond to the opportunities emerging from industry and consumer pressures for environmentally friendly processes and packaging.

Some paper packaging producers have been pioneers in the development of the recycling industry in Canada. Recycled paper fibre (secondary fibre) has been used as a raw material in the making of boxboard for folding cartons since the early 1900s. Currently, the majority of the fibre used in folding carton production (nearly 80 percent) comes from recyclable paper. Corrugated container and sanitary tissue producers over the past 15 to 20 years have increased their use of recycled fibre to over 40 percent and over 50 percent, respectively, of raw material requirements. The use of secondary fibre in value-added paper products will undoubtedly increase in response to increasing market demand and as more recycling capacity and sources of waste paper are established in Canada.

Concerns about the environment are influencing consumer purchasing patterns, causing a shift in the materials used in the manufacture of paper packaging, paper consumer products and other paper products such as fast-food containers. This shift is most evident in the fast-food industry, where there is a move toward the use of paper disposable products (e.g., cups, trays, plates and food wrappings) to replace packaging materials manufactured from plastics. In addition, consumers are favouring tissue products containing recycled fibre.

The choice of materials used in the manufacture of consumer products is typically based on best performance at the most competitive price. However, the current mood of consumers favours products that possess "environmentally friendly" characteristics. Thus, the value-added paper products industry could benefit from a shift in consumer preference toward paper, which currently is popularly perceived to be more environmentally friendly than competitive materials. The Canadian industry is responding by expanding recycling capacity and by participating in federal, provincial and municipal initiated solid-waste reduction programs through the newly formed Paper and Paperboard Packaging Environmental Council. Critical to the success of this adjustment process

will be the ability of firms to secure reliable supplies of suitable recyclable fibre at competitive prices over the long term.

The availability of material for use in recycling operations for folding cartons, corrugated containers and sanitary tissue is quickly becoming an important issue in the domestic industry. Significant amounts of recyclable material are currently imported from the United States in order to satisfy domestic raw material requirements. In 1992, at least 2 million tonnes of recyclable fibre were used in Canada, of which over half a million tonnes were imported from the United States. With heightened consumer demand for recycling and the large number of recycling facilities coming on stream in all subsectors of the primary and value-added paper products industries, sufficient quantities of recyclable materials at competitive prices may become more difficult to obtain.

Opportunities resulting from concerns for environmental protection extend as well to many other paper products such as those used in offices, the publishing trade and the manufacture of construction materials. For instance, there may be opportunities for manufacturers of envelopes, book and magazine papers, computer paper, office paper, copier paper, adding machine and telex rolls, gift wrap, wallpaper and many other paper products to legitimately claim their products lessen the burden on the environment. Products in this category would be those that contain recycled fibre, use preferred bleaching practices or no bleaching at all, consume less material than competitive products or can be reused or recycled after use. To meet this challenge, manufacturers will have to be innovative in producing and marketing their products.

## Competitiveness Assessment

A new operating environment for Canadian firms is emerging in the North American market. The domestic orientation of the industry is changing gradually, largely as a result of the FTA and NAFTA. These possibilities are causing the Canadian industry to seek new market opportunities in a liberalized trading environment.

Long-term competitiveness is a concern for most subsectors of the industry. Profit levels have declined because of a price/cost squeeze. With low profit levels, the industry is attempting to conduct some R&D that would lead to a more secure market share in the future. Plastic bags and containers, some of which now contain some recycled material, remain a less expensive alternative to paper for certain applications, but concerns about the environment may overcome the cost factor, with public insistence on using paper products in their place.





The industry is making some difficult decisions, building on the core activities that they do best. Particular strengths are the industry's reputation for quality, state-of-the-art plants and flexibility to serve specialized, niche markets. Non-core operations in business plans will be divested, as has been the situation since the late 1980s. Revenues gained by these divestitures and through increased sales as the economy improves will finance technological innovation and R&D that will increase production efficiency. Also, firms will continue to rationalize operations in Canada within the context of a larger North American market. This rationalization could result in a short-term reduction in domestic shipments. However, firms will be better situated to serve a larger, more diverse client base.

On balance, the industry will face these challenges and ensure its place in the market in the 1990s and beyond. The industry that will emerge is expected to be smaller in terms of the number of firms and employment, but the companies will be larger, responsive and poised for recovery to thrive in a global market.

For further information concerning the subject matter contained in this profile or in the ISTC initiative listed on page 14, contact

Forest Industries Branch  
Industry, Science and Technology Canada  
Attention: Value-Added Paper Products  
235 Queen Street  
OTTAWA, Ontario  
K1A 0H5  
Tel.: (613) 954-3060  
Fax: (613) 941-8048





## PRINCIPAL STATISTICS<sup>a</sup>

	1983	1984	1985	1986	1987	1988	1989	1990 <sup>c</sup>	1991 <sup>b</sup>
Establishments	529	530	544	549	543	568	595	513	497
Employment <sup>b</sup>	39 099	40 539	40 924	41 731	43 232	44 907	43 956	40 542	38 649
Shipments <sup>b</sup>									
(\$ millions)	4 390	4 954	5 121	5 484	5 783	6 561	6 758	6 478	6 125
(constant 1988 \$ millions)	5 564	5 958	5 918	6 185	6 184	6 561	6 493	6 176	5 962

<sup>a</sup>For establishments, employment and shipments, see *Paper and Allied Products Industries*, Statistics Canada Catalogue No. 36-250, annual (industry group 273, paper box and bag industries; and industry group 279, other converted paper products industries).

<sup>b</sup>Data also include ISTC estimates covering the production of sanitary tissue as reported for SIC 2719, other paper industries.

<sup>c</sup>Data are from the Canadian Socio-economic Information Management System (CANSIM) data base, Statistics Canada.

## TRADE STATISTICS

	1983	1984	1985	1986	1987	1988 <sup>c</sup>	1989 <sup>c</sup>	1990 <sup>c</sup>	1991 <sup>c</sup>
Exports <sup>a</sup>									
(\$ millions)	193	276	329	423	532	517	551	728	758
(constant 1988 \$ millions)	245	332	380	477	569	517	530	694	738
Domestic shipments									
(\$ millions)	4 197	4 678	4 792	5 061	5 251	6 044	6 207	5 750	5 367
(constant 1988 \$ millions)	5 319	5 626	5 538	5 708	5 615	6 044	5 963	5 482	5 224
Imports <sup>b</sup>									
(\$ millions)	376	454	482	562	606	783	896	928	1 024
(constant 1988 \$ millions)	477	546	557	634	648	783	861	885	997
Canadian market									
(\$ millions)	4 573	5 132	5 274	5 623	5 857	6 827	7 103	6 678	6 391
(constant 1988 \$ millions)	5 796	6 172	6 095	6 342	6 263	6 827	6 824	6 367	6 221
Exports (% of shipments)	4.4	5.6	6.4	7.7	9.2	7.9	8.2	11.2	12.4
Imports (% of Canadian market)	8.2	8.8	9.1	10.0	10.3	11.5	12.6	13.9	16.0

<sup>a</sup>See *Exports by Commodity*, Statistics Canada Catalogue No. 65-004, monthly.

<sup>b</sup>See *Imports by Commodity*, Statistics Canada Catalogue No. 65-007, monthly.

<sup>c</sup>It is important to note that data for 1988 and after are based on the Harmonized Commodity Description and Coding System (HS). Prior to 1988, the shipments, exports and imports data were classified using the Industrial Commodity Classification (ICC), the Export Commodity Classification (XCC) and the Canadian International Trade Classification (CITC), respectively. Although the data are shown as a continuous historical series, users are reminded that HS and previous classifications are not fully compatible. Therefore, changes in the levels for 1988 and after reflect not only changes in shipment, export and import trends, but also changes in the classification systems. It is impossible to assess with any degree of precision the respective contribution of each of these two factors to the total reported changes in these levels.





### SOURCES OF IMPORTS<sup>a</sup> (% of total volume)

	1983	1984	1985	1986	1987	1988 <sup>b</sup>	1989 <sup>b</sup>	1990 <sup>b</sup>	1991 <sup>b</sup>
United States	81	81	77	76	75	91	89	90	91
European Community	14	14	18	19	20	4	5	4	4
Asia	4	4	4	4	4	1	1	1	2
Other	1	1	1	1	1	4	5	5	3

<sup>a</sup>See *Imports by Commodity*, Statistics Canada Catalogue No. 65-007, monthly.

<sup>b</sup>Although the data are shown as a continuous historical series, users are reminded that HS and previous classifications are not fully compatible. Therefore, changes in the levels for 1988 and after reflect not only changes in import trends, but also changes in the classification systems.

### DESTINATIONS OF EXPORTS<sup>a</sup> (% of total volume)

	1983	1984	1985	1986	1987	1988 <sup>b</sup>	1989 <sup>b</sup>	1990 <sup>b</sup>	1991 <sup>b</sup>
United States	74	78	81	85	82	75	69	67	66
European Community	7	6	6	4	7	3	8	8	8
Asia	2	3	4	3	3	13	15	15	15
Other	17	13	9	8	8	9	8	10	11

<sup>a</sup>See *Exports by Commodity*, Statistics Canada Catalogue No. 65-004, monthly.

<sup>b</sup>Although the data are shown as a continuous historical series, users are reminded that HS and previous classifications are not fully compatible. Therefore, changes in the levels for 1988 and after reflect not only changes in export trends, but also changes in the classification systems.

### REGIONAL DISTRIBUTION<sup>a</sup> (average over the period 1986 to 1988)

	Atlantic	Quebec	Ontario	Prairies	British Columbia
Establishments (% of total)	4	29	52	8	7
Employment (% of total)	3	30	58	4	5
Shipments (% of total)	5	26	57	4	8

<sup>a</sup>See *Paper and Allied Products Industries*, Statistics Canada Catalogue No. 36-250, annual.





## MAJOR FIRMS

Name	Country of ownership	Location of major plants
<b>Coated and Treated Papers</b>		
Fasson Canada Inc.	United States	Ajax, Ontario
Norwall Group (Division of North American Decorative Products)	Canada	Brampton, Ontario
Peterborough Paper Converters Inc.	Canada	Peterborough, Ontario
<b>Corrugated Containers</b>		
Canadian Pacific Forest Products Limited	Canada	Burlington, Ontario Markham, Ontario London, Ontario Vaudreuil, Quebec Pointe-aux-Trembles, Quebec
Domtar Packaging (Division of Domtar Inc.)	Canada	Moncton, New Brunswick Montreal, Quebec Quebec City, Quebec Toronto region, Ontario (6 plants) St. Mary's, Ontario Winnipeg, Manitoba Calgary, Alberta Edmonton, Alberta Richmond, British Columbia
MacMillan Bathurst	Canada/United States	Mount-Royal, Quebec Saint-Laurent, Quebec Toronto region, Ontario (3 plants) Guelph, Ontario Pembroke, Ontario Whitby, Ontario Winnipeg, Manitoba Regina, Saskatchewan Calgary, Alberta Edmonton, Alberta New Westminster, British Columbia

(continued)





## MAJOR FIRMS (continued)

Name	Country of ownership	Location of major plants
<b>Folding Cartons</b>		
Lawson Mardon Group Limited	Canada/Switzerland	Vancouver, British Columbia London, Ontario Scarborough, Ontario Baie-d'Urfé, Quebec
Les Industries Ling Inc.	Canada	Warwick, Quebec
Somerville Packaging	Canada	Toronto, Ontario Scarborough, Ontario Brockville, Ontario Smiths Falls, Ontario Montreal, Quebec Vancouver, British Columbia
<b>Paper Bags and Other Packaging</b>		
Aspamill Inc.	Canada	Montreal, Quebec
Bonar Inc.	United Kingdom	Fredericton, New Brunswick Guelph, Ontario Burlington, Ontario East Angus, Quebec Calgary, Alberta
Twinpak Inc.	Australia	Cap-de-la-Madeleine, Quebec Brantford, Ontario Vancouver, British Columbia Calgary, Alberta
<b>Paper Consumer Products</b>		
Atlantic Packaging Products Ltd.	Canada	Scarborough, Ontario
Facelle, a Division of Procter & Gamble Inc.	United States	Toronto, Ontario
Industries Cascades Inc.	Canada	Kingsey Falls, Quebec
Irving Tissue Company	Canada	Saint John, New Brunswick
Kimberly-Clark Inc.	United States	St. Catharines, Ontario Saint-Hyacinthe, Quebec
Scott Paper Limited	Canada/United States	New Westminster, British Columbia Hull, Quebec Crabtree, Quebec Lennoxville, Quebec

(continued)





## MAJOR FIRMS (continued)

Name	Country of ownership	Location of major plants
<b>Stationery Paper</b>		
Abitibi-Price Inc.	Canada	Toronto, Ontario Markham, Ontario Montreal, Quebec Richmond, British Columbia
Cutting International Limited	Canada	Toronto, Ontario Montreal, Quebec Winnipeg, Manitoba Vancouver, British Columbia
Esselte Canada Inc.	Sweden	Saint-Léonard, Quebec Mississauga, Ontario Calgary, Alberta
Supreme Envelope (Division of Supremex Inc.)	Canada	Montreal, Quebec Toronto, Ontario
<b>Other Value-Added Papers</b>		
Dover Industries Limited	Canada	Burlington, Ontario
Lily Cups Inc.	United States	Scarborough, Ontario
Minas Basin Pulp & Power Co. Ltd.	Canada	Hantsport, Nova Scotia

Printed on paper containing recycled fibres.







## INDUSTRY ASSOCIATIONS

Association of Independent Corrugated Converters (Canada)  
P.O. Box 569  
WINONA, Ontario  
L0R 2L0  
Tel.: (416) 643-4550

Canadian Corrugated Case Association  
208 Brimorton Drive  
SCARBOROUGH, Ontario  
M1H 2C6  
Tel.: (416) 431-1330  
Fax: (416) 431-5223

Canadian Manufacturers Association  
75 International Boulevard  
ETOBICOKE, Ontario  
M9W 6L9  
Tel.: (416) 798-8000  
Fax: (416) 798-8050

Canadian Paper Box Manufacturers' Association  
Suite 400, 701 Evans Avenue  
ETOBICOKE, Ontario  
M9C 1A3  
Tel.: (416) 626-7056  
Fax: (416) 626-7054

Canadian Paper Trade Association  
Suite 200, 670 Bloor Street West  
TORONTO, Ontario  
M6G 1L2  
Tel.: (416) 533-7800  
Fax: (416) 533-4795

Canadian Pulp and Paper Association  
Suite 1900, 1155 Metcalfe Street  
MONTREAL, Quebec  
H3B 4T6  
Tel.: (514) 866-6621  
Fax: (514) 866-3035

Paper and Paperboard Packaging Environmental Council  
Suite 400, 701 Evans Avenue  
ETOBICOKE, Ontario  
M9C 1A3  
Tel.: (416) 626-3344  
Fax: (416) 626-7054

## SECTORAL STUDIES AND INITIATIVES

The following initiatives are supported by Industry, Science and Technology Canada (for additional information, see address on page 8).

### **Forest Industry Policy**

Embracing the concept of more efficient use of the forest resource, the federal government through ISTC announced the Forest Industry Policy in late 1987, placing emphasis on technological innovation, new product development and increased value-added production in the forest sector. For instance, the Forest Industries R&D and Innovation Program, an initiative from the Policy, was established in February 1990 to promote more R&D in the forest sector and to improve the international competitiveness of the industry.

### **Forest Industries R&D and Innovation Program**

The overall objective of the three-year Forest Industries R&D and Innovation Program is to increase the international

competitive position of the forest industry by encouraging, through government assistance, increased R&D activity by the industry. The strategic approach is to encourage R&D activity undertaken in alliances with other stakeholders and, thereby, to expand the transfer of technology and accelerate its implementation in advanced forest products and processes in the industry.

An important program delivery mechanism is through strategic memoranda of understanding (MOUs) with companies. The objective is to work with recognized industry leaders to stimulate R&D activity undertaken in cooperative alliances with other partners, including smaller companies and suppliers. A key MOU is with the Pulp and Paper Research Institute of Canada (PAPRICAN), which is to encourage research directed toward addressing the environmental challenges confronting the pulp and paper industry.