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Canada

A STUDY OF THE CANADIAN COMMERCIAL PRINTING INDUSTRY



Government
of Canada

Gouvernement
du Canada

Regional Industrial
Expansion

Expansion industrielle
régionale

EDITOR'S NOTE

The 10 percent MFN rate on certain categories of English-language periodicals and books (described on page 10) was suspended by the Minister of Finance in his budget of February 18, 1987.

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TABLE OF CONTENTS

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TABLE OF CONTENTS

	<u>Page</u>
1. Definition of the Industry	1
2. The Industry in Perspective	1
2.1 Current State of the Industry	1
2.2 Historical Background	1
3. Industry Structures	2
3.1 Size of Plants and Firms	2
3.2 Regional Distribution	2
3.3 Specialization	3
3.4 Ownership and Control	3
3.5 International Context	4
4. Domestic Market Structures	4
4.1 Market Size	4
4.2 Marketing Practices	5
5. International Trade	5
5.1 Exports	5
5.2 Imports	7
5.3 Canada-United States Comparisons	9
6. Barriers to Trade	9
6.1 Tariffs	9
6.2 Non-Tariff Barriers	11
7. Relative Production Costs	13
7.1 Raw Materials and Energy	13
7.2 Employment	14
7.3 Productivity of Labour	16
7.4 Transportation	16
7.5 Canada-United States Comparisons	17
8. Technology and Innovation	25
8.1 Research and Development	25
8.2 Machinery and Equipment	26
9. Financial Situation	27
9.1 Profitability	27
9.2 Liquidity and Solvency	29
10. Role of Governments	30

TABLE OF CONTENTS - CON'T

	<u>Page</u>
11. Medium-Term Outlook	31
11.1 Domestic Market Trends	31
11.2 International Market Trends	32
11.3 Production Trends	33
11.4 Supply Factors	34
11.5 Technological Developments	34
12. Conclusions	35

Annexes

Annex A - Principal Tariff Items in Canada

Annex B - Principal Tariff Items in the United States

A STUDY OF
THE CANADIAN COMMERCIAL PRINTING INDUSTRY

1. Definition of Industry

The industry is classified under SIC 2811 (business forms printing) and 2819 (other commercial printing). It is composed of establishments primarily engaged in the production of printed items, regardless of the printing method used. Integrated printing facilities in such organizations as insurance companies and governments (commonly referred to as in-house printing plants) are excluded.

The industry is an integral part of the Printing, Publishing and Allied Industries sector. While there are notable differences in the structures and operations of the printing and publishing industries, there is a certain degree of interdependence.

2. Industry in Perspective

2.1 Current State of Industry

In 1985, the Canadian industry consisted of 2875 companies that controlled an estimated 3000 establishments, employed about 53 000 people and reported shipments valued at \$4.4 billion. The industry produces a wide variety of consumer and industrial goods for all segments of the economy. Catalogues, circulars, price lists and other advertising matter represent the single largest product group, accounting for about one-fifth of the industry's output. The other dominant product groups are business forms (15 percent) and periodicals printed for publishers (9.0 percent). The bulk of the industry's output involves custom work. Although it is unquestionably a manufacturing sector, there is a substantial service factor which exists as a result of the manufacturer/customer relationships.

In 1984 and 1985, the industry experienced rapid growth following the recent economic recession. Concurrent with this growth was the virtual disappearance of the overcapacity situation that had existed since early 1982. With the return of better market conditions, capital expenditures by the industry picked up substantially in 1984-85.

2.2 Historical Background

In response to generally favourable market conditions, the Canadian commercial printing industry achieved a solid record of expansion and diversification during the period 1974-85. Employment and shipment levels expanded at average annual growth rates of 1.7 and 12.5 percent respectively.

During the period under review, the commercial printing industry performed better than the manufacturing sector. Its shares of all manufacturing's shipments and employment expanded from 1.5 to 1.8 percent and from 2.5 to 3.1 percent respectively. Similarly, its

financial performance, in terms of before-tax profit on total income and after-tax profit on equity, has usually been better than all manufacturing during this period.

3. Industry Structures

3.1 Size of Plants and Firms

The industry has more establishments than any other manufacturing industry in Canada (at the SIC three-digit level) and is characterized by a large number of small, relatively labour-intensive production units. There are no major barriers to entry into the industry at the small scale level. As indicated in Table 1, plants employing fewer than 20 people represented four-fifths of all establishments in 1984, the latest year for which reliable statistics are available, but accounted for only one-fifth of total shipments. The 92 largest plants, or 3.2 percent of the total, shared almost half of the industry's shipments. There have been no indications of major changes in the establishment size in 1985. It is a more highly fragmented industry than the Canadian manufacturing sector as a whole.

TABLE 1
DISTRIBUTION OF INDUSTRY BY ESTABLISHMENT SIZE, 1984

<u>No. of Employees</u>	<u>Establishment</u>		<u>Employment</u>		<u>Shipments</u>	
	(No.)	(%)	(No.)	(%)	(\$ million)	(%)
less than 10	2 000	68.5	7 188	13.8	452.7	11.2
10 to 19	418	14.3	5 633	10.8	351.1	8.7
20 to 49	306	10.5	9 543	18.3	692.9	17.1
50 to 99	104	3.6	7 451	14.3	646.1	16.0
100 or more	<u>92</u>	<u>3.2</u>	<u>22 287</u>	<u>42.8</u>	<u>1 906.5</u>	<u>47.1</u>
TOTAL	2 920	100.0	52 102	100.0	4 049.4	100.0

SOURCE: Statistics Canada Catalogue No. 36-203

The development of multi-plant organizations is not yet significant in the industry, although a slow trend toward amalgamation has been evident in recent years. At the company level, the four largest printers account for about 30 percent of all shipments. Two of these are controlled by communications conglomerates.

3.2 Regional Distribution

Although plants can be found throughout the country, the industry is heavily concentrated in Ontario and Quebec. In 1984, these two provinces together accounted for almost three-quarters of all plants and roughly four-fifths of all employment and shipments, as outlined in Table 2. There is nothing to indicate that the figures on regional distribution are not still valid today.

While the industry provides important employment opportunities in smaller communities, printing activities tend to be concentrated in the areas of high population density. Plants located in the Toronto and Montréal metropolitan areas account for about half of the industry's output. The average printer tends to service its local market only.

TABLE 2
REGIONAL DISTRIBUTION OF ESTABLISHMENTS, 1984

	<u>Establishment</u>		<u>Employment</u>		<u>Shipments</u>	
	(No.)	(%)	(No.)	(%)	(\$ million)	(%)
Maritimes	124	4.2	964	1.9	57.1	1.4
Quebec	796	27.3	15 046	28.9	1 209.9	29.9
Ontario	1 292	44.2	27 163	52.1	2 134.4	52.7
Prairies	414	14.2	5 746	11.0	409.8	10.1
B.C., Yukon & N.W.T	<u>294</u>	<u>10.1</u>	<u>3 183</u>	<u>6.1</u>	<u>238.3</u>	<u>5.9</u>
TOTAL	2 920	100.0	52 102	100.0	4 049.4	100.0

SOURCE: Statistics Canada Catalogue No. 36-203

3.3 Specialization

The majority of printing establishments produce a wide range of printed items while only a relatively small number of plants specialize in certain types of products or clients. Product specialization predominates among printers of business forms and greeting cards. The "instant printer" is an example of specialization demanded by clients serving that segment of the market requiring rapid delivery of small orders with minimal quality requirements.

3.4 Ownership and Control

The industry is largely Canadian-owned with a strong tradition of family ownership. About 4 percent of the companies are foreign-controlled, mainly by Americans. These companies tend to be larger than average and collectively account for about 15 percent of industry's output. This compares favourably with the total Canadian manufacturing sector in which half of all shipments originate from foreign-owned firms. Non-resident ownership in the industry is most extensive in the greeting cards segment. The degree of local autonomy in decision-making in branch plants varies from company to company; however, these firms tend to be restricted to a domestic vocation. Similarly, a number of Canadian-owned printers have investments abroad, primarily in the United States, and the Canadian plants normally would not seek export orders from the markets served by their affiliates.

3.5 International Context

For the purpose of this document, international comparison has been limited to the United States because of the similarity in business conditions, consumer preferences and cultures. In addition, the United States is by far Canada's largest trading partner in the commercial printing field.

According to preliminary statistics provided by the U.S. Department of Commerce, the commercial printing industry(1) in the United States employed 622 500 people in 1985 with shipments of US\$47.0 billion. The number of establishments stood at an estimated 31 500. In 1985, per capita shipments of commercial printed products reached US\$196.99 in the United States, compared to Canadian \$169.27 (US\$123.55) in Canada. The number of plants per million inhabitants stood at 132 in the U.S. compared with 118 in Canada.

The structural characteristics of the American industry are not markedly different than those of its Canadian counterpart. For example, plants employing fewer than 20 people accounted for 82.6 percent of all establishments in the U.S. in 1982(2), 24.2 percent of total employment and 17.7 percent of all shipments. Production is concentrated in California (9.9 percent of industry's shipments), Illinois (9.8 percent), New York (8.8 percent), Pennsylvania (6.3 percent) and Ohio (5.3 percent). There is a trend towards movement of production facilities to the sun belt area in response to above-average increases in population and general business activity in the southern and western states. Finally, the American industry is primarily domestically owned. In the last few years, some of the larger Canadian commercial printers have acquired printing companies in the U.S.

4. Domestic Market Structures

4.1 Market Size

Reflecting generally favourable conditions, the apparent Canadian market for commercial printed products expanded from \$1.3 billion in 1974 to \$4.6 billion in 1985, an average annual growth rate of 12.3 percent. Growth in real terms (i.e., constant dollars) cannot be provided because of the lack of adequate price indices for commercial printed products. Growth by year varied from a high of 19.8 percent in 1980 to a low of

NOTE: (1) Classified under SIC 2732 (book printing), 2751 (commercial printing, letter press), 2752 (commercial printing, lithographic), 2754 (commercial printing, gravure), 2761 (manifold business forms) and 2771 (greeting cards).
(2) Latest year for which accurate statistics are available.

2.8 percent in 1982. A special characteristic of commercial printing, in relation to other manufacturing industries, is that its market is segmented into two linguistic groups.

The potential market of the industry has been eroded increasingly in the last decade by in-house printing facilities and photocopying machines. For example, the equivalent value of in-house printing in Canada is estimated at \$250 million annually.

4.2 Marketing Practices

The majority of the industry's domestic customers are small, placing orders intermittently for a variety of printed products. In most cases, their needs are unique and, since the value of individual orders is relatively modest, good service in terms of quality and delivery is a prime requirement. Consequently, the average commercial printer tends to service only its local market and generates orders through personal contact with customers. Use of intermediaries, such as distributors or jobbers, is limited to specialist printers in such areas as business forms and greeting cards. It is estimated that the industry spends only 1.0 percent of total sales dollar on advertising, mostly through company circulars/brochures and advertisements in specialized business publications, such as Canadian Printer & Publisher and Le Maître Imprimeur.

5. International Trade

In developed countries, the commercial printing industry is basically domestic oriented, reflecting the nature of the products. For most print orders, buyer and supplier must have easy access to each other to proof layouts and copy before the actual printing takes place. Nonetheless, there is a broad group of printed products of a non-time, sensitive nature that lend themselves to international trade.

5.1 Exports

As demonstrated in Table 3, Canada's exports of commercial printed products expanded from \$22.9 million in 1974 to \$149.2 million in 1985(1), an average annual growth rate of 20.1 percent. During the

NOTE: (1) The export statistics quoted in this report understate the actual level of export orientation of the Canadian commercial printing industry. For statistical purposes, Canada's international trade in newspapers, periodicals and books is usually assigned to the publishing industry. However, it appears that many such Canadian exports originate 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, the bulk of Canada's imports of newspapers, periodicals and books apparently originates from foreign publishers.

period under review, exports grew at a faster rate than domestic shipments, increasing their share of the industry's total output from 1.9 to 3.4 percent. Gains in export shipments have been particularly significant in the last two years, reflecting the impact of a cheap Canadian dollar. The export data compiled by Statistics Canada are not detailed enough to enable a meaningful assessment by product lines as roughly three-quarters of all export shipments are classified under a single item -- printed matter n.e.s. Based on industry's comments, it would appear that Canada's exports consist of a wide variety of products, including inserts, flyers, menus, labels, tickets, yearbooks and travellers' cheques. During the 1974-85 period, the industry's share of Canadian exports of inedible end products increased from 0.25 to 0.30 percent.

TABLE 3
CANADA'S EXPORTS BY COMMODITY CLASS

	<u>1974</u>		<u>1979</u>		<u>1985</u>	
	(\$ million)	(%)	(\$ million)	(%)	(\$ million)	(%)
Maps, pictures, cards and music	2.8	12.2	5.4	11.2	17.2	11.5
Advertising matter n.e.s.	3.7	16.2	2.0	4.2	17.7	11.9
Printed matter n.e.s.	<u>16.4</u>	<u>71.6</u>	<u>40.7</u>	<u>84.6</u>	<u>114.3</u>	<u>76.6</u>
TOTAL	22.9	100.0	48.1	100.0	149.2	100.0

SOURCE: Statistics Canada Catalogue No. 65-004

As shown in Table 4, Canada's export trade in this field is conducted primarily with the United States. The U.S. share of all export shipments varied from a high of 88.9 percent in 1985 to a low of 75.4 percent in 1977. While reliable statistics are not available to confirm it, it is understood that the bulk of Canadian exports to the United States are directed at states close to the border. Within the European Community (EC), the United Kingdom was the most important market in 1985, absorbing 2.6 percent of all exports, followed by Ireland (0.5 percent), France (0.5 percent) and Belgium-Luxembourg (0.4 percent).

TABLE 4
CANADA'S EXPORTS BY COUNTRY

	<u>1974</u>		<u>1979</u>		<u>1985</u>	
	(\$ million)	(%)	(\$ million)	(%)	(\$ million)	(%)
United States	19.0	83.0	38.9	80.9	132.7	88.9
EC(1)	1.0	4.4	4.1	8.5	6.9	4.6
Asia	0.3	1.1	0.6	1.2	1.5	1.0
Others	<u>2.6</u>	<u>11.4</u>	<u>4.5</u>	<u>9.4</u>	<u>8.1</u>	<u>5.4</u>
TOTAL	22.9	100.0	48.1	100.0	149.2	100.0

SOURCE: Statistics Canada Catalogue No. 65-004

NOTE: (1) Belgium, Denmark, France, West Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands and the United Kingdom.

It is generally believed that a relatively small number of larger printers account for the bulk of Canadian exports to the United States. Prominent in this group are companies such as Maclean Hunter, Southam Printing and Ronalds-Federated. A significant portion of export shipments originates from plants in central Canada, although the rest of the country has aggressive exporters, including Lunenburg County Print in Nova Scotia, Barnes-Hopkins in New Brunswick, Public Press in Manitoba, Mercury Graphics in Saskatchewan and Agency Press in British Columbia. Most export shipments to the U.S. are made by trucks. A small number of Canadian exporters maintain sales offices in the United States while other companies serve the market through regular visits by Canadian salesmen. American print brokers are also used by several Canadian exporters. It should be noted that a Canadian export consortium was established in 1984 to tap the American market -- the Montréal Creative Consortium which, at present, has 40 companies and individuals as members.

5.2 Imports

As depicted in Table 5, imports of commercial printed items into Canada jumped from \$102.2 million in 1974 to \$335.5 million in 1985, an average annual growth rate of 11.7 percent. Imports expanded at a slower rate than domestic production, as their share of the apparent Canadian market declined from 7.9 to 7.4 percent. Overall, Canada's trade imbalance has grown from \$79.3 million to \$186.3 million during the period 1974-85. However, the industry's share of Canadian imports of inedible end products declined from 0.56 to 0.47 percent. It is not possible to do a meaningful assessment of imports by product lines since 61.1 percent of all import shipments in 1985 were classified under two items -- advertising matter n.e.s. and printed matter n.e.s. In many cases, these imports represented shipments which were part of a much larger press run with the major portion used in the exporter's domestic market. Predominant in this group would be imports by American-controlled companies in all segments of the Canadian economy that obtain their print requirements from parent organizations.

TABLE 5
CANADA'S IMPORTS BY COMMODITY CLASS

	1974		1979		1985	
	(\$ mil.)	(%)	(\$ mil.)	(%)	(\$ mil.)	(%)
Globes	0.5	0.5	1.0	0.5	1.8	0.5
Charts and maps	1.7	1.7	1.9	1.0	3.4	1.0
Photographs	3.0	2.9	2.6	1.3	5.4	1.6
Greeting cards	3.5	3.4	6.1	3.1	15.2	4.5
Pictorial post cards	0.3	0.3	0.6	0.3	0.9	0.3
Picture reproductions n.e.s.	4.0	3.9	7.9	4.0	10.8	3.2
Printed music	4.5	4.4	8.7	4.4	7.5	2.2
Children's picture books	1.7	1.7	5.3	2.7	17.6	5.2
Labels, tags and wrappers	5.4	5.3	13.6	6.8	23.9	7.1
Blueprints, plans and designs	16.3	15.9	13.0	6.5	20.3	6.1
Decalcomania transfers	3.1	3.0	10.7	5.4	10.5	3.1
Playing cards in packs	1.0	1.0	1.5	0.8	1.7	0.5
Playing cards in sheets	0.9	0.9	2.3	1.2	1.4	0.4
Printed paper patterns	2.8	2.7	4.1	2.1	6.0	1.8
Tourist literature	1.1	1.1	3.0	1.5	4.0	1.2
Advertising matter n.e.s.	24.8	24.3	37.4	18.7	61.0	18.2
Printed matter n.e.s.	<u>27.6</u>	<u>27.0</u>	<u>80.2</u>	<u>40.1</u>	<u>144.0</u>	<u>42.9</u>
TOTAL	102.2	100.0	199.9	100.0	335.5	100.0

SOURCE: Statistics Canada Catalogue No. 65-007

The United States is by far the largest supplier of commercial printed products to Canada, as indicated in Table 6. Its share of all imports varied from a high of 89.1 percent in 1976 to a low of 81.3 percent in 1983. In 1985, it dominated in all the 17 commodity classes identified in Table 5. Within the EC, the United Kingdom was the largest source in 1985, supplying 3.8 percent of all imports, followed by France (2.0 percent), West Germany (1.6 percent) and Italy (1.3 percent).

TABLE 6
CANADA'S IMPORTS BY COUNTRY

	1974		1979		1985	
	(\$ million)	(%)	(\$ million)	(%)	(\$ million)	(%)
United States	89.0	87.1	170.8	85.4	276.6	82.4
EC(1)	8.5	8.3	18.8	9.4	36.8	11.0
Asia	3.0	3.0	7.7	3.9	15.8	4.7
Others	<u>1.7</u>	<u>1.7</u>	<u>2.6</u>	<u>1.3</u>	<u>6.3</u>	<u>1.9</u>
TOTAL	102.2	100.0	199.9	100.0	335.5	100.0

SOURCE: Statistics Canada Catalogue No. 65-007

NOTE: (1) Belgium, Denmark, France, West Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands and the United Kingdom.

5.3 Canada-United States Comparisons

As demonstrated in Table 7, the United States industry is less export oriented but supplies a larger share of its domestic market than its Canadian counterpart.

TABLE 7
EXPORT ORIENTATION AND IMPORT PENETRATION

	<u>Canada</u>	<u>United States</u>
Exports as % of shipments		
1974	1.9	0.8
1979	2.2	0.9
1985	3.4	0.6
Imports as % domestic market		
1974	7.9	0.5
1979	8.4	0.7
1985	7.4	0.9

SOURCE: Statistics Canada and U.S. Department of Commerce - Bureau of the Census

In 1985, exports of commercial printed products by the United States reached US\$298.6 million. Roughly half of all export shipments were classified under two items -- printed matter nspf(1) (35.8 percent) and advertising printed matter nspf(1) (12.9 percent). Other dominant product lines were plans and drawings (17.4 percent) and labels (11.0 percent). Canada was the principal export market of the American commercial printing industry, absorbing 24.9 percent of all export shipments, followed by the United Kingdom (10.9 percent), Japan (6.7 percent) and Australia (5.4 percent). During that year, imports into the United States stood at US\$400.4 million, of which 27.9 percent were classified under basket items. Other dominant product lines were catalogues (21.4 percent), calendars (7.2 percent) and decalcomanias (6.1 percent). Canada was the principal source of supply, accounting for 31.3 percent of all imports into the United States, followed by Japan (13.8 percent), West Germany (10.8 percent) and the United Kingdom (10.2 percent).

6. Barriers to Trade

6.1 Tariffs

Imports of commercial printed products into Canada are classified under approximately 200 different tariff items. The principal ones are described in Annex A along with their Most Favoured Nation (MFN) duty rates.

NOTE: (1) Not specially provided for.

In response to the American surcharge on imported shakes and shingles, on June 6, 1986, Canada re-imposed a 10 percent MFN rate on English-language periodicals issued less than four times a year, and on books (except books for educational institutions and libraries, and of a religious nature). Canada continues to provide duty-free entry to newspapers, periodicals and books in any other than the English language, and to other printed matter when relating to foreign products or services, for use by educational institutions, or of a religious nature. Where applicable, Canadian MFN rates in 1986 range from a low of 7.2 percent for stamp albums to a high of 29.5 percent for advertising catalogues. The duties collected in 1985 reached \$21.3 million, representing 6.3 percent of the total value of imports. As indicated in Table 8, almost 60 percent of all imports entered Canada duty-free during that year.

TABLE 8
CANADA'S IMPORTS BY LEVEL OF DUTY RATES, 1985

<u>Applicable Duty Rate (%)</u>	<u>Imports</u>	
	<u>(\$ million)</u>	<u>(%)</u>
Free	191.5	57.1
0.1 to 4.9	0	0
5.0 to 9.9	1.8	0.5
10 or more	<u>142.2</u>	<u>42.4</u>
TOTAL	335.5	100.0

SOURCE: Statistics Canada unpublished data

The principal tariff items in the United States are listed in Annex B along with their duty rates which are substantially lower than those in Canada. By way of comparison, tariff rates in the EC usually fall between the Canadian and American rates. The duties collected by American Customs on imports of commercial printed products reached US\$6.1 million in 1985, representing only 1.5 percent of the total value of imports. As shown in Table 9, only about one-third of all imports entered the United States duty-free while the bulk of the remaining imports were subject to a tariff of less than 5.0 percent.

TABLE 9
UNITED STATES IMPORTS BY LEVEL OF DUTY RATES, 1985

<u>Applicable Duty Rate (%)</u>	<u>Imports</u>	
	<u>(U.S. \$ mil.)</u>	<u>(%)</u>
Free	127.3	31.7
0.1 to 4.9	217.1	54.2
5.0 to 9.9	56.0	14.0
10 or more	<u>0</u>	<u>0</u>
TOTAL	400.4	100.0

SOURCE: U.S. Department of Commerce Catalogue FT 246

6.2 Non-Tariff Barriers

The principal Canadian non-tariff barriers that have provided, directly or indirectly, a measure of protection/assistance to the domestic commercial printing industry are government procurement and publishing programs.

The federal government purchased \$126 million of print materials in 1985-86. Provincial and municipal governments together bought an estimated additional \$100 million. Government procurement, therefore, accounts for about 5.0 percent of the printing industry's shipments. The Canadian government has a formal policy of soliciting bids only from Canadian printers while most provinces and municipalities grant preferential treatment to their local suppliers, either through formal or informal mechanisms. It should be noted that printing is not covered by the GATT Code on Government Procurement.

In the last decade, the federal government, primarily through the Department of Communications and its related agencies, and several provincial governments, notably Quebec and Ontario, have introduced special incentive measures to assist and protect the periodical and book publishing industries. These measures usually require publishers to source their printing requirements in Canada and, therefore, could be construed as non-tariff barriers. Printing of periodicals and books for publishers accounted for about 13 percent of the commercial printing industry's shipments in 1985.

A prohibition on importing lottery tickets, under section 305, "Immoral Articles", of the United States Tariff Act, and preferential government procurement practices are the principal non-tariff barriers in the United States affecting Canadian exports of commercial printed products. As in Canada, U.S. governments at all levels have adopted purchasing policies that give preferential treatment to local suppliers.

At the federal level, these policies date from 1933 when the Buy American Act was passed. The Act generally provides that federal government procurement for use within the United States must be restricted to domestic products unless the purchase of such supplies is "inconsistent with the public interest", if their cost would be "unreasonable", if they are "unavailable" in the United States in sufficient quantities and quality or within a specified period of time. These requirements are applicable to contracts not covered under the GATT Code on Government Procurement. "Unreasonable" costs, within the context of the legislation, are spelled out by Presidential Executive Order 2954 in the form of a general 6.0 percent price differential (applied to transportation costs and applicable duty). A 12 percent differential is applied when the American bidder is a small business, a minority business or a business located in a high labour surplus area. In addition, some contracts are set aside exclusively for such business.

For the purpose of the Buy American Act, small business concerns and labour surplus areas are defined in terms of standards published by the Small Business Administration and the Department of Labour respectively. Generally speaking, a small business is an independently owned and operated firm, not dominant in the field of operations in which it is bidding and with 500 employees or less.

Most American states have their preferential policies or statutes. They may take the form of a nominal or price preference for American products or a total prohibition on foreign goods. Not all state policies are necessarily in legal code form; some are implemented through attitude and buying preference.

Until 1978, penetration of the American market by Canadian commercial printers was hampered by the manufacturing clause of the United States Copyright Law. Basically, the clause provides that non-dramatic literary works in the English language, written by United States citizens or residents, must be manufactured in the United States to obtain copyright protection. Canadian printers were dissuaded from quoting on several classes of work for American customers either because of the clause or, and just as important, because of the fear of possible application. Under the 1976 general revision of the Copyright Law, the American government decided (a) that the manufacturing clause would expire on July 1, 1986, and (b) to grant an exemption from the clause to Canada, effective January 1, 1978. In return, the United States expected Canada to ratify the Florence Agreement, a UNESCO-sponsored instrument, which became effective in 1950, requiring members to exempt from custom duties a wide range of educational, scientific and cultural products. Members also undertake, as far as possible to grant licences and foreign exchanges for the importation of these products. However, as the Canadian exemption was not permanently entrenched in the U.S. Copyright Law, Canada opted for reducing, for an indefinite period, the Most Favoured Nation (MFN) rate of duty on books from 10 percent to free. This reduction came into force on January 30, 1979. At that time, book was the principal printed product covered by the Florence Agreement which was not granted duty-free entry into Canada. In 1984, a GATT panel found the manufacturing clause was inconsistent with the United States obligations under the GATT.

In November 1985, a bill was introduced in the U.S. Senate to extend the manufacturing clause and the Canadian exemption indefinitely. Another bill, introduced at the same time, would have extended the manufacturing clause but would have removed the special treatment granted to Canada. Instead, this bill would have offered the possibility of an exemption to countries that provide copyright protection to American authors and that are certified by the United States Trade Representative as having no material non-tariff barriers to trade in printed material. In addition, the bill would have broadened coverage of the clause from "preponderantly non-dramatic literary material" to "printed matter". These efforts did not succeed in preventing the elimination of the clause on July 1 as originally planned.

7. Relative Production Costs

7.1 Raw Materials and Energy

The Canadian commercial printing industry spent roughly \$1.8 billion for materials and supplies in 1985, representing 43 percent of its value of shipments, compared to an average of about 59 percent for all manufacturing industries. The major materials consumed were fine paper (approximately \$525 million), book/printing paper (\$275 million), newsprint paper (\$215 million) and printing inks (\$95 million). Most of the materials required by the industry are Canadian produced and no critical sourcing difficulties or delays have been experienced by the industry over the past few years. However, some grades and sizes of Canadian paper at times have been in tight supply, forcing the commercial printing industry to import part of its requirements.

Table 10 gives industry selling price indices for the principal materials used by the industry. As demonstrated, the price index for newsprint has increased at a faster rate than all manufactured goods during the last decade. As is characteristic of an oligopolistic situation, the newsprint industry in Canada practises "price leadership". Generally, the largest firm announces contract prices and these then prevail regionally throughout the industry. Over the more recent period 1980-85, the index for newsprint grew at an average annual rate of 7.4 percent, compared to 5.2 percent for book/printing paper, 5.1 percent for fine paper, 2.2 percent for printing inks and 5.3 percent for all manufactured goods.

TABLE 10
INDUSTRY SELLING PRICE INDEX

	<u>Newsprint(1)</u>	<u>Book/Printing paper(2)</u> (1971 = 100)	<u>Fine Paper</u>	<u>Printing inks</u>	<u>All manufactured goods</u>
1974	135.8	154.2	152.4	124.7	138.1
1979	224.4	221.2	197.7	167.9	217.9
1980	257.9	245.9	219.0	181.9	247.2
1981	290.1	273.7	242.1	195.9	272.4
1982	316.5	286.6	256.4	208.6	288.8
1983	303.6	291.6	257.6	209.5	298.8
1984	333.5	307.6	277.5	202.3	310.9
1985	366.3	311.2	279.7	201.9	319.2

SOURCE: Statistics Canada Catalogue No. 62-011

NOTES: (1) White in rolls for domestic market
(2) Containing less than 50 percent groundwood

The commercial printing industry is a small energy consumer. As a percentage of value of shipments, the industry's fuel and electricity costs were estimated at 1.0 percent in 1985, compared to roughly 3.0 percent for all manufacturing. In terms of energy costs, this industry is also affected indirectly through its purchases of printing inks (petroleum-derived materials) and paper. The paper industry ranks as one of the largest energy users among manufacturing industries.

7.2 Employment

Wages represented roughly 25 percent of the printing industry's value of shipments in 1985, versus approximately 12 percent for the manufacturing sector as a whole. Historically, the commercial printing industry has provided a higher wage structure than all manufacturing, as depicted in Table 11.

As is common for most manufacturing industries, earnings tend to be higher in urban than in rural areas and are generally lower in the Maritimes and Prairies than in central Canada and British Columbia.

TABLE 11
ANNUAL AVERAGE HOURLY EARNINGS

	<u>Commercial Printing</u> ($\$$)	<u>All Manufacturing</u> ($\$$)	<u>CP/AM</u> (%)
1974	4.47	4.29	104.2
1979	7.45	7.19	103.6
1980	8.25	7.97	103.5
1981	9.24	8.90	103.8
1982	9.99	9.83	101.6
1983	10.92	10.49	104.1
1984	11.50	10.95	105.0
1985	11.85 (1)	11.59	102.2

SOURCE: Statistics Canada Catalogue Nos. 31-203 and 36-203 and Divisional estimates.

NOTE: (1) Estimates

Production and related workers accounted for about 75 percent of total employment in the commercial printing industry in 1985, compared to roughly 72 percent for all manufacturing industries. Approximately 30 percent of the jobs in commercial printing were occupied by women, five percentage points above the average for all manufacturing. The manufacturing operations in this industry do not give rise to serious pollution or health problems.

Changes in the occupation mix of the work force of the industry have occurred over the last decade. At one point, the industry used primarily labour-intensive manufacturing processes which required highly skilled

workers. However, as a result of rapid technological changes, some impressive strides have been made in more mechanized equipment for commercial printing, reducing the need for highly skilled workers in favour of lesser-skilled technicians.

About one-third of the industry labour force are union members. Most large companies are unionized while the smaller firms tend to be open shops. Generally, an apprenticeship system is enforced and dividing lines between the trades represented by the unions are maintained as are seniority privileges. A significant percentage of the unionized workers belong to international unions with head offices in the United States. The industry has been relatively free of strikes and other forms of labour strife, reflecting the above-average working conditions in most printing plants. The major vehicle for acquiring trade skills in this industry is still on-the-job training provided by management, unions and suppliers of machinery and equipment. In addition, a number of Canadian technical schools, community colleges and universities provide courses in various aspects of printing.

In the last few years, labour supply has not been a major problem for the industry. Turnover has been relatively high for certain lower-skilled occupations, and firms in smaller population centres have had difficulty in keeping skilled employees since they tend to join firms in large centres paying higher salaries. In general, the industry has been able to attract workers in sufficient quantity and with the appropriate skills.

While reliable statistics are not available to confirm it, it is understood that the average salary of managers in the commercial printing industry is comparable to that offered by the manufacturing sector as a whole. As a general rule, the level of management sophistication in this industry, like most industries, increases with the size of the firm. In most instances, larger firms are managed by well-educated professionals who employ effective management systems. In small firms, virtually all decisions are taken by one or two persons, in most cases the owners who are often entrepreneurs with production or direct selling backgrounds but little experience in other functions. Consequently, managerial decisions are frequently made by instinct. The size of these companies restricts the extent by which a specialized management group can be efficiently maintained or financially justified.

The Canadian industry is highly organized, from a management viewpoint, through the Graphic Arts Industries Association (GAIA). Its 697 active members account for about 75 percent of the industry's shipments. It is supported by a good cross-section of the industry, both in terms of size and geographic location of firms. Over the years, the association has played a major role in promoting the growth of its members and bringing their problems and views to the attention of governments in Canada. In particular, it is heavily involved in encouraging the development of a skilled, dynamic and well-trained human resource component, notably at the managerial level. Through its own facilities and those of its

American counterpart, the association offers a wide range of educational seminars and publications and provides scholarships to students who want to pursue college or university degrees in graphic arts. As of June 1985, roughly 165 scholarships have been awarded since the program began. In 1982, the association signed a Human Resource Planning Agreement with the Department of Employment and Immigration to develop and implement measures to ensure the availability of an adequate labour supply. As a result, local advisory councils were established to allow members to discuss local employment issues with government representatives.

7.3 Productivity of Labour

The commercial printing industry is relatively labour-intensive. In 1984, the latest year for which reliable statistics are available, wages represented 38.7 percent of the manufacturing activity value added, seven percentage points above the average for all manufacturing industries. Productivity of labour in this industry is relatively low in comparison to the manufacturing sector, as indicated in Table 12. This indicates that a significant percentage of the industry's output consists of custom-made products. It is also due, to some extent, to the small volume of individual orders and associated frequent machine changeovers. In addition, in some sub-sectors of commercial printing, the manufacturing process used is essentially a discontinuous one, consisting of a number of distinct steps.

TABLE 12
MANUFACTURING VALUE ADDED PER PERSON-HOUR PAID

	<u>Commercial Printing</u> (\\$)	<u>All Manufacturing</u> (\\$)	<u>CP/AM</u> (%)
1974	10.99	12.93	85.0
1979	17.75	21.39	83.0
1980	19.77	23.69	83.5
1981	22.40	26.81	83.6
1982	23.91	28.04	85.3
1983	25.84	31.35	82.4
1984	29.69	34.33	86.5

SOURCE: Statistics Canada Catalogue Nos. 31-203 and 36-203.

7.4 Transportation

Transportation is not a critical cost element in this industry. The average printer tends to service only its local market while the vast majority of commercial printed products can be transported relatively easily. About one-quarter of the industry's output is ultimately distributed through the postal system. Consequently, changes in postal rates and regulations, and particularly mail disruptions, affect the industry, particularly the greeting card and periodical printing segments.

7.5 Canada-United States Comparisons

It is difficult to present detailed comparisons of cost structures for this industry since, for many factors/elements, the data compiled by Statistics Canada and its American counterpart are not directly comparable or are not sufficiently disaggregated to enable proper analysis.

7.5.1 Size of Plants and Firms

As in Canada, the American commercial printing industry is characterized by a large number of small establishments. However, the larger plants in the United States (i.e., those with 500 employees and more) account for a greater share of the industry's shipments than their Canadian counterparts, as demonstrated in Table 13.

TABLE 13
DISTRIBUTION OF INDUSTRY BY ESTABLISHMENT SIZE, 1982(1)

	<u>EMPLOYEES</u>				
	<u>Less than 20</u>	<u>20 to 49</u>	<u>50 to 99</u>	<u>100 to 499</u>	<u>500 & more</u>
Establishment (%)					
- Canada	81.5	11.4	3.9	3.1	0.2
- U.S.A.	82.7	10.4	3.9	2.7	0.3
Total Employment (%)					
- Canada	26.2	18.1	14.4	30.4	10.9
- U.S.A.	24.2	17.5	14.9	28.9	14.5
Shipments (%)					
- Canada	20.2	17.7	15.5	39.3	7.5
- U.S.A.	17.7	15.0	15.5	34.6	17.2

SOURCE: Statistics Canada Catalogue No. 31-402 and U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C.

NOTE: (1) Latest year for which American statistics are available.

At the company level, the Americans dominate the Canadians, with the exception of Moore, as outlined in Table 14. Moore is a Canadian-owned multinational with about 130 plants in 38 countries. Moore's Canadian plants accounted for one-tenth of total corporate sales in 1985, compared to roughly 70 percent for the American plants.

TABLE 14
CORPORATE SALES OF COMMERCIAL PRINTED PRODUCTS - 1985

<u>Canadian Firms</u>	<u>Canadian</u> <u>\$ million</u>	<u>U.S.</u> <u>\$ million</u>	<u>American</u> <u>Firms</u>	<u>U.S.</u> <u>\$ million</u>
Moore	2 823	2 068	R.R. Donnelly	2 038
Lawson Mardon	922	675	Hallmark Cards	1 500
Southam Printing	388	284	American Greeting	1 036
Ronalds Federated	350	256	Deluxe Check Printers	764
Maclean Hunter	135	99	Jefferson Smurfit	630
Quebecor	110	81	World Colour Press	616
R.L. Crain	107	78	Arcata Graphics	485
Transcontinental	74	54	Uarco	483
R.B.W.	66	48	Standard Register	441
Litho Prestige	51	38	Treasure Chest	435

SOURCE: Financial Post Survey of Industrials, Moody's Industrial Manuals and Company's annual report.

While the Canadian industry is at a disadvantage in terms of the size of plants and companies, nonetheless it is more highly concentrated than the American industry, as shown in Table 15.

TABLE 15
PERCENTAGE OF INDUSTRY SHIPMENTS ACCOUNTED BY LARGEST FIRMS

<u>No. of Firms</u>	<u>CANADA</u>				<u>U.S.A.</u>			
	<u>1970</u>	<u>1972</u>	<u>1977</u>	<u>1982</u>	<u>1970</u>	<u>1972</u>	<u>1977</u>	<u>1982</u>
4	17.1	19.5	20.0	17.9	18.7	18.8	19.1	N/A
8	25.2	27.9	29.1	28.1	25.1	25.5	25.6	N/A
20	36.8	39.5	41.0	42.2	N/A	35.1	35.1	N/A
50	50.3	52.0	52.9	53.5	N/A	45.2	44.5	N/A

SOURCE: Statistics Canada Catalogue No. 31-402 and U.S. Department of Commerce Catalogue No. MC77-SR-9.

7.5.2 Raw Materials

Most industry selling price indices, compiled by Statistics Canada and the U.S. Department of Labor for the major raw materials consumed by commercial printers, are not directly comparable. In addition, the American series for paper started in June 1981 only and for printing inks in June 1984. Table 16, which provides a comparison of the Canadian and American price indices for certain paper grades and printing inks, is useful for showing general patterns. The price indices generally have expanded at a faster rate in Canada.

TABLE 16
INDUSTRY SELLING PRICE INDEX FOR JUNE (1)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>Canada</u>					
Newsprint	100.0	114.3	105.6	113.7	131.5
Book/printing paper	100.0	103.6	104.8	112.5	112.6
Fine paper	100.0	105.0	104.1	114.9	114.5
Printing inks	97.4	104.1	105.9	100.0	101.3
<u>U.S.A</u>					
Newsprint	100.0	105.8	99.1	104.3	110.5
Groundwood paper uncoated	100.0	105.5	100.8	105.7	108.5
Clay coated printing and converting paper	100.0	105.1	103.9	116.5	123.3
Book paper, uncoated free sheet	100.0	101.6	98.8	108.1	101.9
Printing inks	N/A	N/A	N/A	100.0	100.5

SOURCE: Statistics Canada Catalogue No. 62-011 and U.S. Department of Labor-Producer Price Indexes Report.

NOTE: (1) 1981=100 for paper grades and 1984=100 for printing inks

A study undertaken by Data Resources of Canada for the Department of Regional Industrial Expansion estimated that, in 1984, the general Canadian industry selling price index for paper products consumed by commercial printers was approximately 17 percent higher than the American index. On a currency adjustment basis, the Canadian index was about 10 percent below the American.

According to industry sources, prices for some Canadian fine paper grades, the principal raw material used by commercial printers, are between 10 to 15 percent higher than they are for similar grades produced in the United States. For most of its existence, Canada has protected its fine paper industry with import tariffs sufficiently high for manufacturers to produce profitably most, if not all, of the kinds of fine paper required. Operating behind this tariff wall, until recently, the Canadian industry has developed without the need of being internationally competitive.

7.5.3 Wages

In "local currency terms", average hourly earnings grew at an average annual rate of 9.1 percent in Canada during the period 1974-1985, compared to 6.0 percent in the United States. Earning levels were consistently higher in Canada from 1976 onwards, as depicted in Table 17. This is due largely to higher inflationary pressures in Canada and the higher degree of unionization. However, taking into account currency adjustment, the Canadian industry has provided a lower wage structure than its American counterpart, except in 1976.

TABLE 17
AVERAGE HOURLY EARNINGS

	<u>Canada</u>		<u>U.S.A.</u> (U.S. \$)	<u>Canada/U.S.A.</u>	
	(Cdn \$)	(U.S. \$)		<u>Unadjusted</u> (%)	<u>Adjusted(2)</u> (%)
1974	4.47	4.57	5.02	89.0	91.0
1975	5.04	4.95	5.31	94.9	93.2
1976	5.68	5.76	5.58	101.8	103.2
1977	6.37	5.99	6.21	102.6	96.5
1978	6.83	5.99	6.55	104.3	91.5
1979	7.45	6.36	6.68	111.5	95.2
1980	8.25	7.06	7.20	114.6	98.1
1981	9.24	7.71	7.76	119.1	99.4
1982	9.99	8.09	8.63	115.8	93.7
1983	10.92	8.86	8.97	121.7	98.8
1984	11.50	8.88	9.23	124.6	96.2
1985	11.85 (1)	8.68	9.52	124.5	91.2

SOURCE: Statistics Canada Catalogue No. 36-203, U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C, U.S. Industrial Outlook 1986 and Divisional estimates.

NOTES: (1) Estimates
(2) Currency adjustments

The Canadian performance in wage differentials is particularly poor for establishments employing between 100 and 499 people, as indicated in Table 18. These plants accounted for roughly 40 percent of the industry's shipments in 1982. The best performance was achieved by establishments with 500 and more employees, but there were only five Canadian plants in that size category in 1982, and together they accounted for only 7.5 percent of industry's shipments. The bulk of trade in printed matter between Canada and the U.S. originates from the larger manufacturers.

TABLE 18
AVERAGE HOURLY EARNINGS, 1982(1)

	(Cdn \$)	<u>Canada/U.S.A.</u>		Unadjusted (%)	Adjusted(2) (%)
		<u>Canada</u> (U.S. \$)	<u>U.S.A.</u> (U.S. \$)		
Less than 20	8.19	6.64	7.07	115.8	93.9
20 to 49	9.91	8.03	8.14	121.7	98.7
50 to 99	10.24	8.30	8.85	115.7	93.8
100 to 499	11.79	9.55	9.43	125.0	101.3
500 and over	9.99	8.10	9.97	100.2	81.3

SOURCE: Statistics Canada Catalogue No. 36-203 and U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C.

- NOTES: (1) The latest year for which accurate statistics about the American industry are available.
(2) Currency adjustments.

As a final note, Table 19 provides industry-wide wage statistics for Canadian provinces and selected American states.

TABLE 19
AVERAGE HOURLY EARNINGS, 1982(1)

	<u>Cdn \$</u>	<u>U.S. \$</u>		<u>U.S. \$</u>
British Columbia	11.56	9.37	Illinois	9.91
Quebec	10.27	8.32	Wisconsin	9.73
Alberta	10.22	8.28	Minnesota	9.26
Ontario	9.73	7.88	California	9.18
Saskatchewan	9.54	7.73	Michigan	8.98
Manitoba	9.43	7.64	New York	8.86
New Brunswick	8.52	6.90	Ohio	8.75
Newfoundland	8.10	6.56	Massachussets	8.21
Nova Scotia	7.35	5.96	Texas	8.05
Prince Edward Island	7.31	5.92	Florida	7.16

SOURCE: Statistics Canada Catalogue No. 36-203 and U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C.

- NOTE: (1) The latest year for which accurate statistics about the American industry are available.

7.5.4 Productivity of Labour

Excluding the effects of exchange rate fluctuations, the Canadian commercial printing industry has been less efficient than that in the U.S. during the 1974-82 period, although the gap has been narrowed during the later years, as indicated in Table 20. The difference in labour productivity levels in some measure reflects the fact that the larger American plants account for a greater share of the industry's

total output and, therefore, achieve greater economies of scale. It is also due to the shorter printing runs in Canada associated with the segmentation of the domestic market into two linguistic groups. Because of their larger domestic market, many of the large American printers are able to achieve a greater degree of specialization not possible to Canadian firms. The gap in productivity between the Canadian and American commercial printing industries is much larger when using currency-adjusted statistics, and has deteriorated during the later years.

TABLE 20
TOTAL VALUE ADDED PER EMPLOYEE

	Canada		U.S.A. (U.S. \$)	Canada/U.S.A.	
	(Cdn. \$)	(U.S. \$)		Unadjusted (%)	Adjusted(2) (%)
1974	16 412	16 781	20 260	81.0	82.8
1975	18 329	18 017	20 432	89.7	88.2
1976	19 797	20 076	22 475	88.1	89.3
1977	21 938	20 628	25 185	87.1	81.9
1978	24 156	21 186	26 771	90.2	79.1
1979	26 945	23 000	28 814	93.5	79.8
1980	29 901	25 578	30 954	96.6	82.6
1981	33 713	28 118	34 646	97.3	81.2
1982(1)	35 798	29 007	37 112	96.5	78.2

SOURCE: Statistics Canada Catalogue No. 36-203 and U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C

NOTES: (1) The latest year for which accurate statistics about the American industry are available.
(2) Currency adjustments.

The weakness in Canadian productivity is particularly evident for plants employing fewer than 20 people and those with 500 and more, as demonstrated in Table 21.

TABLE 21
TOTAL VALUE ADDED PER EMPLOYEE, 1982

	Canada		U.S.A. (U.S. \$)	Canada/U.S.A.	
	(Cdn. \$)	(U.S. \$)		Unadjusted (%)	Adjusted(1) (%)
Less than 20	25 767	20 879	28 105	91.7	74.3
20 to 49	36 824	29 839	32 455	113.5	91.9
50 to 99	37 687	30 538	37 681	100.0	81.0
100 to 499	44 792	36 295	42 135	106.3	86.1
500 and over	30 553	24 757	47 115	64.9	52.6

SOURCE: Statistics Canada Catalogue No. 36-203 and U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C.

NOTE: (1) Currency adjustments

7.5.5 Relative Unit Labour Cost

The 1974-82 period saw an alarming deterioration in the Canada/U.S. relative unit cost ratio for commercial printed products when measured in local currency terms, as shown in Table 22. However, because the Canadian dollar depreciated over this period, the gap in local currency terms become less pronounced after exchange rate adjustments and, in 1982, relative unit labour cost in Canada, expressed in American dollars, was below the U.S. level.

TABLE 22
RELATIVE UNIT LABOUR COST

	<u>Canada/U.S.A</u>	
	<u>Unadjusted</u>	<u>Adjusted(1)</u>
1974	1.097	1.121
1975	1.058	1.039
1976	1.157	1.173
1977	1.174	1.105
1978	1.155	1.012
1979	1.190	1.017
1980	1.185	1.013
1981	1.223	1.022
1982	1.198	0.970

SOURCE: Statistics Canada Catalogue No. 36-203 and U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C.

NOTE: (1) Currency adjustments

7.5.6 Trade Association Surveys

The Graphic Arts Industries Association (GAIA) and its American counterpart, the Printing Industries of America (PIA), conduct an annual survey of the financial status of their members. Questionnaires used by the associations are similar. The level of participation in these surveys tends to be relatively small and, therefore, the results cannot represent the industry as a whole. For example, only 160 companies participated in the 1984 survey done by GAIA and their combined sales reached \$796.6 million, representing only one-fifth of the industry's output. In comparison, 901 firms responded to the 1984 PIA's questionnaire and their combined sales totalled \$5.8 billion or 13.4 percent of the industry's shipments. Tables 23 through 26 provide an operating statement and supporting schedules for the average participant in the survey. While it would be dangerous to draw too many conclusions from these tables, they provide a measure of comparison which parallels patterns described in previous sections of this report. In particular, they show that raw material costs and direct wages account for larger shares of the sales dollar in Canada than in the United States.

TABLE 23
OPERATING STATEMENT, 1984

	<u>Canada</u> (%)	<u>U.S.A.</u> (%)
Sales	100.00	100.00
Materials used	30.28	28.63
Outside services used	8.50	8.29
Factory payroll	27.58	26.88
Factory expenses	11.26	12.78
Gross profit	22.37	23.42
Administrative expenses	9.43	10.11
Selling expenses	8.12	8.20
Income before interest expense	4.82	5.11
Interest expense	2.17	1.99
Operating income	2.65	3.12
Net other income or expense	0.76	0.70
Net income before taxes	3.41	3.82

SOURCE: Graphic Arts Industries Association and Printing Industries of America.

TABLE 24
SUPPORTING SCHEDULE - MATERIALS USED, 1984

	<u>Canada</u> (%)	<u>U.S.A.</u> (%)
Paper	24.39	23.17
Ink	1.80	1.79
Blank films	1.27	1.13
Blank plates	1.07	1.16
Other	1.75	1.38
	<u>30.28</u>	<u>28.63</u>

SOURCE: Graphic Arts Industries Association and Printing Industries of America.

TABLE 25
SUPPORTING SCHEDULE - FACTORY PAYROLL, 1984

	<u>Canada</u> (%)	<u>U.S.A.</u> (%)
Salaries, executive	2.30	2.03
Direct wages	19.96	18.58
General factory salaries and wages	1.86	1.67
Packing, shipping and delivery wages	0.78	0.80
Payroll taxes	0.92	1.70
Employee benefits	1.76	2.10
	<u>27.58</u>	<u>26.88</u>

SOURCE: Graphic Arts Industries Association and Printing Industries of America.

TABLE 26
SUPPORTING SCHEDULE-FACTORY EXPENSES, 1984

	<u>Canada</u> (%)	<u>U.S.A.</u> (%)
Depreciation - real estate	0.27	0.27
Depreciation - other	2.95	3.25
Taxes - real estate	0.37	0.21
Taxes - other property	0.09	0.19
Insurance	0.32	0.51
Building rent	1.49	1.53
Utilities	0.89	1.21
Equipment rental	0.52	0.56
Factory supplies	1.37	1.92
Packing, shipping and delivery	1.17	1.04
Repairs and maintenance	1.40	1.37
Other	<u>0.62</u>	<u>0.72</u>
	11.26	12.78

SOURCE: Graphic Arts Industries Association and Printing Industries of America.

8. Technology and Innovation

8.1 Research and Development

In terms of manufacturing processes, the commercial printing industry, worldwide, generally relies on suppliers of machinery and equipment to originate technological developments. Because of the existence of several competing printing methods, extensive research and development programs have been conducted by suppliers of production facilities in order to capture a larger share of the market. This has resulted in a rapid and continuing introduction of new or more sophisticated technologies, which have slowly moved the industry from a craft-oriented to a technology-oriented activity. These technologies are available worldwide. Most of this R&D work is done outside Canada, notably in the United States, West Germany, Japan and Sweden. The limited research and development done by the printing industry itself consists largely of on-the-job "cosmetic" adjustments. An exception is the work of the Graphic Arts Technical Foundation (GATF) in Pittsburg. Established in 1924, GATF is a member-supported, non-profit organization engaged in a wide range of scientific, technical and educational activities. Currently, it has 2300 corporate members and 3500 additional members from 67 countries and it has a staff of about 100.

Given the nature of the industry, the need for R&D to improve existing products or develop new ones is limited. In fact, a good deal of product innovation in this field is based on "cosmetic" changes. The Canadian industry is generally dependent upon outside sources for ideas, particularly the United States.

8.2 Machinery and Equipment

Lithography (also called offset) is the principal printing method used by the industry, accounting for about 70 percent of shipments, followed by letterpress and gravure at about 15 and 10 percent respectively. Screen, flexography and electrostatic printing methods account for the remaining 5.0 percent. The popularity of lithography among commercial printers comes from its ability to produce a wide range of products efficiently. In contrast, the other printing methods tend to be best adapted for particular products -- the gravure process is used extensively for high-quality catalogues with long print runs.

With the exception of business form presses which are available from Canadian manufacturers, manufacturing equipment used by the Canadian commercial printing industry must be imported. Major supplying countries are the United States, West Germany, Japan and Sweden and equipment usually enters Canada duty-free. It is generally believed that the Canadian commercial printing industry has not kept pace with its American counterpart in modernizing its manufacturing facilities. Table 27 below shows that, since 1977, capital expenditures in relation to sales have been lower in Canada than in the United States. In terms of capital expenditures per employee, the Canadian ratios reached C\$1118 (US\$1142) in 1974 and C\$3077 (US\$2254) in 1985, while the American ratios stood at US\$1152 and US\$3695 respectively. However, most large Canadian firms use state-of-the-art technology. The relatively small size of the domestic market restricts the ability of large printers in Canada to acquire some highly specialized and expensive technologies, such as in-line finishing equipment which requires long print runs to be operated economically. For a number of reasons, including economic and market factors, the rate of implementation of technological innovations is much slower in smaller printing firms, both in Canada and the United States.

TABLE 27
CAPITAL EXPENDITURES

	<u>Canada</u>		<u>U.S.A.</u> (U.S. \$ mil.)	<u>% of Industry's Shipments</u>	
	(Cdn. \$ mil.)	(U.S. \$ mil.)		<u>Canada</u>	<u>U.S.A.</u>
1974	49.3	50.4	518.0	4.1	3.4
1975	52.9	52.0	556.3	3.9	3.5
1976	55.1	55.9	590.7	3.8	3.3
1977	52.0	48.9	776.9	3.3	3.8
1978	57.6	50.5	1 137.1	3.1	5.0
1979	89.7	76.6	1 160.2	4.0	4.5
1980	108.8	93.1	1 221.6	4.1	4.3
1981	113.3	94.5	1 462.4	3.6	4.5
1982	95.3	77.2	1 547.1	3.0	4.1
1983	96.1	78.0	1 521.1	2.8	4.0
1984	169.6	131.0	1 975.0	4.2	4.5
1985	163.1	119.8	2 300.0	3.7	4.9

SOURCE: Statistics Canada Catalogue Nos. 61-214 and 61-007 and U.S. Department of Commerce Catalogue No. MC82-1-27 A/B/C and unpublished data.

However, as demonstrated in Table 28, it would appear that the Canadian industry is devoting more financial resources, in relation to shipments, than the Americans in repairing old construction, machinery and equipment.

TABLE 28
REPAIR EXPENDITURES

	Canada		U.S.A.	% of Industry's Shipments	
	(Cdn. \$ mil.)	(U.S. \$ mil.)	(U.S. \$ mil.)	Canada	U.S.A.
1977	21.9	20.6	73.2	1.4	0.4
1978	25.3	22.2	87.8	1.3	0.4
1979	30.3	25.9	104.2	1.4	0.4
1980	36.4	31.1	120.1	1.4	0.4
1981	39.3	32.8	150.4	1.3	0.5
1982	33.7	27.3	241.1	1.0	0.7
1983(1)	37.6	30.5	160.0	1.1	0.4

SOURCE: Statistics Canada Catalogue Nos. 61-214 and 61-007 and U.S. Department of Commerce Catalogue No. MC82-1-27A/B/C.

NOTE: (1) Latest year for which American statistics are available.

Table 29 provides selected investment statistics extracted from the GAIA and PIA surveys. Participation rate in these surveys is low and the ratios must be used with great care as they may not be representative of the industry situation.

TABLE 29
INVESTMENT STATISTICS, 1984

	Canada		U.S.A.
	(Cdn. \$)	(U.S. \$)	(U.S. \$)
Average assets per employee	32 314	24 957	35 122
Average assets per factory employee	49 239	38 028	50 418
Average gross plant investment per factory employee	40 254	31 089	40 211

SOURCE: Graphic Arts Industries Association and Printing Industries of America.

9. Financial Situation

9.1 Profitability

Statistics Canada publishes financial statistics for the printing and publishing sector as well as for the four member industries that compose the sector. However, the U.S. Department of Commerce limits its statistical compilation to the sectoral level. In Canada, the commercial printing industry has traditionally performed much better

than the printing and publishing sector in after-tax profit on equity, as indicated in Table 30, although its performance in before-tax profit on total income has been less impressive. At the sectoral level, Canada has a significant edge over the United States in after-tax profit on equity, while the before-tax profit on total income ratios in the two countries are similar. The former ratio reflects lower provision for current and deferred income tax as well as lower equity base. For example, provision for income tax represented 2.8 percent of sector's sales in Canada in 1983, compared to 4.3 percent in the U.S., while equity represented 39.0 percent of total assets in Canada versus 48.1 percent in the U.S.

TABLE 30
PROFIT PERFORMANCE

	<u>Canada</u>		<u>U.S.A.</u>
	<u>Commercial Printing</u>	<u>Printing & Publishing</u>	<u>Printing & Publishing</u>
	Profit before tax on total income (%)		
1974	10.0	11.5	8.3
1979	9.8	8.8	10.3
1980	9.4	9.4	9.3
1981	9.3	9.3	9.0
1982	9.1	8.1	8.2
1983	7.6	9.1	10.1
1984	8.4 (1)	N/A	10.6
	Profit after tax on equity (%)		
1974	22.9	20.5	13.2
1979	31.0	24.4	18.1
1980	30.1	27.8	16.4
1981	30.0	28.1	14.9
1982	31.1	28.3	13.5
1983	31.0	24.7	17.5
1984	30.5 (1)	N/A	18.3

SOURCE: Statistics Canada Catalogue No. 61-207, U.S. Department of Commerce - Quarterly Financial Report and Divisional estimates.

NOTE: (1) Estimates

A comparison of the 1984 ratios compiled by the Graphic Arts Industries Association and the Printing Industries of America tends to indicate that the larger printers in the United States (i.e., those with sales of \$1.5 million and more) are more profitable than those in Canada, while the reverse is true for smaller firms, as demonstrated in Table 31. However, the associations' statistics may not be representative of the industry situation.

TABLE 31
PROFIT PERFORMANCE BY SIZE OF COMPANIES, 1984 - COMMERCIAL PRINTING

<u>Sales</u>	<u>Profit Before Taxes on Sales</u>		<u>Return on Investment(1)</u>	
	<u>Canada (%)</u>	<u>U.S.A. (%)</u>	<u>Canada (%)</u>	<u>U.S.A. (%)</u>
Under \$250 000	1.66	0.20	6.15	2.93
\$250 000 to \$499 999	4.55	1.71	7.06	5.17
\$500 000 to \$1 499 999	2.78	3.10	5.14	6.51
\$1 500,000 to \$4 999 999	3.95	3.81	6.94	6.93
\$5 000 000 to \$9 999 999	4.58	4.23	6.59	7.00
Over \$10 000 000	3.41	6.10	6.17	9.33
All firms		3.82		7.01

SOURCE: Graphic Arts Industries Association and Printing Industries of America.

NOTE: (1) Profit before tax on equity ratios are not compiled by the associations.

9.2 Liquidity and Solvency

The sources of financing for the majority of the smaller printers, in both Canada and the United States, are internally generated funds and loans from established financial institutions such as chartered banks and trust companies, while the larger firms tend to use public financing. A number of major Canadian printers are part of larger organizations and usually rely on their parents for financing requirements. Most owners of small printing companies reject options for association with private investors in order to improve capital structure and reduce their dependence on lending institutions.

Tables 32 and 33 provide liquidity and solvency ratios based on government and trade association statistics.

TABLE 32
LIQUIDITY AND SOLVENCY RATIOS, 1983

	<u>CANADA</u>		<u>U.S.A.</u>
	<u>Commercial Printing</u>	<u>Printing & Publishing</u>	<u>Printing & Publishing</u>
Current assets to current liabilities (time)	1.44	1.35	1.84
Current liabilities to inventories (time)	2.23	3.18	2.52
Long-term debt to equity (%)	36.4	33.7	40.1
Long-term debt to net fixed assets (%)	45.7	46.3	56.7
Total assets to sales (%)	62.7	66.6	68.9
Sales to inventories (time)	10.33	14.91	15.46
Collection period (in days)	58.2	51.4	49.3

SOURCE: Statistics Canada Catalogue No. 61-207 and U.S. Department of Commerce - Quarterly Financial Report.

TABLE 33
LIQUIDITY AND SOLVENCY RATIOS, 1984 - COMMERCIAL PRINTING

	<u>Canada</u>	<u>U.S.A.</u>
Current assets to current liabilities (time)	1.65	1.71
Long-term liabilities(1) to equity (%)	63.9	70.7
Collection period (in days)	68.1	59.1

SOURCE: Graphic Arts Industries Association and Printing Industries of America.

NOTE: (1) Long-term debt is not available.

10. Role of Governments

Federal government involvement in the commercial printing industry through special measures has been modest. Government horizontal policies in taxation, tariffs, postal distribution, copyright, publishing and public procurement have had the strongest influence. Horizontal incentive programs have had varying impact on the industry. The Federal Business Development Bank has been a major source of financing. The Industrial and Regional Development Program (IRDP) and Canadian Industrial Renewal Board Program have been used moderately but the Program for Export Market Development (PEMD) only sparingly. None of the provincial governments has developed distinct assistance measures.

About one-quarter of the commercial printing industry's output is ultimately distributed through the postal system. Consequently, changes in postal rates and regulations and mail disruptions have an important influence on several segments of the industry.

Many of the products manufactured by commercial printers are subject to provisions of the Canadian Copyright Act -- the legal expression of the rights granted by parliament to creators to protect their works against unauthorized use. It came into force in 1924 and no major revisions have since been made. In 1984, the government issued a White Paper entitled Proposals for the Revisions of the Canadian Copyright Act. The document was examined by a sub-committee of the House of Commons Standing Committee on Communications and Culture which submitted its report on October 10, 1985. Drafting of the new legislation commenced in 1986. By way of comparison, the copyright law in the United States was completely revamped in the late 1970s.

In the last decade, governments in Canada have moved on several fronts to promote the growth of periodical and book publishing. Commercial printers have benefitted from the strengthening of the publishing industry.

Government departments and agencies at all levels, federal, provincial and municipal, are major users of print materials. In 1985-86, the

Department of Supply and Services (DSS) purchased \$126 million worth of print materials on behalf of the federal government. The federal government, through DSS, and several provincial governments are heavily engaged in printing operations. About 40 percent of the print needs of the federal government is met through in-house printing plants. At times, the actions of these government printing units have had an adverse impact on printers in the private sector.

The U.S. government has not developed special policies or programs for the commercial printing industry.

11. Medium-Term Outlook

11.1 Domestic Market Trends

The industry manufactures a wide variety of consumer and industrial goods. Market demand for these products is influenced by a complex and interrelated mix of economic, demographic and sociological factors. In the medium term, some of the forces that contributed to the rapid growth of the industry during the 1970s are expected to moderate to some extent, while others will continue to have a strong positive effect. For example, the population of Canada is expected to grow at an average annual rate of approximately 0.9 percent between 1985 and 1990(1), two-tenths of a percentage point below the level recorded in the 1980-85 period(2). However, the proportion of the population in the 25 to 64 age group, which does the most reading of books, periodicals and newspapers (products manufactured by printers for publishers), is projected to increase from 50.9 percent in 1985(3) to 52.8 percent in 1990(4). The proportion of the population 15 and over with some or a completed post-secondary education is expected to rise from 62.2 percent in 1985 to 67.7 percent in 1990(5). While more leisure time is forecasted in the medium term, the next few years should bring to maturity a number of technological developments in the entertainment field, such as pay television, which may adversely affect some types of books. Also, while demand for information is anticipated to continue at an unabated rate, technological advances in non-print methods of transmitting and storing information will increasingly displace some printed products. On the other hand, GNP in constant 1971 dollars is expected to grow at an average annual rate of 3.0 percent between 1985 and 1990(6) versus 2.3 percent during the 1980-85 period(7).

- NOTES:
- (1) Statistics Canada Catalogue No. 91-520
 - (2) Statistics Canada Catalogue No. 91-001
 - (3) Statistics Canada Catalogue No. 91-210
 - (4) Statistics Canada Catalogue No. 91-520
 - (5) The Changing Education Profile of Canadians, 1961 to 2000 published by Statistics Canada
 - (6) Department of Finance
 - (7) Statistics Canada Catalogue No. 11-003

Reflecting the above factors, the apparent Canadian market for commercial printed items in non-deflated dollars should increase from \$4.6 billion in 1985 to \$6.9 billion in 1990, an average annual growth rate of 8.5 percent, compared to 10.0 percent during the period 1980-85.

11.2 International Market Trends(1)

11.2.1 Export Orientation

The United States is by far the largest export market for Canadian commercial printed products. By using smaller size to advantage through the adoption of flexible custom-work approaches, many Canadian printers have been able to meet the precise requirements of American buyers, where larger U.S. printers with greater economies of scale have been limited into adapting their client's needs to their own manufacturing operations. In addition, the lower value of the Canadian dollar has more than offset the higher input costs incurred by the Canadian commercial printing industry. While Canadian exports to the United States reached \$132.7 million in 1985, this represented only 31 percent of all American imports, leaving considerable scope for expansion.

The anticipated changes in the population size, age composition, educational attainment, leisure patterns, disposable income and GNP in the United States over the medium term should parallel those in Canada. In addition, the value of the Canadian dollar is expected to remain 20 to 30 percent lower than that of the American dollar over the next five years and this should provide a beneficial impact on the competitive position of Canadian exporters. Also, the potential export possibilities in the large American market for Canadian commercial printed items are enhanced by a common language, similar marketing techniques, and a shared preference in printed products.

Of major significance to Canadian exporters to the United States is the future status of the manufacturing clause of the United States Copyright Law and the Canadian exemption.

In 1985, the Department of Regional Industrial Expansion retained the services of Alphalink of Ottawa to promote export interests among the Canadian commercial printing industry by undertaking the following activities:

- a) to interview a representative cross-section of printers currently exporting to the United States to determine the products exported, the American states served, the channels of distribution used, the difficulties encountered, and whether federal and provincial export incentive programs have been used;
- b) to identify American organizations (such as agents) which could assist Canadian printers in penetrating the U.S. market;

NOTE: (1) Assuming no further trade liberalization efforts.

- c) to draft a publication geared specifically to assisting Canadian printers interested in exporting.

Most of the general information collected by the consultant has been published in the Canadian Printer & Publisher, a trade publication. Until early 1985, the principal of Alphalink, Brian Linklater, was the president of the Graphic Arts Industries Association.

11.2.2 Import Penetration

So far, the Canadian tariff cuts, introduced as a result of the last MTN, have had only limited adverse effects on the commercial printing industry. The remaining cut in 1987 is also not expected to have much impact. Nevertheless, import pressures from the United States are not expected to moderate over the medium term. In this context, the competitive position of the Canadian industry versus American imports would deteriorate should the Canadian dollar appreciate. In addition, intensified competition will come from a number of other industrialized countries, such as Japan.

11.2.3 Overall

Assuming no significant deterioration in Canada's terms of trade, export shipments by the Canadian commercial printing industry should expand from \$149 million in 1985 to \$310 million in 1990, resulting in an increase in the industry's export orientation ratio from 3.4 percent to 4.7 percent. During this period, imports of commercial printed products into Canada should increase by about 68 percent to reach \$562 million in 1990. Imports will grow at a faster rate than domestic production, as their share of the apparent Canadian market will increase from 7.4 percent in 1985 to 8.2 percent in 1990. No drastic changes in the geographic or product group mix are anticipated for Canada's trade in commercial printed products.

11.3 Production Trends

Reflecting the forecast market opportunities at home and abroad and the import pressures, industry's shipments in non-deflated dollars should expand from \$4.4 billion in 1985 to about \$6.6 billion in 1990, an average annual growth rate of 8.6 percent. This is 1.9 percentage points below the level recorded during 1980-85. Employment in the industry should increase by about 4000 to reach 57 000 in 1990. The proportion of production workers to total employment should continue to decline, reflecting the adoption of microprocessing systems to control printing operations.

The forecast opportunities over the medium term should stimulate a number of firms to undertake specialization and rationalization of production and to achieve significant economies of scale. Barring government intervention, there should continue to be an increasing concentration of manufacturing facilities and shipments among the major organizations.

11.4 Supply Factors

As observed earlier, some grades and sizes of Canadian paper at times have been in tight supply in the last few years, the result of demand/production imbalances, forcing the commercial printing industry to buy part of its requirements from foreign sources at higher prices. It is generally believed that no critical shortages of paper or other raw materials used by the commercial printing industry will occur in the medium term. In addition, there are indications that the Canadian paper industry is taking steps to improve its international competitiveness. For example, Domtar Inc. expects to have two world-class fine paper machines in operation by 1989.

The commercial printing industry will continue to be a small energy consumer. Moderate fluctuations in energy prices would not materially affect the competitive position of the industry.

With the projected high rate of unemployment in Canada, the industry should have no major problems in filling unskilled and semi-skilled jobs. However, there might be some difficulties in attracting adequately trained workers in sufficient quantity. From the standpoint of labour demand, the introduction of more mechanized equipment in the coming years will require skills different from those of some of the industry's workers. Production occupational needs are likely to grow more diverse, with small establishments requiring moderately skilled and versatile workers and the larger firms needing higher technical skills over a narrower field but with a widely based general training. Looking at the supply of labour, indications are that the size and composition of the Canadian work force will change in the coming years.

Higher job expectations and more resistance to mobility towards slow growth regions can be expected from more highly educated workers. The possible mismatches between the future skills and aspirations of the Canadian labour force in the coming years and the requirements of the commercial printing industry could create production bottlenecks in some segments. Furthermore, the wider selection and higher cost of machinery and equipment will put increased emphasis on planning and control of both human and financial resources as well as requiring more effective marketing skills.

11.5 Technological Developments

The past decade has seen a rapid and continuing introduction of more sophisticated manufacturing technologies in the printing field. It is generally believed that no dramatic technological developments are likely to occur during the next five years, and that the major emphasis will be on refining existing technologies. In particular, electronics and computers will continue to make rapid inroads into printing plants of all sizes bringing improved speed, efficiency and economy.

The pace of technology adoption should accelerate in the medium term, particularly for medium-sized firms to adjust to increased pressures

from larger firms, provided the access to medium- and long-term capital in Canada does not deteriorate. The financing of government deficits over the next few years will put major strains on the capital resources of the country.

12. Conclusions

The commercial printing industry manufactures a diversified range of product lines for all segments of the economy. It is an old industry with strong family-ownership traditions and composed mostly of small businesses, nearly four-fifths of which employ less than 20 people. While plants can be found throughout the country, the industry is heavily concentrated in central Canada, notably in the areas of high population density. It has a number of characteristics of benefit to national development, including strong backward links to the resource sector and primarily Canadian ownership. A strong entrepreneurial spirit exists within the industry and heavy reliance on direct government intervention does not appeal to most owners. More than anything, it requires from government the development of the right economic and social environment for private businesses to exist and prosper.

Over the 1974-85 period, the industry has been a healthy and vital part of the Canadian economy. Its performance during the last decade compared very favourably with that of manufacturing as a whole.

Under the present tariff structure and exchange value of the Canadian dollar, the Canadian commercial printing industry is capable of supplying most of the requirements of the domestic market and of filling specialized niches in export markets, principally the United States. However, in comparison to its American counterpart, the current exchange rate masks an underlying disadvantage in the Canadian cost structure in the area of productivity.

The general outlook for the Canadian industry between 1985 and 1990 is positive, although it will grow at a lower rate than during the 1980-85 period. There is scope for improving the industry's level of international competitiveness through further rationalization/specialization and modernization and through access to adequate supplies of paper at internationally competitive prices. Furthermore, the industry should increase its efforts to identify and exploit export market opportunities.

ANNEX A
PRINCIPAL TARIFF ITEMS IN CANADA

Tariff Item	Principal Products (1)	Principal Import Commodity Codes (1)	Imports in 1985 (1)	MFN Rate	
			(\$ million)	1985 (2)	1987 (2)
17000-01	Children's picture books in any other than the English language	894-90	3.6	0	0
17100-01	Children's picture books, advertising matter, printed matter n.e.s.	894-90	32.4	0	0
		895-89, 895-99			
17200-01	Official reports, pamphlets, timetables, etc., issued by foreign organizations	895-89, 895-99	49.4	0	0
17205-01	Tourist literature issued by governments, boards of trade and similar organizations	895-81	2.7	0	0
17210-01	Picture reproductions, music printed, printed matter n.e.s., of a religious nature	894-30, 894-40, 895-99	1.1	0	0
17305-01	Catalogues, printed matter n.e.s., included in the curriculum of educational institutions	895-99	1.9	0	0
17310-01	Printed matter n.e.s. for use in intelligence and similar tests	895-99	1.9	0	0
17700-01	Advertising catalogues	895-89	1.9	30.5	29.6
17800-01	Advertising matter	895-89, 895-99	17.2	25.9	24.3
17800-03	Advertising matter relating to products or services of foreign countries	895-89, 895-99	46.5	0	0
17900-01	Labels, tags, decalcomania transfers	895-20, 895-28, 895-99	21.6	13.5	11.3
18000-01	Photographs, picture reproductions	894-17, 894-39, 895-99	14.7	13.5	11.3
18010-01	Decalcomania transfers	895-28	5.8	12.0	10.2
18025-01	Blueprints, plans and designs, except reproductions of Canadian originals	895-24	16.4	0	0
18030-01	Maps, charts, designs, drawings	894-09, 895-24	1.8	12.6	10.7
18100-01	Wrapper, bank stationery, calendars without advertising, printed matter n.e.s.	895-20, 895-89, 895-99	33.4	14.6	12.2
18101-01	Colouring children's books, printed matter n.e.s.	894-90, 895-99	9.1	13.5	11.3
18105-01	Greeting cards, pictorial post cards	894-24	16.2	13.5	11.3
18200-02	Music printed,	894-40	2.6	6.0	5.0
18205-01	Music printed, educational or religious purposes	894-40	4.1	0	0
19400-01	Playing cards in packs	837-01	1.5	4.5¢	3.6¢
19405-01	Playing cards in sheets imported by manufacturers of playing cards	895-32	1.1	4.5¢	3.6¢
19510-01	Wallpaper sample book	895-89	6.0	0	0
19900-01	Paper patterns, printed envelopes, manufactures of paper n.e.s.	895-36, 895-99	14.7	12.0	10.2
41235-01	Photographs	894-17	2.1	0	0
41245-01	Photographs, framed transparencies	894-17, 894-39	1.8	10.7	9.2
46300-01	Framed transparencies	894-17	.5	9.2	9.2
69605-02	Maps, charts, printed matter n.e.s., for use by educational institution	894-09, 895-99	.7	0	0
69615-01	Geographical maps, printed matter n.e.s., of an educational character	894-09, 895-99	1.1	0	0
69700-01	Terrestrial globes	894-03	1.8	0	0

Notes: (1) Only those classified to the commercial printing industry

(2) Percentage except otherwise noted

ANNEX B

PRINCIPAL TARIFF ITEMS IN THE UNITED STATES

Tariff Item	Principal Products (1)	Imports in 1985 (1)	MFN Rate	
		(U.S. \$ million)	1985 (2)	1987 (2)
270-4500	Catalogues of American authorship relating to the sales of United States products	1.7	0.4	0
270-5000	Other catalogues relating to the sales of United States products	38.9	0.9	0
270-7000	Tourist and other literature with respect to places outside the customs territory of U.S.A.	19.9	0	0
270-8500	Catalogues, price lists and trade notices relating to products of a foreign country	45.1	0	0
273-1000	Music in books or sheets	2.3	0	0
273-3500	Maps, atlases and charts	14.4	0	0
273-5500	Drawings and plans, whether originals or reproductions	8.8	0	0
273-6000	Manuscripts, typewritten matter, and carbon copies thereof	5.2	0	0
273-6500	Decalcomanias, in ceramic colors, weighing not over 100 pounds per 1,000 sheets	1.5	22¢ + 3.1%	18¢ + 2.4%
273-7000	Decalcomanias, in ceramic colors, weighing over 100 pounds per 1,000 sheets	5.8	6.7¢ + 3.8%	6.0¢ + 3.5%
273-7510	Other decalcomanias, not backed with metal leaf, in rolls	8.5	7.7¢ per lb.	7.0¢
273-7520	Other decalcomanias, not backed with metal leaf, other than in rolls	8.7	7.7¢ per lb.	7.0¢
273-8500	Postcards with views of scene in the United States	3.3	5.5	4.0
273-9500	Postcards, except of U.S. scenes, printed by lithography	1.4	3.3	3.1
274-0000	Greeting and similar cards, without greeting, title or other wording	1.7	5.0	5.0
274-0500	Greeting and similar cards, with greeting, title or other wording	13.0	5.6	4.9
274-1000	Calendars of paper, printed by lithography, not over 0.02 inch in thickness	6.2	1.5¢ per lb.	free
274-1500	Calendars of paper, printed by lithography, over 0.02 inch in thickness	13.9	2.1¢ per lb.	2.0¢
274-2000	Calendars of paper, other	8.8	4.1	3.0
274-2900	Printed paper labels, flaps and bands, printed by lithography but not printed in metal leaf	4.7	5.2¢ per lb.	4.0¢
274-3500	Printed paper labels, flaps and bands not printed by lithography	5.2	4.7	4.2
274-5000	Photographs, engravings, etchings and wood cuts, printed over 20 years	6.9	0	0
274-6020	Posters, not over 0.02 inch in thickness	4.6	6¢ per lb.	6¢
274-6040	Lithographs on paper, other than posters, not over 0.02 inch in thickness	17.1	6¢ per lb.	6¢
274-7020	Posters, over 0.02 inch in thickness	2.6	3.3	3.1
274-7040	Photographs, engravings, etchings and wood cuts, printed not over 20 years	19.4	3.3	3.1
274-7300	Printed matter suitable for use in the production of books that would themselves be free of duty	6.8	0	0
274-7520	Posters, not over 0.02 inch in thickness, printed by lithography	1.8	1.5¢ per lb.	free
274-7560	Printed matter, ng. s.p., not over 0.02 inch in thickness, printed by lithography	41.6	1.5¢ per lb.	free
274-8000	Printed matter, n.s.p., over 0.02 inch in thickness, printed by lithography	7.2	2¢ per lb.	2¢
274-8500	Printed matter, n.s.p., susceptible of authorship	16.1	1.9	1.8
274-9040	Printed matter, n.s.p.	37.5	5.6	4.9
737-5200	Toy books, including colouring books	13.0	0	0

Notes: (1) Only those classified to the commercial printing industry
(2) Percentage except otherwise noted.

