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FOREWORD

This paper has been prepared by the staff of the Project Assessment and Evaluation Branch, Department of Regional Economic Expansion. Any views or opinion expressed in this paper do not necessarily represent those of the Department of Regional Economic Expansion nor of the Government of Canada. The material contained herein is based on both primary and secondary research, and while all reasonable care has been taken to corroborate the information we cannot guarantee the accuracy of facts obtained through interviews. This is one of a series of reports which provides background information on the prospects facing the Canadian forest products industry and is being made available so that the Department may have the advantage of informed comments from knowledgeable sources.

Organization of the Report

Since the present situation in the Canadian newsprint industry is largely the result of decisions made as many as fifty years ago by various parties, the first chapter of this report is devoted to a brief history of the industry.

On the basis of this background, in Chapter II and Chapter III the present situation of the Canadian newsprint industry is described in terms of the markets it serves and in terms of the producers with whom it competes. Chapter II is devoted to the analysis of the main markets served by the industry - their composition, customer structure and key competitive issues. Chapter III compares the Canadian industry to its key competitors in terms of past development, industry structure, organization, cost levels, and profits.

Chapter IV attempts to identify those forces that will be of key importance in the shaping of the future competitive equation of the Canadian industry. In other words, having reviewed the "battlegrounds" and the "armies", an attempt will be made to underline those issues upon which the next "war" will be fought.

With this understanding of the dynamics of the whole system in which the Canadian producers are involved, the likely developments and major strategic choices with which the Canadian producers will be confronted in the short to medium term future will be delineated in Chapter V.

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List of Abbreviations

AN	Associated Newspapers
ANPA	American Newspaper Publishers Association
API	American Paper Institute
BCFP	British Columbia Forest Products Ltd.
CIP	Canadian International Paper Co.
CMF	Chemo-mechanical Pulping
CNC	Canadian Newsprint Company
CPPA	Canadian Pulp and Paper Association
DBS	Dominion Bureau of Statistics (Statistics Canada)
EEC	European Economic Community
FAO	Food and Agriculture Organization (United Nations)
IP	Canadian International Paper Company
IPC	International Publishing Corporation (England)
MBtu	Million British Thermal Units
Mt	Million Short Tons
MT	Million Metric Tons
NIC	Newsprint Institute of Canada
NIRA	National Industrial Recovery Act
NSFI	Nova Scotia Forest Industries Ltd.
PPI	Pulp and Paper Institute
RMP	Refiner Mechanical Pulping
ROI	Return on Investment
t	Short Ton
T	Metric Ton
TCMP	Thermo-chemi-mechanical pulping
tpd	Short Tons per Day
TMP	Thermo-mechanical Pulping

1. A Brief History of the Canadian
Newsprint Industry

A BRIEF HISTORY OF THE CANADIAN NEWSPRINT INDUSTRY

1.1 The Formative Years 1910-1928

As shown in Table 1, between 1900 and 1928 Canada gradually became the dominant supplier to the North American newsprint market. Several forces appear to have determined this development:

- the progressive exhaustion of the northern U.S. forests during the 1890-1925 period, which resulted in an increased reliance on Canadian pulpwoods to supply existing U.S. newsprint mills,
- the sudden ban on the export of pulpwood, by Ontario in 1900 and by Quebec in 1910,
- the presence in Canada of favourable economic conditions for the production of newsprint:
 - the existence of adequate reserves of white softwoods, (the technology for production of newsprint from coloured softwoods, such as southern pine, did not develop until the late 1930's);
 - the availability of sufficient manpower resources, particularly for logging operations. Canadian forests, because of their smaller trees (easier to fell and transport), were well adapted to traditional labour-intensive logging operations;
 - the abundance of hydro electric power resources necessary for the production of pulp and paper;
 - the existence of a water system adequate for the transportation of pulpwood from the logging areas to mills and for the pulp and paper plant operations;
 - and
 - the proximity of the most suitable Canadian sites to the major U.S. northern markets with easy water or rail transportation access.

Table 1

North American Newsprint Consumption and Supplies
(000 short tons)

	<u>US Consumption*</u> <u>of Newsprint</u>	<u>Supply From</u> <u>U.S. Mills</u>	<u>Supply From</u> <u>Canadian Mills</u>	<u>Supply From</u> <u>Other Mills</u>
1915	1509	1176	329	4
1920	2197	1465	679	51
1925	3013	1507	1316	133
1930	3599	1272	2145	134

* Consumption and supplies do not match each year because of inventory adjustments.

The specific producers who participated in this first wave of capacity expansion were a very diverse group. Included were:

- a. American firms with a vested interest in the manufacture of newsprint. These firms were following the changing economics of the product. International Paper is probably the most typical example: in less than 15 years, following the Quebec ban on the export of pulpwood, it moved its entire newsprint production from the Eastern United States to Eastern Canada (Quebec and New Brunswick);
- b. European firms seeking low-cost sources of newsprint. E.g. the Anglo-Canadian Pulp and Paper Company and the Belgian company which was incorporated in Consolidated-Bathurst;
- c. Large Northern American publishers trying to secure stable and low-cost sources of supplies. Examples are the Chicago Tribune, (Ontario Paper, Thorold, Ont.) and the New York Times, (Spruce Falls Power and Paper Company); and
- d. Canadian firms or entrepreneurs trying to establish themselves in a growing market. These firms required little marketing know-how, and enjoyed easy access to the technology and to the necessary wood supplies. Examples included the Price Company, (which was originally a lumber firm), and the original entrepreneur who developed the mills which were later incorporated in the Abitibi Company.

To summarize briefly these first formative years, one can note that within fifteen years Canada:

- achieved a dominant role in the supply of newsprint in North America, based on favourable access to the various factors of production (i.e. labour, wood and power);
- achieved this remarkable feat, not through internal development, but mostly because of the natural exhaustion of its competitors (mainly in the U.S. Northeast). This is shown particularly by the role

- played by the various foreign manufacturers involved (i.e. the established U.S. manufacturers and some publishers) in the development of the Canadian industry;
- progressively developed sizeable exports outside the United States, particularly after 1925 and mainly toward countries in the British Empire, (United Kingdom, Australia, etc.);
 - made newsprint the base of its pulp and paper industry. (In 1940 newsprint still represented 55% of the value of the total output of the Canadian pulp and paper industry.)

1.2 Overcapacity and the Depression: The First Crisis 1928-1940

The rapid expansion of Canadian newsprint capacity came to a sudden halt around 1928, when overcapacity started to manifest itself. As a result of the uncoordinated rush to establish new mills in Canada; Canadian output outstripped the available U.S. demand. Provincial authorities tried to check newsprint expansion through the control they exerted by granting timber limits. For example, the Chicago Tribune was originally denied timber concessions for its Thorold mill. However, these controls proved relatively ineffective because of the implicit competition existing among the provinces and the relative resilience of U.S. production (which started to decline in absolute terms only after 1925).

This growing overcapacity together with the spread of the Great Depression after 1929, led to a series of dramatic price wars and a sizeable reduction in the firms' operating rates. As indicated in Table 2, newsprint prices dropped, from a \$69 high in 1925, to \$50 in 1931, and to an all-time low of \$32.60 in 1936. The operating rate of groundwood pulp mills

Table 2

Evolution of Newsprint Production,
Prices and Operating Rates 1925-1940

	<u>Newsprint Production</u> (000t)	<u>Value</u> (Million \$)	<u>Price Per ton</u> (\$)	<u>Operating Rate For Groundwood Pulp Mills</u> (%)
1925	1537	106.3	69.00	77.4
1926	1889	121.1	64.00	77.4
1927	2082	132.3	63.50	67.5
1928	2414	144.1	59.70	66.8
1929	2725	150.8	55.30	73.9
1930	2498	136.2	54.40	64.8
1931	2227	111.4	50.00	63.0
1932	1919	85.5	44.50	51.1
1933	2022	67.0	33.10	56.6
1934	2605	86.8	33.30	71.1
1935	2765	91.8	33.20	74.5
1936	3225	105.2	32.60	83.8*
1937	3673	126.4	34.40	94.9*
1938	2669	107.1	40.00	63.8*
1939	3174	NA	NA	68.5*
1940	3769	NA	NA	NA

* operating rate for newsprint mills

Source: DBS

dropped from 77% in 1925 to 63% in 1931 and then to 51% in 1933.

The consequences of these events on the newsprint producers, some of whom had gone deeply into debt to finance their expansion, soon became dramatic. The least financially sound firms started defaulting on their loans. By the early 1930's numerous producers entered receivership (e.g. Abitibi, Ontario-Minnesota and the Price Company). These growing financial difficulties, after a period of rapid expansion, prompted the establishment of various measures aimed at preserving the existing mills.

First, in 1927 the leading sales companies handling Canadian newsprint (G.H. Mead Company, Canadian Export Paper Company and the St. Maurice Sales Company, which together controlled about half the industry's sales) formed the Canadian Newsprint Company (CNC). CNC purchased the entire output of the associated mills and sold it to the three sales companies, who then sold it to the publishers. These efforts, however, were short-lived, as the largest mills undertook to sell their output directly at lower prices than those established by the CNC.

Another attempt was made in 1928 with the creation of the Newsprint Institute of Canada, under the sponsorship of the premiers of Quebec and Ontario. The NIC proposed that all mills operate at 80% of capacity. Further, it made some provisions to distribute tonnage among the less favourably located mills, so as to prevent them from engaging in further price cutting. When the quota dropped to 70% and the NIC failed in its attempts to raise prices in 1930, the pressures became such that two of the largest participants, Price and St. Lawrence, began operating independently. It should be noted also that neither CIP nor Spruce Falls Power and Paper were ever party to these agreements and apparently did not try to curtail their output. In the same way, Ontario Paper, taking advantage of its "non-commercial"

status, (i.e. the fact it was an integrated mill supplying only its parent), remained strongly opposed to the idea of ever joining such a scheme.

As these early efforts to "manage the crisis" had only limited effects, other attempts were made to correct the situation. In the late twenties and early thirties, some firms made direct attempts to increase concentration in the industry. For example, in 1928-1929, Abitibi merged with Spanish River and acquired St. Anne Paper, Manitoba Paper (Pine Falls), and Murray Bay Paper as well as a 50% interest in the Thunder Bay Company of Port Arthur. In 1928 Canada Power and Paper merged with the St. Maurice Corporation, which was already itself an amalgamation of the St. Maurice Paper and the Belgo-Canadian paper companies. In 1929 and 1930 it acquired the Port Alfred and the Wayagamack Pulp and Paper companies and linked itself to the Lord Rothermere group (Anglo-Canadian Company). This wave of financial reorganizations and acquisitions can be regarded as an attempt to facilitate the coordination of the production decisions of the various mills, and as a first step toward a possible restructuring of the whole industry.

Despite these attempts, the erosion of prices continued, culminating in 1933 when the West Coast producers started, for the first time, to sell in some of the markets traditionally served by the eastern and central producers. At this point, the provincial governments initiated direct pressures upon the companies to limit price concessions. In 1934 for example, Premier Taschereau of Quebec withdrew the special concession rates which had been granted to Consolidated Paper, in an attempt to make the company renegotiate one of their key supply contracts which had not provided for any increase over 1933 price levels. In the same vein, the Provinces of Quebec and Ontario introduced bills in 1935 and 1936 to "increase stumpage rates on Crown lands from \$1.35 to \$6.00 a cord, with the provision that the lower rate could be

charged to all newsprint companies which agreed to conform to certain provisions regarding the price they charged for newsprint".

Relief, however, apparently came from another source. In accordance with the NIRA, a newsprint code was signed between the Newsprint Export Manufacturers Association of Canada and the Associated Newsprint Manufacturers of the United States. This code provided for a minimum floor price (\$40), and a limited tonnage allocation scheme favouring the weakest producers. When the market collapsed again in 1937, a new scheme to equalize orders among the Canadian mills was sponsored by the Newsprint Association of Canada with the strong support of the Quebec and Ontario governments.

Despite these manoeuvres it was not until 1938 and the following two years of market recovery in the U.S. and overseas that prices showed a slight improvement. Even then prices remained 26% below the already depressed levels of 1930.

To a large extent, this first crisis is a key turning point in the evolution of the industry. In less than ten years the industry's organization had changed completely, from one dominated by a single producer, (essentially International Paper), to one dominated by a few key groups (International Paper, Consolidated Paper and Abitibi). At the same time, because of the financial problems encountered by most companies, a major change in key management personnel had taken place. In many cases financiers and lawyers replaced the original entrepreneurs. Finally, a new type of relationship had emerged between the companies and the Provinces, as a result of the latter's desire to preserve existing capacity and employment levels and their determination not to leave the evolution of the industry to the natural play of market forces.

1.3 The 1940-1945 Period: Wartime Controls

The arrival of World War II artificially distorted the development of the Canadian newsprint industry. The restrictions imposed on transatlantic shipments rapidly eliminated Scandinavian supplies from the North American scene - they dropped from around 300,000t in 1939 to nothing in 1943. The restrictions imposed on the production of newsprint (considered to be a non essential item) severely curtailed newsprint consumption in the U.S. - it fell from 3.9 Mt in 1939 to 3.2 Mt in 1943. The wartime price controls imposed on the producers resulted in depressed profitability levels. In fact, several of the remaining U.S. producers claimed that during that period they were producing newsprint at a loss because of the virtual "freeze" imposed on newsprint prices. Additionally, normal market mechanisms were also distorted by the introduction of national production plans, which allocated production quotas across the various mills on the basis of local availability of labour and power. This policy favoured the more remote mills (such as Baie Comeau on Quebec's north shore), where there was little local competition for power and labour, at the expense of the more central ones.

After more than twenty-five years of existence, the Canadian newsprint industry at the end of World War II found itself in a rather peculiar situation, characterized by:

- an extremely low profitability record, as exemplified by both the price declines experienced in the market (the price of newsprint in 1945 was still 23% below its 1929 level), and the historically low operating rates experienced by the firms;

- an interrupted presence on its various overseas exports markets, which it had to stop supplying during World War II;
- a relatively high level of past government intervention, both indirectly, (as in the case of the acceptance of the order allocation scheme), and directly, (the wartime price and production control);
- a "caretaker" mentality, due to the large number of firms managed by outsiders. In 1945, numerous firms like Abitibi Paper, Price, and Ontario-Minnesota were still managed by the outsiders who took charge when these firms went into receivership in the early thirties. To a large extent the earlier crisis which the Canadian newsprint industry experienced had the effect of eliminating the first generation of entrepreneurs. This may be one of the prime reasons for the accusations of conservatism which have often been levelled against the Canadian pulp and paper industry;
- less than "up to date" production facilities, because of the low level of funds available for reinvestment and lack of demand for expanded newsprint production.

These considerations had an important influence on the behaviour of the industry in the immediate post-war period.

1.4 The Golden Era: 1945-1956

The most significant data regarding this period have been summarized in Table 3. Following the end of World War II,

Table 3

The Golden Era
1945-1956

	<u>1945</u>	<u>1950</u>	<u>1956</u>
Total U.S. Newsprint Demand	3.5 Mt	6 Mt	6.6 Mt
U.S. Newsprint Capacity	.981 Mt	.992 Mt	1.6 Mt
Operating Rates of U.S. Newsprint Industry	73%	102%	105%
Canadian Exports Outside the U.S.	.685 Mt	.208 Mt	.742 Mt
Canadian Newsprint Capacity	4.6 Mt	5.2 Mt	6.2 Mt
Operating Rate	76.9%	101%	103%
Newsprint Prices (ton)	\$67	\$101	\$130
Canadian Share of U.S. Market	80%	80%	73.4%
Canadian Pulp and Paper Industry Performance			
- Return on total assets	3.24%	7.3%	9.15% (1954)
- Return on sales	9.55%	17.07%	17.21%

Source: CPPA, Statistics Canada

wartime restrictions were lifted and the demand for newsprint increased considerably. U.S. consumption nearly doubled between 1945 and 1950. The most immediate consequence of this growth in demand was a surge in newsprint prices from \$67 at the end of 1945 to \$101 in 1950. This boom, however, did not immediately trigger spectacular capacity increases in either the U.S. or Canada. Canadian firms increased their capacity from 4.6 to 5.2 Mt between 1945 and 1950. U.S. capacity remained stagnant during the same period. Consequently both operating ratios and profits rose dramatically.

This rather timid increase in capacity despite tremendous worldwide market developments was a surprising aspect of the years immediately after World War II. Several reasons appear to have accounted for this situation. Newsprint producing firms, in limiting capacity increases, were likely (1) reacting to the past overcapacity crises which had plagued the industry and (2) attempting to rebuild earnings damaged by the 1928-1945 price declines. Another reason suggested for this limited expansion was that newsprint had little appeal as an investment for firms within or outside the industry. In its 1950 report, the Canadian Pulp and Paper Association states that:

"Ten new pulp and paper mills have been built or reopened in Canada in the last five years, but all of them for other products than newsprint ... the fact that these ten mills are non newsprint mills indicates that other pulp products are more attractive to new venture capital"

The same conclusions were reached by the Stanford Research Institute in a report prepared for the California Newspaper Association (1952):

"The estimated future increase in demand for newsprint as such in the United States, is less than for sulfate pulp alone, about the same as sulfite pulp alone, and less than for paperboards and other papers ... These estimates indicate that the competition from pulp and non-newsprint paper products for timber resources, production facilities and new capital investment will tend to become more and more intense as the decade passes."

Whatever the explanation, the fact is that during this period the newsprint industry was able to supply increased U.S. demand by reducing its available underutilized capacity, introducing marginal improvements in production facilities that resulted in some added capacity, and limiting its exports to markets other than the U.S. In 1939 overseas exports represented 22% of total Canadian shipments, by 1946 they were down to 16% and by 1951 they had fallen to 5% of total shipments.

The relative scarcity of newsprint which appeared in the early 50's created some problems for U.S. publishers. "Spot" (non-contract) prices tended to soar well above the official list prices (some publishers were reported to be paying up to \$300 per ton). Since newsprint prices were traditionally quoted on a delivered basis, Canadian mills attempted to maximize their "mill net sales" by giving preference to their closest customers. As a consequence, the prevailing scarcity was more deeply felt in those regions that were the farthest away from the Canadian mills, i.e. essentially the U.S. Southwest and Southeast.

The reaction of the U.S. southern publishers to this "squeeze" was twofold. First, they applied political pressure in the U.S., through various congressmen and inquiry commissions, against the "unjustified market power" of the Canadian producers. This led CPPA to comment that:

"Prewar Canadian producers, making good earnings in 1946-1950 for the first time in more than twenty years have put back the greater part of their revenues into a post war newsprint expansion almost without parallel among major industries throughout the world. Whether or not Canadian producers have been wise in following this course, rather than choosing higher grades and less troublesome products remains to be seen. At the end of 1950, a year marked by the antics of U.S. Congressman Celler and of various people connected with the U.S. newspaper trade, the question is an open one."

Second, they took measures of their own to make more local capacity available. In doing so they were able to capitalize on pioneering efforts in the manufacture of newsprint from southern pine during the late thirties. These independent measures took several forms:

- availability studies, such as the report already mentioned which was commissioned by the California Newspaper Publishers Association from the Stanford Research Institute;
- direct involvement in capacity expansions, as in the cases of Southland, (Lufkin Texas), backed by a group of southern publishers, and Publishers Paper backed by the publishers of the Los Angeles Times, Los Angeles Mirror and Salt Lake City's Desert News. The case of the western publishers appears slightly different, inasmuch as they seem to have reacted

more to a very concentrated supply system (Crown Zellerbach and MacMillan Bloedel), rather than to immediate shortages;

- the provision of start-up capital to entice established Canadian manufacturers to initiate production in the U.S. South. This approach is clearly illustrated in the case of Kimberly-Clark, which accepted a management contract for a mill in Coosa Pine (Alabama) with the financial backing of the Southern Newspaper Publishers Association;
- the "blocking" of orders to entice new producers into the newsprint field in the U.S. South. This approach was developed by several publishers and probably facilitated the initial establishment of Bowater and later of International Paper in the U.S. South.

During the 1950-1956 period, these pressures, however, had only a moderate impact. Overall U.S. capacity increased by only 400,000t between 1950 and 1955, whereas total U.S. newsprint consumption increased by about .5 Mt during the same period. Overall Canadian capacity increased by .8 Mt. The industry managed to absorb this extra output by significantly increasing its overseas shipments (by more than .5 Mt) and by filling the gap left by the limited U.S. capacity increases. As a result, in spite of this emerging local competition, the Canadian producers managed to maintain exceedingly high operating rates (above the 100% mark), and correspondingly high levels of profits, (even above the 1950 level, particularly as far as the level of return on assets is concerned). This state of affairs persisted until 1956, at which time another increase

in U.S. capacity (225,000t) was easily absorbed by a 260,000t increase in U.S. consumption.

The end of the golden era set the stage for the further evolution of the Canadian industry. The Canadian suppliers, who were still scornful of the possibility of producing newsprint from southern pine, helped promote a new competitor in their key market. They did this by alienating a substantial number of their customers, who probably already had some propensity to antagonize their suppliers. At this point it must be remembered that International Paper had originally been set up in the late 1880's as a cartel of newsprint producers controlling more than 80% of the U.S. market. Because of increased exports overseas and the limited amount of capacity which materialized, the damaging effects of this arrangement had gone unnoticed. By 1956, however, it was apparent that to maintain its relatively high profit levels the Canadian industry had had to give up some market share in the U.S. The share of U.S. market held by Canadian suppliers dropped from 80% to 73% between 1950 and 1956, mostly during the 1954-1956 period.

1.5 The First Wave of Newsprint Expansion in the U.S. South 1956-60

The 1956-1960 period saw continued growth of developments which started during the preceding period (see Table 4). The growth of the U.S. market continued, (an increase of .7 Mt between 1956 and 1960), but, for the first time since the end of World War II quite marked fluctuations appeared (particularly in 1957 and 1958). The crucial event of

Table 4

The First Wave of Newsprint Expansion in the U.S. South
1956 - 1960

	<u>1956</u>	<u>1960</u>
Total U.S. Newsprint Demand	6.6 Mt	7.3 Mt
U.S. Newsprint Capacity	1.6 Mt	2.4 Mt
Operating Rate of U.S. Newsprint Industry	105%	85%
Canadian Exports Outside the U.S.	.742 Mt	1 Mt
Canadian Newsprint Capacity	6.2 Mt	7.6 Mt
Operating Rate	103%	88%
Newsprint Prices	\$130	\$134
Canadian Share of U.S. Market	73.4%	72%
Canadian Pulp and Paper Industry Performance		
- return on total assets	7.5%*	6.8%
- return on net worth	8.2%*	7.2%

* 1957 data

Source: CPPA Statistics Canada

the period, however, was the increase in North American capacity, (2.2 Mt), which outstripped market growth for the first time since the twenties.

In the case of the United States, this increase in capacity was concentrated in the U.S. South, as shown in Table 5. In four years, newsprint capacity in the South increased by .65 Mt (nearly 75% of the total U.S. capacity increase). To a large extent, the efforts of the southern publishers had begun to pay off. Gradually, the incentives had been reduced. The first two southern mills (Southland Paper and Coosa Pines) were started with publishers' funds. The fact that Kimberly-Clark, an established newsprint producer, originally refused to put its own funds into the Coosa Pines mill reflects on the limited appeal of such ventures in the early 50's. The next mills, Calhoun (Bowater) and Mobile (International Paper), were funded by the manufacturers themselves, probably with the promise of sustained orders. In fact, several good reasons gradually emerged in the mid- or late fifties to make the South a more attractive location for newsprint production. These were:

- the comparatively high transportation costs affecting Canadian newsprint;
- the preliminary work done by Southland, who had shown after several years of "debugging" that the production of newsprint from southern pine was economically feasible;
- the evolution of the underlying economics (low wood - costs, opportunities for continuous operations, cheap labour and energy) of bulk paper manufacturing had enticed numerous producers to locate their packaging paper mills in the U.S. South, thus gaining experience in operating in the southern environment. Interestingly enough, International Paper, which had expanded its southern operations

Table 5

Regional Evolution of U.S. Newsprint Capacity
(000 short tons)

	North <u>(including Northwest)</u>	<u>South</u>
1946	785	50
1950	772	220
1955	1009	400
1960	1199	1200
1965	1350	1223

Source: API

Table 6

Capacity Increases in the U.S. South

1945-1950		
	Southland Paper (Lufkin Texas)	50,000t
1950-1956		
	Bowater Southern Paper Corp, Calhoun (Tenn)	140,000t
	Kimberly Clark, Coosa River Newsprint (Ala)	140,000t
1956-1960		
	Bowater Southern Paper Corp, Calhoun (Tenn)	260,000t
	International Paper, Mobile (Alabama)	120,000t
	Southland Paper, Lufkin (Texas)	130,000t
	International Paper, Pine Buff, (Arkansas)	120,000t
1960-1966		
	Southwest Forest Industries, Snowflake (Ariz.)	80,000t
1966-1972		
	Cox Newsprint (later Abitibi), Augusta (GA)	155,000t
	Catawba Newsprint Co., Bowater, (S.C.)	180,000t
	Boise Price Southern Newsprint, de Ridder (Louis.)	135,000t
	Southland Paper Mills, Lufkin (Texas)	100,000t
	Southland Paper Mills, Houston (Texas)	135,000t
	Kimberly-Clark, Coosa River Newsprint (Ala)	165,000t

Source: ANPA

- in the early 1930's, was one of the first established Canadian producers to "make a move" to the South with a newsprint mill;
- the South rapidly emerged as one of the fastest growing newsprint consumption regions of the United States, as indicated in Table 7. Because of this, and in spite of the rapid capacity increases taking place, by 1960 the South was still a "deficit" region in terms of newsprint, with a total consumption (1.7 Mt), still significantly above its regional capacity (1.2 Mt).

These basic structural factors, amplified by the actions of the southern publishers, led to the initial development of the southern newsprint industry. What started as a "self protection" movement, without much support from any manufacturer, progressively became a "strategic shift" in the orientation of the whole North American newsprint industry. Interestingly enough, only the most international among the Canadian manufacturers (IP, Bowater, Kimberly-Clark) took advantage of this opportunity.

In the meantime, the Canadian industry initiated the biggest capacity increase since the booming 20's. In four years nearly 1.4 Mt of new capacity was added. In contrast to the preceding period, these increases were essentially concentrated in British Columbia (where MacMillan Bloedel started a two-machine mill in Port Alberni) and in the Ontario/Manitoba regions.

While the expansion in British Columbia appears to have been related to the relatively rapid growth of the U.S. western market (which increased by nearly 400,000t. between 1950 and 1960), capacity expansions in Ontario (.6 Mt), and Quebec

Table 7

Evolution of Newsprint Consumption
by Area 1950 - 1960

(000 tons)

	<u>Northeast</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>
1950	2088	1886	1152	811
1955	2130	2091	1439	978
1960	<u>2325</u>	<u>2216</u>	<u>1659</u>	<u>1199</u>
Change in Consumption 1950 - 1960	237 11.4%	330 17.5%	507 44%	388 47%

Source: CPPA

(.3 Mt), appear more difficult to rationalize. The Ontario producers, in particular, implemented these large increases (more than 40% in five years) at a time when their "natural" markets (the Midwest and the Northeast) grew by only .3 Mt. The Quebec producers appear to have expanded in anticipation of a recovery of the overseas (particularly European) markets. These expectations, however, were rapidly disappointed. Overseas shipments increased by only 50% between 1955 and 1960 in contrast to their more than threefold 1950-1955 increase. The rapid reconstitution of production capacities all over the world during the late 50's was noted by CPPA:

"Scandinavian capacity for 1961 is more than 1 Mt higher than in 1954 and availability for a full year of projects due for completion during 1961 will add about a quarter of a million tons to the 1961 figure. In the "all other" group an increase of more than 800,000t has occurred since 1956 --- some of these are of local importance but are unlikely to grow and are significant only to the total situation in that their output displaces imports from the larger producers. Others such as the developments in Chile and in New Zealand are factors of increasing importance in international trade."

The result of this mounting overcapacity, which affected both the U.S. and Canadian producers, was a sharp decline in operating rates (U.S. from 105% to 85%; Canada from 103% to 88%) and a stabilization of newsprint prices (which increased by only \$4 between 1956 and 1960). This deterioration of operating rates and prices led to a slight erosion of the Canadian producers' profits, which dropped by about one point during the period (profit on net worth basis).

1.6 Stabilization and its Effects: 1960-63

Because of the stabilization which took place in the U.S. market between 1960 and 1963 (see Table 8), this three year period offers an interesting opportunity to analyze the first confrontation in the U.S. newsprint market between the emerging U.S. South industry and the Canadian industry. For three years, supplies of newsprint to the U.S. remained at the 1960 level of 7.3-7.4 Mt. In spite of this stagnation, U.S. producers managed to increase their market share at the expense of the Canadian producers, whose share dropped nearly 2.5% during the period. In other terms, the first real confrontation between the Southern and Canadian producers was to the advantage of the former, who, by increasing their market share, were able to noticeably increase their operating rates (from 85% to 90%).

The main forces behind these changes in market share are fairly clear. First, a growing concentration in the U.S. publishing industry affected U.S. newsprint consumption (see Table 9). This occurred particularly in Canada's main markets, the Northeast and the Midwest. Secondly, the South gradually started to show some cost advantages over Canada. While these cost differences are difficult to document, the reactions of the Canadian producers (who tried, for example, to have the work week lengthened so that production would be continuous) are indicative of such growing concerns. A third factor was the importance and seriousness of the commitments made by the southern publishers to the newly-founded southern industry.

The deterioration of the industry's performance was further aggravated by continued additions to Canadian capacity (about .4 Mt, mainly in B.C., in response to the continuous

Table 8

Stabilization and its Effects
1960 - 1963

	<u>1960</u>	<u>1963</u>
Total U.S. Newsprint Demand	7.3 Mt	7.4 Mt
U.S. Newsprint Capacity	2.4 Mt	2.4 Mt
Operating Rate of U.S. Newsprint Industry	85%	90%
Canadian Exports Outside the U.S.	1 Mt	.95 Mt
Canadian Newsprint Capacity	7.6 Mt	8.0 Mt
Operating Rate	88.5%	82.3%
Newsprint Prices	\$134	\$134
Canadian Share of U.S. Market	72%	69.4%
Canadian Pulp and Paper Industry Performance		
- return on total assets	6.8%	6.5%
- return on net worth	7.2%	6.4%

Table 9

U.S. Newsprint Consumption by Area
1960 - 1963
(000t)

	<u>Total Newsprint Consumption</u>	<u>Northeast</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>
1960	7426	2313	2222	1665	1226
1961	7380	2303	2172	1641	1264
1962	7486	2294	2177	1711	1364
1963	7547	2179	2166	1792	1410
Change in Consumption 1960-1963	1.6%	-5.8%	-2.6%	7.6%	15%

Source: CPPA

growth of the U.S. western market). Since overseas exports were stagnant during this period, operating rates fell sharply to their lowest level since 1945 (82.3%). This disappointing performance, however, was barely apparent in lower profits (which dropped by less than 1%) because of the de facto devaluation of the Canadian dollar between 1960 and 1963. However, the stagnation which followed this first wave of capacity increases in the U.S. South has had a far reaching impact upon Canadian producers.

For the first time since the end of World War II, several producers attempted to use the cash generated by their newsprint operations to diversify into other related product lines. In 1964, the MacLaren company acquired Thurso Pulp and Paper, a producer of hardwood kraft pulp and solid wood products. In 1965 Great Lakes Paper, which had previously produced only newsprint, entered the bleached kraft market pulp business through the development of its Thunder Bay mill. Consolidated Paper acquired St. Regis Paper Co. Ltd., a manufacturer of containers and multiwall bags in 1960, entered the market pulp field in 1964 (Pontiac Mill), acquired an interest in Rolland in 1965, and finally, in 1965, gained control of Bathurst Ltd., a packaging paper and paperboard manufacturer. Domtar, a new entrant to the industry, limited the expansion of its newsprint mills and developed its fine paper, market pulp (through the development of the Lebel-sur-Quevillon mill in 1964), and packaging businesses. Abitibi entered the container business in 1960, and the building board business in 1963 (through the acquisition of the Miratile Manufacturing Company of Chicago). Price, the least diversified company, entered the paperboard and lumber businesses in the early 1960's.

These developments illustrate the strategic choices made by some of the largest newsprint producers in the early 1960's. Faced with a limited market and spurred on by their relatively large cash reserves or simply by the fear of possible takeovers, these companies committed their funds and management resources to other business opportunities. In several cases, they began to regard their newsprint operations mainly as cash generating activities.

1.7 Before the Storm: 1963-1966

The false stability which occurred after the devaluation of the Canadian dollar was further enhanced by the rapid market growth and lack of capacity increases in the U.S. South which characterized the 1963-1966 period (see Table 10). During these three years, total supplies to the U.S. market jumped from 7.4 Mt to 9.3 Mt, (an increase of nearly 26%), resulting in a sharp increase in the U.S. producers' operating rates (to 97.5%).

In Canada, capacity increases of 10% over three years were easily absorbed by the booming U.S. market and a slight increase in overseas shipments (up by 100,000t). As a result, operating rates climbed significantly (to 94.8% from 82.3%), and prices started to move upward for the first time since 1958 (from \$134 to \$137). These favourable movements were translated into slightly higher profits, as measured by Net Income on Stockholders' equity (11%, up 1% from the 1963 level).

The history of this short period helps explain the large capacity additions which some Canadian producers undertook

Table 10
Before the Storm
1963 - 1966

	<u>1963</u>	<u>1966</u>
Total U.S. Newsprint Demand	7.4 Mt	9.3 Mt
U.S. Newsprint Capacity	2.4 Mt	2.5 Mt
Operating Rate of U.S. Newsprint Industry	90%	97.5%
Canadian Exports Outside the U.S.	.95 Mt	1.1 Mt
Canadian Newsprint Capacity	8.0 Mt	8.8 Mt
Operating Rate	82.3%	94.8%
Newsprint Prices	\$134	\$136.92
Canadian Share of U.S. Market	69.4%	71.1%
Canadian Pulp and Paper Industry Performance - Net Income on Stockholders' Equity	10%	11%

during the last years of the decade as a result of the favourable exchange rate, the booming market, and the new strategic orientation of some of the main producers.

1.8 The Storm: 1966-1972

The 1966-1972 period saw a repetition of events which had taken place nearly ten years earlier, i.e. a rapid surge in U.S. Southern capacity. During the intervening ten years, however, the relative power position of the two groups had changed, and the confrontation rapidly turned into a near-disaster for the Canadian industry.

Between 1966 and 1972 the U.S. market growth was relatively moderate (1 Mt). However, at the same time nearly 2 Mt of newsprint capacity were added in North America, i.e. approximately 1.2 Mt in the U.S. and 1.5 Mt in Canada (see Table 11). As this represents a major "mismatch" between demand and supply, it is important to examine these capacity increases separately.

The capacity increases in the U.S. South were largely predictable. Many sources predicted them as early as 1964 - notably the Canadian Pulp and Paper Association itself:

"during the next two years, however, a remarkable change seems to be coming and for 1967-1968 announced building prospects indicate an expansion similar to the one which started ten years ago. In the four years from 1955 to 1959 an addition of nearly a million tons was made to U.S. annual capacity, most of it in the South. During the years 1966-1968, if all of the apparently valid announcements of new capacity materialize, another addition of almost a million tons seem to be in prospect."

The regional market, the logistics, the production costs, the rapid growth of the overall market during the 1963-1966 period - all factors looked "right" for a second wave of capacity expansion.

What is particularly interesting, however, is the identity of the groups which supported these capacity increases. First, nearly all the established producers, with the exception of International Paper, expanded the capacities of their existing mills (Coosa Pines, Southland). In addition two established producers (Bowater and Southland), set up additional mills (Catawba for Bowater and Houston for Southland). Secondly, publisher-supported new entrants, such as Southwest Forest Industries (tied to Hearst Publishing) and Cox Newsprint (Cox Publications), set up small-sized plants in the U.S. South. Finally, traditional Canadian producers began to produce in the U.S. South. Price, in conjunction with Boise Cascade, set up a mill in Louisiana. Abitibi acquired the Cox Newsprint mill in 1968.

The magnitude of these developments and the character of the companies involved, seem clearly to indicate a change in the nature of the issue. While the first wave of new capacity was largely publisher-influenced, this second wave of capacity increases reflected a complete change in the relative economics of production between Canada and the U.S. South.

The change in relative economics of production is documented in numerous studies that began appearing in the late sixties. For example, a study published by the University of North Carolina* indicates differences in wood costs in the order of CAN\$6 (1968) to \$3 (1965) per ton of newsprint, essentially attributable to higher logging overheads in Eastern Canada,

* Cost Studies in European Forestry, Einver Stridsberg and Kval Viktor Agvere, Study No. 49, 1967, U. of North Carolina.

(\$11.50 per cunit) than in the U.S. South (\$3 per cunit). In addition, because of their methodologies (analyzing "comparable" mills), these studies probably minimized the real cost differences between Eastern Canada and the U.S. South, since they took into account neither the productivity differences that existed between the old Eastern Canadian mills and their much more modern Southern counterparts, nor the differences in transportation costs affecting each group of mills.

During this period, Canadian capacity also increased fairly dramatically (by about 1.5 Mt). In retrospect, it seems that this excessive increase can be related to a variety of factors, including:

- the development of new mills. For example, the conversion of the Price Chandler and Nova Scotia Forest Products pulp mills into newsprint mills added about 400,000 tons to the Canadian newsprint capacity. In the case of Price, this conversion was backed by some direct support from a publisher, the N.Y. Times.
- the expansion of existing mills. The Donohue Company in Clermont, partly with the backing of the Gannett newspaper chain in 1967 and the N.Y. Times in 1970, increased capacity by 120,000 tons between 1966 and 1971. In Nova Scotia, capacity of the Rothesay mill was increased by 130,000 tons following the mill's absorption into the MacMillan Bloedel organization. Finally, between 1965 and 1976 the capacity of Ontario Paper's mill at Baie Comeau was increased by 90,000 tons.
- the export-oriented expansion of the British Columbia mills to supply the growing Asian market. MacMillan Bloedel's capacity at Powell River grew by 90,000 tons. BCFP increased capacity at Crofton by 120,000 tons.

Table 11

The Storm
1966 - 1972

	<u>1966</u>	<u>1972</u>
Total U.S. Newsprint Demand	9.3 Mt	10.3 Mt
U.S. Newsprint Capacity	2.5 Mt	3.7 Mt
Operating Rate of U.S. Newsprint Industry	97.5%	98.4%
Canadian Exports Outside the U.S.	1.1 Mt	1.7 Mt
Canadian Newsprint Capacity	8.8 Mt	10.3 Mt
Operating Rate	94.8%	85.6%
Newsprint Prices	\$136.92	\$164.58
Canadian Share of U.S. Market	71.1%	62.5%
Canadian Pulp and Paper Industry Performance - Net Income on Stockholders' Equity	11%	2%

Source: CPPA, Statistics Canada.

- the attempts of various producers to upgrade their facilities and introduce more efficient machines. For example, the CIP Gatineau mill's output increased by 85,000 tons when a new "state of the art" paper machine was installed in 1969.

While publishers did have some impact on the capacity surge, it is difficult to conclude that the various capacity expansions which took place were the result of a concerted strategy. Rather, the pattern suggests a sequence of uncoordinated moves by producers responding to a variety of signals. These decisions were based on the need to exit from sulfite market pulp, a desire to capitalize on growing export markets, inadequate publishers' estimates of their own needs (later the N.Y. Times confessed that the interest in the Donohue mill had been acquired in 1970, when it expected a circulation boom which never materialized), the desire of some producers to reduce the impact of their fixed costs by increasing production, or on just plain misreading of marketing or industry conditions.

Results of these simultaneous capacity build-ups, were quite dramatic. Within six years the Canadian share of the U.S. market dropped from 71.1% to 62.5%. As shown in Table 11, not only did Canada lose any chance to capitalize on the market growth of the U.S. South, (up 400,000 tons between 1967 and 1970), but producers had to reduce shipments to the U.S. South and suffer a slight growth of U.S. Southern shipments into the Midwest. Within six years southern producers had reduced Canada's remaining beachhead into the South and had indicated their intention of moving the "market share war" to a new field of operations: the U.S. Midwest.

These market share losses, which were hardly compensated by increases in overseas shipments, (600,000t, mostly

Table 12

Change in Regional Market Shares
(000t)

	<u>1967</u>	<u>1970</u>
<u>U.S. South</u>		
Total Newsprint Consumption	2179	2588
Eastern Canada Shipments	925 (42%)	793 (30%)
U.S. South Shipments	1113 (51%)	1700 (65.6%)
<u>U.S. Midwest</u>		
Total Newsprint Consumption	2560	2699
Eastern Canada Shipments	2198 (85.8%)	2289 (84.8%)
U.S. South Shipments	182 (7.1%)	230 (8.5%)

Source: CPPA

to Asia and Latin America), proved disastrous to the Canadian producers. While the U.S. producers managed to keep their mills operating at full capacity, the Canadian producers' operating rates dipped dangerously from 94.8% in 1966 to 85.6% in 1972. Financially, these poor operating rates were compounded by two other factors, the revaluation of the Canadian dollar between 1969 and 1972 (which resulted in a net 7% decline in the export revenues of Canadian producers), and the progressive cost erosion that started affecting the mills, particularly in the field of labour costs.

The Canadian producers managed to partly offset these problems by raising the price of newsprint by five or six dollars each a year. In doing so they were probably taking advantage of the fact that the U.S. mills were running near full capacity. These price increases, however, were inadequate to offset the low operating rates and rising direct costs. As a consequence, the whole industry's financial performance deteriorated sharply, with the return on equity falling from 11% in 1966 to only 2% in 1972.

1.9 The Aftermath 1972-1976

The 1972-1976 period was marked by relative market improvements and attempts by the Canadian newsprint industry to alleviate some of its problems.

Between 1972 and 1974, worldwide demand for newsprint, as for most pulp and paper grades, increased sharply (about 1 Mt for the U.S. alone between 1971 and 1973, as reported by ANPA). At the same time, however, little additional newsprint capacity was added in the U.S., despite the high operating rates experienced by U.S. producers in the early 1970's. To some

extent this absence of additions to capacity can be related to the cost of new mills, which soared in the early seventies, making additional investments relatively unattractive, at least at the then-prevailing newsprint prices.

This demand surge and stabilized capacity resulted in a drastic upward movement in newsprint prices from \$165 in 1972 to \$210 in 1974. This upward movement was further encouraged by

- the disruption in shipments which took place in 1973 because of the Canadian rail strike, which created fairly substantial sourcing problems for various publishers;
- the progressive withdrawal from the U.S. market of the Finnish producers, whose shipments declined by 45% between 1973 and 1974 and vanished almost completely in 1975;
- a new awareness among the Canadian newsprint producers of the price increases required to restore the industry's profitability. The acceptance of these price increases was largely facilitated by the fact that U.S. producers were running "flat out" and few alternative supplies were available from Europe.

Besides taking advantage of the tight market situation prevailing between 1972 and 1974, the Canadian newsprint industry as a group, as well as individual firms, introduced various measures directed toward the correction of some of the prevailing problems. The industry turned to government in order to obtain various forms of relief, ranging from lower taxes to funds for modernization. On a provincial basis, industry associations requested lower stumpage rates and improved wood supplies (reduced stumpage rates were granted by the Quebec government to the wood-using industries in 1973). In 1974, the

Table 13

The Aftermath
1972 - 1976

	<u>1972</u>	<u>1976</u>
Total U.S. Newsprint Demand	10.3 Mt	9.8 Mt*
U.S. Newsprint Capacity	3.7 Mt	3.9 Mt
Operating Rate of U.S. Newsprint Industry	98.4%	94%
Canadian Exports Outside the U.S.	1.7 Mt	1.5 Mt*
Canadian Newsprint Capacity	10.3 Mt	10.3 Mt*
Operating Rate	85.6%	84.4%
Newsprint Prices	\$164.58	\$285
Canadian Share of U.S. Market	62.5%	63%
Canadian Pulp and Paper Industry Performance	2%	7%

* 30 lbs basis

Canadian newsprint industry reduced the weight standards for newsprint from 32 lbs to 30 lbs. By doing so, the industry took advantage of the fact that newsprint, defined as groundwood paper above 28 lbs, is admitted duty free to the United States. A lighter newsprint enabled the producers to make some far from negligible savings in their operating costs. Certain firms carried out capacity reduction programs resulting in newsprint machine conversion or permanent closures. For example: MacMillan Bloedel reduced the capacity of its Powell River Mill by 55,000 tons, Crown Zellerbach unsuccessfully attempted to close its Ocean Falls mill (later taken over by the B.C. government), and CIP reduced the capacity of its Three Rivers mill by 80,000 tons. In a similar manner, Domtar sold its newsprint operations in Trois Rivières to Kruger. This trend, which began during the 1973-1974 period, regained some momentum in 1977 when Price announced its plans to convert its Kenogami mill to groundwood papers and Consolidated Bathurst decided to close permanently its Cap de la Madeleine newsprint mill.

Numerous firms implemented "modernization-consolidation programs" involving technological improvements in some facilities and the concomitant closure or conversion of others. Consolidated-Bathurst, while planning the closure of Cap-de-la-Madeleine, undertook an investment program at its Port Alfred mill. The Price Company invested in its Grand Falls mill, while converting its Kenogami facilities. These plans were made possible by the relatively high levels of profits generated by the companies in 1974, as well as by promising technological developments taking place in the field of pulping systems (e.g. thermo-mechanical pulping, TMP).

Finally, the Abitibi-Price merger resulted in an increased level of concentration in the industry. At present

Abitibi-Price represents about 20% of total Canadian capacity. This merger also resulted in the creation of a joint Abitibi-Price newsprint sales organization.

These problem-solving manoeuvres by the Canadian newsprint industry created further difficulties. To a large extent, publishers felt "victimized", particularly with regard to prices, supply and quality of newsprint. Rather heated exchanges took place during the ANPA/RI "producer meet publisher" conference at Anaheim in June 1977. As Pulp and Paper reported:

"Newspaper publishers in rebellious mood over prices supply, quality ... recent producer meet publisher panel at ANPA/RI conference draws torrent of complaints - and also pledges to work together better in the future."

(Pulp and Paper, September, 1977)

In part, these reactions were fuelled by the industry's poor performance in defending its case and informing its customers of its decisions (particularly the change to the lower weight basis). The most obvious result, however, was to push publishers to introduce newsprint saving measures. According to Jon Udell, an ANPA consultant, these measures resulted in savings of 500,000 tons in 1974, of 570,000 tons in 1975 and of 700,000 tons in 1976, (i.e. approximately 5% to 6% of total U.S. newsprint consumption).

The increased profitability of the pulp and paper industry in 1974 (average return on equity: 19%) as a result of these measures and the overall market situation led to strong labour pressures for higher wages and benefits when the labour contracts came due for negotiation in 1975 and 1976. As the

markets declined in 1975, however, the industry tried to curb these wage demands and accepted lengthy strikes, reducing newsprint availability by nearly 20% during this period. This policy apparently paid off on two counts. First, the strikes restrained wage increases and eliminated cost-of-living clauses (but still left Canadian labour costs an estimated 18% to 20% ahead of U.S. mills). Secondly, the limited newsprint availability enabled Canadian producers to raise the price of newsprint twice, by a total of \$25, during 1975 and 1976. However, the policy also further undermined the U.S. publishers' confidence in the reliability of the Canadian industry and increased their resentment of the industry's "high-handedness" in passing on its costs.

These developments helped the industry financially by restoring 1975 and 1976 profits to levels above the extremely depressed levels of the early 1970's. Further, the slight decline in profits experienced between 1975 and 1976 (compared to 1974 levels), was partly offset by the 7% decline in the Canadian dollar which took place in early 1977.

2. The Main Battlegrounds: Canada's Position
in the Major Worldwide Newsprint Markets

THE MAIN BATTLEFIELDS: CANADA'S POSITION
IN THE MAJOR WORLDWIDE NEWSPRINT MARKETS

As can be seen from Tables 14 and 15 and Figure 1, the structure of the worldwide newsprint market is characterized by three main elements:

- newsprint is a commodity traded heavily worldwide, with more than 45% of the world production being traded across national borders (20% if the U.S. Canadian trade is excluded);
- newsprint consumption tends to be concentrated in the most highly developed regions, with North America, Western Europe and Japan absorbing close to 80% of the world's newsprint production;
- newsprint production tends to be concentrated in the Northern hemisphere, with North America, Scandinavia and Japan accounting for approximately 82% of total newsprint production.

On the supply side, the worldwide system appears to be structured around two major export-oriented areas, several regionally-oriented producers and a large number of purely local suppliers:

Export-Oriented Producers: To a large extent Canada and Scandinavia share a similar situation in that their newsprint output is primarily oriented toward one major market: nearly 70% of Canada's newsprint shipments are directed to the U.S. market; approximately 70% of Scandinavia's production is sold in Western Europe. The sheer magnitude of Canada's production, however, (33% of worldwide output) makes Canada about twice as important as Scandinavia in markets other than the U.S. or Europe.

Table 14
Worldwide Newsprint Production and Demand
 (000 short tons, 1976)

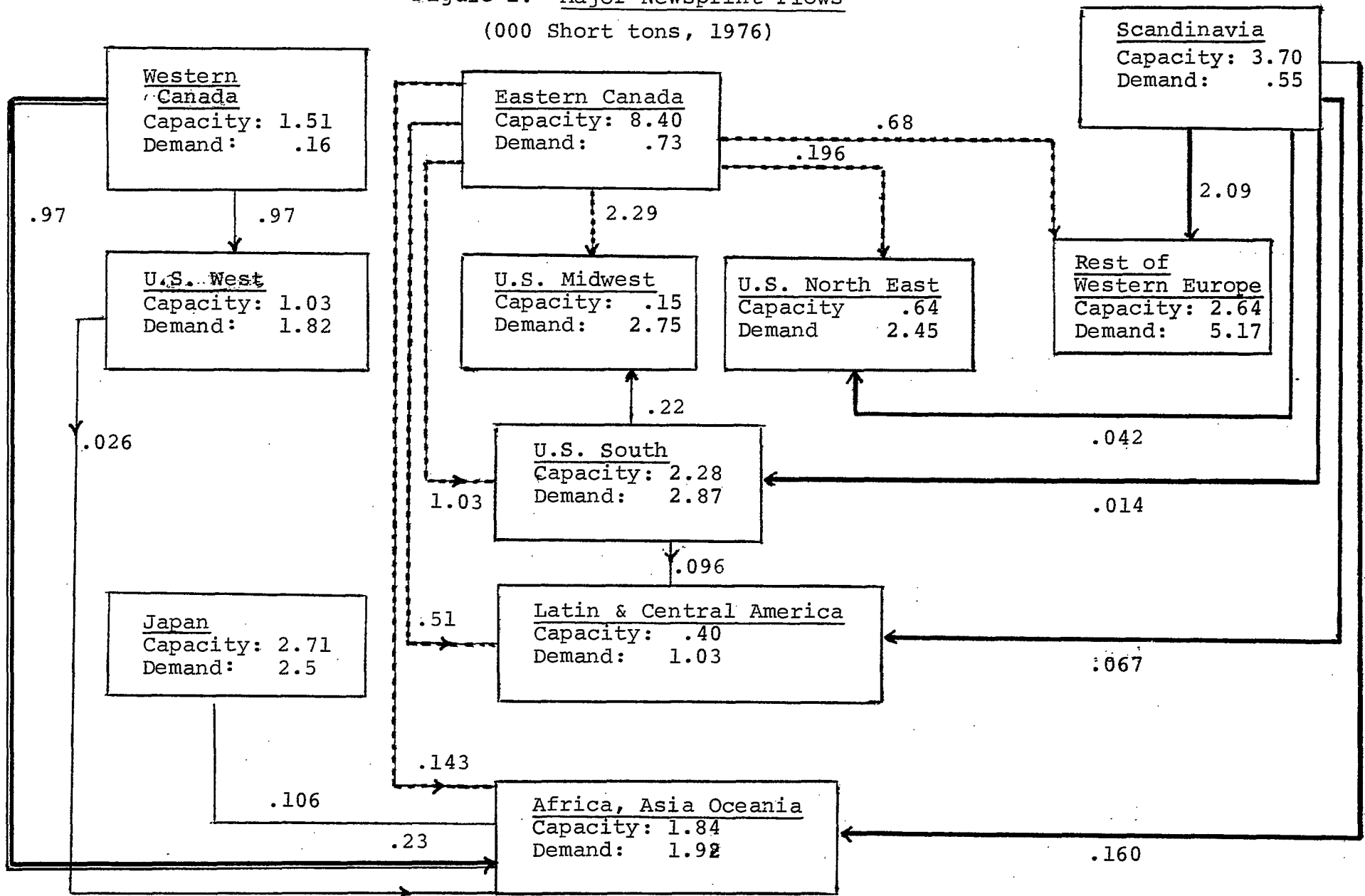
	<u>Production</u>	<u>Consumption</u>
Africa	253	325
North America	12593	10776
Latin America	336	1036
Asia	2998	3442
(Japan alone)	(2597)	(2492)
Western Europe	5100	5728
Oceania	467	652
Eastern Europe	1956	1867
Source CPPA	23703	23826

Table 15
Worldwide Newsprint Trade Patterns
 (000 metric tons, 1975)

Major Exporters / Major Importers	Canada	Sweden	Finland	Norway	USSR	USA	New Zealand	Japan
	Africa	5	23	18	6	11	13	0
North Central America	5312	16	2	0	30	74	0	0
South America	257	35	15	1		38	0	0
Asia	182	45	18	11	45	20	9	106
Europe	479	787	683	363	191	14	0	0
Oceania	114	5	7	0	0	0	112	1
USSR	0	13	30	0	0	0	0	0
Total Exports (Exporters data)	6349	924	773	381	277	159	121	107
Total Non-US Exports	1037							

Source: FAO, Yearbook of Forest Products, 1975

Figure 1. Major Newspaper Flows
(000 Short tons, 1976)



Regionally-Oriented Producers: Despite their considerable production, several areas in the world play only a regional role in the worldwide newsprint system. In fact this category includes countries as different as

- the United States, where 95% of newsprint production (3.6 Mt.) is consumed locally;
- Japan, which produces 2.6 Mt, exports only around 100,000 tons each year, and imports very limited amounts of newsprint;
- the USSR, which produces 1.5 Mt. and exports only 300,000 tons per year, mainly to politically related areas of the world;
- China, which consumes entirely its 1.1 Mt yearly production.

To this list could be added countries such as Austria, New Zealand and Chile, whose production, besides serving local needs, goes primarily to a single, generally close market (Germany, Australia and Argentina, respectively).

Purely Local Suppliers: This category includes most of the producers in Continental Europe (United Kingdom, France, Germany) as well as producers who have recently emerged in developing nations like Mexico, Korea and South Africa.

On the demand side, the worldwide system is largely structured around two key import markets, several "closed regions", and a few minor import-dependent markets. Western Europe and the United States, with a total consumption of more than 15 Mt, together represent 63% of the worldwide newsprint consumption. With self-sufficient ratios of 46% and 66% respectively, these markets are dependent upon external supplies, and, as a result, together they account for most of the worldwide newsprint trade.

In comparison Japan, Eastern Europe and China together represent close to 23% of the world newsprint consumption, but are entirely self-sufficient and do not entertain any significant newsprint imports. The remaining areas (Latin America, Africa, Oceania and the rest of Asia) represent only 14% of the world newsprint consumption and vary in their dependency upon imported newsprint from the total dependency of Venezuela and Nigeria to the total independence of Chile and New Zealand.

In geopolitical terms, the worldwide newsprint system can be thought of as being divided into:

- respective zones of influence consisting of North and South America and Oceania for Canada and Continental Europe and Africa for the Scandinavian countries;
- "closed or neutral territories" such as Japan, China and the U.S.S.R.;
- zones of coexistence between the Canadian and the Scandinavian producers and (eventually) some domestic producers, such as most of the Asian market, the United Kingdom and some of the largest South American markets.

To a large extent, historical factors such as the traditional Commonwealth preference, the economics of shipments, and the relative costs of production between the various countries appear responsible for this "division of labour" among the key producers. The relative stability of this division of labour, however, should not be over-estimated -- depending upon the relative positions and strategies of the producers and customers involved, supply-demand patterns evolve (as was the case, for example, when the Finnish producers withdrew from the

North American market in 1975 after nearly fifty years of uninterrupted supplies), and new balances are negotiated among the various groups involved.

Canada's Position in the Major Worldwide Newsprint Markets

As a group, Canadian producers, in addition to their domestic market, are involved in seven major markets or "battlegrounds". In the following sections, the Canadian producers' present position in each of these seven markets will be reviewed in detail. Given the strategic and historical importance of the United States and United Kingdom markets, their structure will be analyzed more closely.

2.1 The United States Market

Canadian producers supply approximately 63% of the U.S. market's newsprint needs (down from 80% at the end of World War II). The sheer size of this market makes it Canada's dominant customer (in 1975, it absorbed 70% of Canada's total shipments) and as a result it is a prime determinant of the Canadian newsprint industry's performance. As shown in Table 16, Canada's overall position is far from being homogeneous. The Canadian market shares vary significantly across the regions.

The Northeast and North Central Regions are heavily controlled by Canadian producers, who enjoy market shares close to the 80% mark. To a large extent this dominance is the

Table 16

Regional Sources of Newsprint
for U.S. Daily Newspapers Reporting to ANPA
(000t) 1975

Supplies to	from	U.S. Northeast	U.S. North Central	U.S. South	U.S. West	Canada East	Canada West	Others	Total Market Size
North Eastern Newspapers		393 (20.1)	0	29 (1.5)	0	1529 (78.4)	0	1	1951 (100%)
North Central Newspapers		13 (.7)	98 (5.0)	187 (9.5)	0	1613 (82.2)	51 (2.6)	1	1964 (100%)
Southern Newspapers		39 (1.9)	9 (.4)	1412 (67.8)	9 (.5)	594 (28.5)	2 (.1)	16 (.8)	2082 (100%)
Western Newspapers		0	1 (.1)	19 (1.4)	653 (47.7)	54 (4.0)	631 (46.0)	11 (.8)	1370 (100%)
Total Supplied		445	108	1657	662	3790	684	29	6367

* Note: these data are tabulated by ANPA from the information submitted by more than 500 newspapers; these newspapers represent approximately 70% of U.S. newsprint consumption.

Source: Daily Newspapers Reporting to ANPA

result of Canada's relatively favourable competitive position over existing local producers. In fact with the exception of two Maine producers, the Canadian industry virtually eliminated local supplies from these areas in the early 1930's. Recent developments, however, have seen the appearance around major markets of two recycled paper newsprint mills (one in each region) which have slightly eroded Canada's dominant market share.

The Western Region is shared virtually equally among Canadian and U.S. suppliers. This partly reflects the homogeneous development of the Northwestern forest product industry on both sides of the border (i.e. on the west coast, the Canadian industry never replaced a domestic industry as it did in the Northeast and North Central regions). Historically, the Western region developed as a duopoly involving Crown Zellerbach (on both sides of the border) and MacMillan Bloedel (in Canada only). In the early 1950's, publishers, worried about future supplies, started mills on their own (Inland, Steilacoom, Publishers Paper), thus breaking the traditional supply pattern on the west coast.

The Southern Region, which is the largest and fastest growing U.S. regional market, is also the region where the Canadian newsprint industry market share is the lowest. To a large extent the fight for market share in this region has been one of the key driving forces influencing the behaviour and performance of the industry over the last thirty years. Successive waves of capacity increases, first in the late 50's and then in the late sixties, have severely rolled back Canada's position on this market and have increased the Canadian industry's vulnerability to economic fluctuations. The Canadian producers have been able to retain some positions, particularly in those areas

that can easily be supplied through barge shipments (the Atlantic and Gulf coasts), but many industry sources see the maintenance of Canada's market share in this area as a definitely problematic issue.

The Structure of the U.S. Market

The U.S. newsprint market can be divided into four main categories: daily newspapers, Sunday newspapers, weeklies and other markets, each with their own dynamics.

The Daily Newspapers Market

As shown in Table 17, the number of U.S. dailies has remained relatively constant since 1946. This overall stability, however, should not mask the fact that relatively significant changes have taken place at various levels for the last twenty years.

Changes in Regional Distribution: As indicated in Table 18, the overall stability in the number of newspapers has been achieved through a slight growth in the number of dailies published in the U.S. South while the number of dailies in the Northeastern and Western Regions of the United States declined. This relative shift has been of some consequence for the Canadian newspaper industry, inasmuch as the South is the region farthest away from Canadian mills and is also the zone where most of the U.S. newsprint production is now concentrated.

Table 17

Evolution of Newspaper Circulation 1920-1976

<u>Year</u>	<u>Morning</u>	<u>Evening</u>	<u>Total M&E</u>	<u>Circulation</u>	<u>Total Sunday</u>	<u>Total Sunday Circulation</u>	<u>Total Weekly Newspapers</u>	<u>Average Circulation</u>	<u>Total Weekly Circulation</u>
1920	437	1,605	2,042	27,790,656	522	17,083,604			
1925	427	1,581	2,008	33,739,369	548	23,354,622			
1930	388	1,554	1,942	39,589,172	521	26,413,047			
1935	390	1,560	1,950	38,155,540	518	28,147,343			
1940	380	1,498	1,878	41,131,611	525	32,371,092			
1945	330	1,419	1,749	48,384,188	485	39,860,036			
1946	334	1,429	1,763	50,927,505	497	43,665,364			
1950	322	1,450	1,772	53,829,072	549	46,582,348			
1955	316	1,454	1,760	56,147,359	541	46,447,658			
1960	312	1,459	1,763	58,881,746	563	47,698,651	8,138	2,606	21,327,782
1965	320	1,444	1,751	60,357,563	562	48,600,090	8,003	3,260	26,088,230
1966	324	1,444	1,754	61,397,252	578	49,281,852			
1967	327	1,438	1,749	61,560,952	573	49,224,125			
1968	328	1,443	1,752	62,023,323	578	49,660,143			
1969	333	1,443	1,758	62,059,589	585	49,674,847	7,610	3,866	29,422,487
1970	334	1,429	1,748	62,107,527	586	49,216,602	7,567	4,030	30,495,921
1971	339	1,425	1,749	62,231,258	590	49,664,643	7,553	4,236	31,997,341
1972	337	1,441	1,761	62,510,242	605	50,000,669	7,641	4,572	34,938,800
1973	343	1,451	1,774	63,147,280	634	51,717,465	7,612	4,702	35,792,409
1974	340	1,449	1,768	61,877,197	641	51,678,726	7,486	4,698	35,176,130
1975	339	1,436	1,756	60,655,431	639	51,096,393	7,579	5,015	38,006,868
1976	346	1,435	1,762	60,977,011	650	51,565,334			

Source: Editor & Publisher

Table 18 Regional Distribution of U.S. Daily Newspapers

	<u>1965</u>	<u>1975</u>	<u>Change 65-75</u>
Northeast	338	316	-22
North Central	577	576	-1
South	534	566	32
West	<u>294</u>	<u>286</u>	-8
	1743	1744	

Source: ANPA

Changes in Newspaper Sizes: As illustrated in the table below, the size of newspapers (as measured by their circulation), has experienced some changes over the last twenty five years. Over these years, there has been a slight reduction in the total number of newspapers below 50,000 circulation (still nearly 86% of all newspapers in 1976), an increase in the 50,000 - 150,000 category, and a relative stagnation in the number of large metropolitan newspapers.

Changes in Circulation Groups 1950-1976

	<u>Total Number of Dailies</u>	<u>Under 50,000</u>	<u>Daily Circulation</u>		
			<u>50,000 100,000</u>	<u>100,000 150,000</u>	<u>over 250,000</u>
1950	1772	1564	91	70	38
1960	1763	1540	96	83	44
1970	1748	1491	127	92	38
1976	1762	1512	131	83	36

Source: ANPA

Changes in Circulation: While the total number of dailies remained constant between 1960 and 1976, the total circulation of morning and evening papers increased by nearly 20%, from 51 million copies in 1946 to 61 million copies in 1976. To some extent these variations are correlated with the changes which took place in the newspaper circulation categories, but they probably also reflect the increase in circulation that mainly affected the below 50,000 circulation category.

Changes in Ownership: While 319 newspapers were controlled by groups in 1940, 1047 belonged to this category in 1977. This point will be analyzed later in this note.

Changes in the Average Number of Pages: The most significant change has probably taken place at this level. Between 1960 and 1974 the average number of pages per daily issue has increased by 40% (43 pages in 1960 and 60 pages in 1974; Source: Predicast). This increase, together with the overall stability in the number of dailies, underlines the fact that the daily newspaper industry displays the main characteristics of a mature, relatively slow-growth industry, with an accompanying restructuring in process.

The Sunday Newspapers Market

The separation of the Sunday papers from the rest of the dailies is largely artificial, since few independent Sunday papers exist. This separation has been retained here mainly because of the quantitative differences characterizing this segment of the industry in terms of newsprint consumption. In comparison with the dailies, the number of Sunday Papers has increased (497 in 1946, 650 in 1977) to the point where there is now a .36 to 1 ratio between the two categories.

The increase in circulation experienced by the Sunday papers (from 43.6M in 1946 to 51.5M in 1976) appears to be related to the expansion in the number of papers rather than to an increase in their average circulation. In fact, the average circulation of Sunday papers has declined over the period (from 87,000 in 1946 to 79,000 in 1976). Finally, it should be noted that the Sunday papers, like the dailies, have experienced a growing concentration of ownership. It was been estimated that 78% of the Sunday papers in 1977 belonged to groups.

The Weeklies

Since 1960 the number of weeklies has decreased by about 8%. Their total circulation, however, has increased by more than 75% over the same period (see Table 17). Their importance in terms of overall newsprint consumption is difficult to assess since in most cases these weeklies include only a fairly limited number of pages. Since most of them are suburban newspapers, their dynamics are probably closer to those of large metropolitan dailies (for which they are more often a complement than a substitute) than to those of smaller rural dailies. In many cases, however, these weeklies provide a springboard for the expansion into suburban dailies, which have started to appear during the last decade.

The Other Markets

Recent analyses of U.S. newsprint consumption have revealed the growing importance of the so called non-newspaper market. The ANPA, for example, recently released the following figures:

Table 19 Distribution of Newsprint Consumption

	<u>Daily and Sunday Newspapers</u>	<u>Others</u>
1960 - 1970	86%	14%
1975	81%	19%

Source: ANPA

Industry sources appear divided on the significance of this rather recent percentage shift. Several sources indicate that various elements, such as preprinted inserts or comics, are printed separately (and hence classified as "others") but ultimately find their way into regular newspapers and should as a consequence be classified in the "newspaper" category. Other sources underline the fact that this shift represents an "authentic" market growth attributable both to the increase in the circulation of the weeklies (21 million in 1960 versus 38 million in 1976) and to the growing role of newsprint as a substitute printing material. This question is hardly an academic one, since the distribution of newsprint to the "other" category is not usually organized on a direct basis. This issue has fairly practical implications for the marketing and distribution strategies of the newsprint mills.

A leading expert in the field of newsprint indicated during an interview that in his opinion 82 to 85% of all the newsprint consumed in the U.S. was ultimately consumed by the daily newspapers. Nevertheless, for the last few years some slight shift appears to have taken place in favour of the "other" category. To a large extent this shift can be traced to the price increases that have affected most paper grades over

the last few years. These increases, over time, have led newspapers to initiate consumption-saving measures and have induced other users of printing paper to use newsprint (which is the cheapest printing paper available) in place of more expensive grades. Despite the lack of definitive evidence, it can be concluded that this shift is both fairly recent and relatively limited.

Market Segmentation and Past Market Growth

Between 1950 and 1976 newsprint consumption in the U.S. increased by approximately 60% in terms of tonnage used. Even though specific analyses of past market growth are difficult to produce because of the unavailability of data regarding number of pages (newsprint consumption being a function of the total number of newspapers, their overall circulation and the average number of pages per issue), a few reasonable deductions can be made regarding segmentation and growth in the U.S. newsprint market. First, the most important factor behind the growth in newsprint consumption has been the increase in the number of pages per daily issue (up 20% between 1960 and 1974). Among the other contributing factors have been the slight increase in the total circulation of the dailies, the increase in the number of Sunday papers, and the increase in the number of pages per Sunday issue (ANPA reports that a Sunday paper includes, on the average, 180 pages, i.e. three times more than a daily paper). Finally, the "non newspaper" uses of newsprint have recently exerted a marginal influence on the increase in newsprint consumption.

Key Market Determinants

Two main factors, advertising expenditures and demographics, are the prime forces behind newsprint consumption.

As discussed in the previous section, the increase in the number of pages per issue has been a key element of growth in newsprint consumption over the last two decades. By and large, this increase in number of pages per issue appears related to the increased amount of advertising expenditures in newspapers. This deduction is supported by the fact that ANPA reported that 63.7% of newspapers' content in 1975 was advertising. As a result, it appears that long term newsprint consumption is directly affected by the amount of advertising funds channelled through newspapers. Since newspapers' share of total advertising expenditures has remained relatively stable since 1960 (see Table 20), it would appear that overall increases in advertising expenditures have been the prime determinant of increased newsprint consumption. Unless newspapers' share of these advertising expenditures changes, the future growth of total advertising expenditures may constitute the key factor limiting future growth of newsprint consumption.

The second main factor, demographics has a major impact on newspaper circulation and hence on newsprint consumption. However, the traditional linear relationship between newspaper circulation and overall U.S. population broke down in the early 1960's (see Figure 2). Most commentators have explained this disruption as a combination of a change in the

Table 20

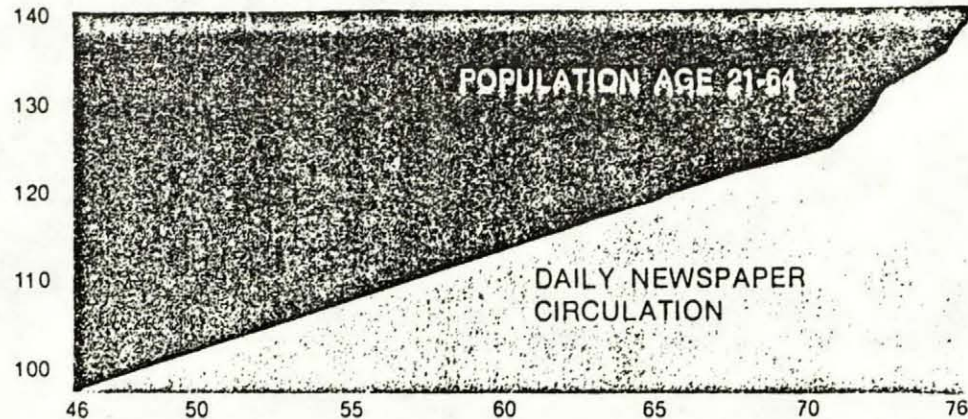
Newspaper's Share of Total Advertising Dollars

Year	<u>Newspaper Advertising</u> (Millions of dollars)	<u>Percent of all</u> Advertising
1960	3,703	31.
1961	3,623	30.6
1962	3,681	29.7
1963	3,804	29.0
1964	4,148	29.3
1965	4,457	29.2
1966	4,895	29.4
1967	4,942	29.3
1968	5,265	29.1
1969	5,753	29.5
1970	5,745	29.3
1971	6,215	30.3
1972	7,008	30.3
1973	7,591	30.3
1974	8,001	29.9
1975	8,430	29.8
1976	10,205	30.0

Source: MacCann Erickson Inc.,
Newspaper advertising bureau

Figure 2

Growth of Circulation and Adult Population



Year	Circulation of Daily Newspapers	Index of Daily Circulation	Population Ages 21-64 (in 000's) ¹	Population Index
1946	50,927,505	100.0	82,226	100.0
1970	62,107,527	122.0	104,730	127.4
1971	62,231,258	122.2	106,350	129.3
1972	62,510,242	122.7	108,015	131.4
1973	63,147,280	124.0	109,711	133.4
1974	61,877,197	121.5	111,061	135.1
1975	60,655,431	119.1	112,914	137.3
1976	60,977,011	119.7	114,818	139.6

Source: ANPA, Editor & Publisher
 U.S. Department of Commerce
 Bureau of the census

readership habits of the younger segments of the U.S. population (declining daily newspaper readership) and an increase in the relative importance of this age group within the overall U.S. population. To some extent, these demographic changes, which took place after the stabilization of the newspapers' advertising market share, further contributed to the slow growth of newsprint consumption since the early 1960's.

Concentration and Newspaper Consumption

As shown in Table 21, for the last fifty years the newspaper industry has undergone a continuous concentration process. This has been marked after 1960 by a rapid increase in the total number of newspapers belonging to groups (a group is defined here as an entity controlling two or more newspapers in different locations). It has been estimated that by 1977 approximately 60% of all newspapers belonged to such groups, versus only 30% in 1960. The forces behind this growing concentration of the newspaper publishing industry are numerous. Of particular importance are:

- the high level of cash flow generation and overall profit levels achieved in the newspaper business, making it an interesting investment alternative;
- the opportunities offered by acquisition policies as ways to boost the earnings of medium-sized companies (the conglomerate effect); these are potent because independent newspapers, like most family-owned businesses, are usually managed so as to minimize tax liabilities, and traditionally report only minimal "book earnings";

Table 21

Evolution of Concentration in the U.S. Newspaper Industry

Year	<u>Number of Dailies</u>	<u>Circulation 000's</u>	<u>Number of Groups</u>	<u>Group Newspapers</u>	<u>Group Average</u>
1910	2,202	22,426	13	62	4.7
1930	1,942	39,589	55	311	5.6
1940	1,878	41,132	60	319	5.3
1960	1,763	58,080	109	560	5.1
1970	1,748	62,107	157	879	5.6
1976	1,762	60,977	167	1,047	6.2

Source: Editor and Publisher

- the various anti-trust decisions which have prevented publishing companies from diversifying into other media (such as radio or television) and have made the acquisition of other newspapers an attractive source of corporate growth;
- the lack of business opportunities facing the largest metropolitan dailies, forcing them to look into geographical diversification as a solution to their growth problems (this is apparently the policy followed by the New York Times since the mid-sixties);
- the present U.S. tax structure, which creates incentives for independently owned concerns to integrate with publicly held groups (particularly when estate settlement issues are concerned); and
- the economies that can be generated by the use of electronic technology in the fields of computerized typesetting and electronic page layouts.

In terms of circulation, this concentration of the newsprint industry is even more conspicuous. On the average, "group newspapers" tend to be about 70% "larger" than their independent counterparts (see Table 22). From data published by the trade magazine "Editor and Publisher", it appears that:

- 167 U.S. newspaper groups control around 71% of the total weekday circulation and about 78% of total Sunday circulation
- the 22 largest groups control approximately 50% of the total U.S. weekday circulation
- wide variations exist in the composition of the groups involved: some, like the N.Y. Times,

Table 22

Concentration in the Newspaper Industry

Groups with Total Weekday Circulation	Number of Groups or Publishers	Weekday Newspaper Circulation Controlled	% of Total Weekday Newspaper Circulation Controlled	Average Newspaper Circulation
Over 1 M copies	10	22 M	36%	} 416,427
Over .5 M copies	22	30 M	50%	
Over .1 M copies	64	40 M	65%	
All groups	167	43.6 M	71%	
Independent publishers	715	17.4 M	29%	243,000
Total circulation		61 M	100%	346,000

Source: Editor and Publisher July 9, 1977.

"Group": two or more daily newspapers in different cities under the same ownership or control.

Washington Post and Chicago Tribune, tend to be organized around one or two major newspapers; others tend to gather together a large number of medium-sized newspapers (for example the average circulation of the 57 newspapers constituting the Thompson group in the U.S. is around 16,400 copies per day).

These differences in the nature of the groups involved are quite important, inasmuch as newsprint consumption tends to increase more than proportionately with circulation. As a result, newsprint is likely to be a more strategic item for a group with a few large newspapers than for a group comprised of relatively small newspapers, even if total circulation is approximately the same for the two groups.

While the impact of this concentration on newsprint consumption is difficult to assess directly, it has been estimated that the largest U.S. group (Knight-Ridder), with a total circulation of 3.6 million copies (see Table 23), consumed around 535,000t of newsprint in 1976. This group alone represented about 6% of the total U.S. newsprint consumption in 1976, and about 7.5% of the total U.S. newsprint consumed by daily newspapers in 1976. The 22 largest groups, representing about 50% of the total circulation of dailies, are likely to represent more than 50% of all the newsprint consumed in the U.S. on the average their dailies have about 20% more circulation than the average U.S. newspaper: 416,000 vs 346,000).

The implications of this increasing buyer concentration in the newspaper publishing industry are fairly critical for the newsprint producers. Concentration tends:

Table 23

Newspaper Groups Ranked According to Circulation

Following are the newspaper groups which have aggregate circulations of more than 500,000 on weekdays as shown in the Editor & Publisher International Year Book for 1977:

Knight-Ridder	3,681,301
Newhouse	3,204,212
Tribune (Chicago)	3,099,120
Gannett	2,771,936
Scripps Howard	1,894,962
Times Mirror	1,879,870
Dow Jones	1,782,622
Hearst	1,435,527
Cox	1,179,370
N.Y. Times	975,255
Capital Cities	949,935
Thomson	935,460
Pulliam	758,692
News (Detroit)	665,542
News America	645,570
Freedom	635,307
Wash. Post	602,818
Copley	601,019
McLean	586,294
Cowles	564,144
Media General	545,142
Harte Hanks	543,263

Note: In most cases the figures are net paid averages as of September 30, 1976. Gannett Co. has reported that 1977 circulation was near 3 million. Other groups also have had gains.)

- to increase the leverage enjoyed by the publishers during price negotiations with the newsprint producers and hence to compress the margins of the latter. The Hearst Corporation, for example, reportedly has requested 6 to 7% price discounts from its suppliers. This is particularly important because the newsprint industry has not experienced the same increase in concentration over the last twenty years, and hence may be more vulnerable to these pressures than it used to be;

- to facilitate backward integration. Traditionally, since newsprint costs have tended to rise faster than circulation (from 11% for a small newspaper to up to 35% for a large metropolitan daily), backward integration tended to be of interest mainly to the largest metropolitan newspapers. In this respect it is interesting to note (see Table 24) that eight out of the thirteen largest U.S. newspapers are backward integrated. The present increase in concentration has raised the number of groups for whom backward integration is a potentially feasible alternative. Even if their newsprint cost ratio is relatively low (because of their orientation toward small or medium sized papers), these groups may find it worthwhile to backward integrate into newsprint. The fact that groups such as Cox Newsprint or Knight-Ridder have chosen to backward integrate during the last few years lends credence to this conclusion;

- to increase the leverage enjoyed by publishers in capacity investment decisions, by enabling them to make commitments for the newsprint volumes required

Table 24

Backward Integration Among the Largest U.S. Dailies

	<u>Circulation</u>	<u>Newsprint Usage</u>	<u>Integration</u>
New York News	1,925,643	293,200t	Ontario Paper (Baie Comeau)
Wall Street Journal	1,407,985	82,197t	Bato (F. Soucy) Boise Cascade (Steilacoom)
Los Angeles Times	1,000,866	313,000t	Publishers Paper
New York Times	803,123	271,600t	Kimberly-Clark (Kapuskaing) Price (Chandler) Donohue (Clermont)
Chicago Tribune	746,029	209,808t	Ontario Paper (Thorold)
Detroit News	627,569	135,056t	NA
Detroit Free Press	620,651	88,187t	NA
Chicago Sun-Times	566,127	132,045t	Field Enterprises (Alsip)
Philadelphia Bulletin	540,851	NA	Kruger (?)
Washington Post	530,031	146,925t	Bowater (Mersey)
New York Post	489,067	NA	NA
Newsday	466,635	NA	N.Y. Times (Kimberly, Price, Donohue)
Boston Globe	461,960	925,000t	NA

Source: Newsprint Facts at a Glance, 19th Edition.
Company Annual Reports

by new entrants in the industry or by existing producers considering capacity expansions.

These advantages, however, should not be overrated. To a large extent the industry has already been able to enjoy them through other means, particularly because of the role played by the various publishers associations. In fact, over the last thirty years these associations (particularly the southern and western ones), through their newsprint committees, have exerted a significant influence both in political and economic terms on the newsprint supplies to the publishing industry. Be it through their lobbying efforts, their involvement in local negotiations with producers, or their promotion of research in non-traditional technologies (like Kanef, for example), these associations have had a distinct influence on the industry. As a result, the present trend toward concentration is probably less a change in the level of buying power available to the industry than a change in the ways of exerting that power (i.e. away from the small publisher-dominated associations and toward the largest groups).

2.2 The United Kingdom Market

Because of its size (1.25 Mt), the United Kingdom market has been one of the world's most important markets (even though it is considerably smaller than the U.S. and the Japanese markets). Because of political and economic links, Canada has traditionally been a major supplier to the United Kingdom market, although her role has changed slightly during the last decade.

Historical Developments

With an apparent consumption of 750,000 metric tons, the United Kingdom market was by far the largest European newsprint market of the early 1950's (see Figure 3). Because of its lack of raw materials, the United Kingdom also represented the largest European import market at that time. Imports to the United Kingdom represented approximately 56% of total European newsprint imports.

The 1950-1960 period was characterized by a doubling of newsprint demand. This demand was initially satisfied by a parallel increase in domestic capacity (particularly during the 1950-1955 period). Later, increasing demand was met by an increase in imports from Canada and, to a lesser extent, from Finland. These movements were a return to the pre-war situation, when Canada and Newfoundland were the main external suppliers of the United Kingdom.

Table 25
United Kingdom
Newsprint Market Shares
1960-1975

 (%)

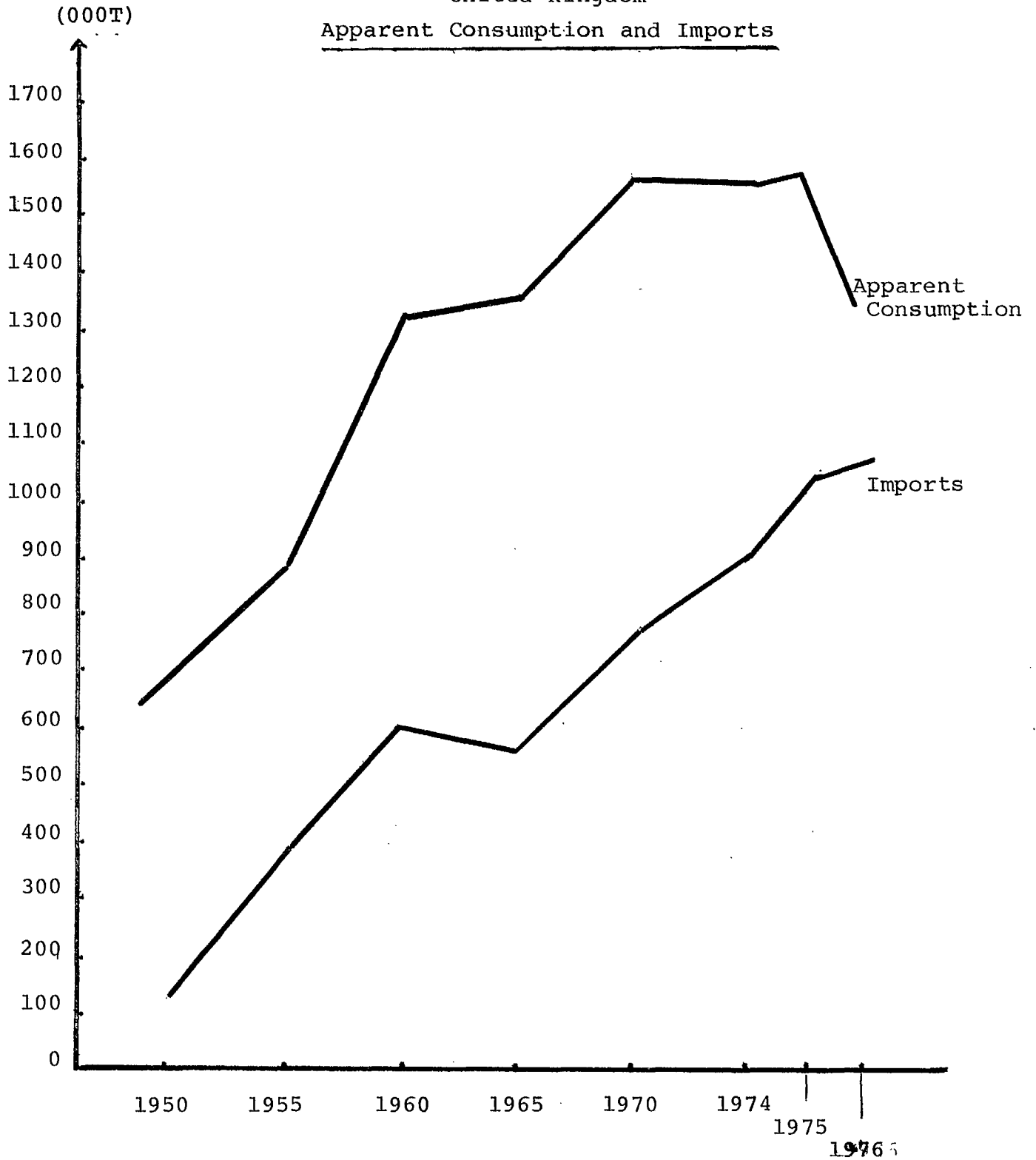
	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Canada	31	25	26	25	33	29	27	26
Finland	9	11	16	22	25	28	35	37
Sweden	5	4	5	6	8	9	9	9
Norway	2	3	3	4	4	4	5	3
U.S.A.	-	-	-	-	2	-	-	-
Domestic Producers	53	57	49	42	29	28	23	25

Source: OECD

Figure 3

United Kingdom

Apparent Consumption and Imports



Source: OECD, PPI

In the early 1960's a levelling off in demand was experienced. At the same time, some increases in domestic capacity (largely from imported mechanical furnishes) came on line. This double movement resulted in an increase in the market share for domestic producers (from 53% to 57%), largely at the expense of the Canadian producers (whose market share dropped from 31% to 25% during this period).

Newsprint consumption increased by approximately 10% during the 1965-1970 period. However, the competitiveness of the local producers started deteriorating sharply, and within five years their market share had declined from 57% to 49%. The increase in available demand benefitted mainly the Finnish producers, who increased their market share from 11% to 16% during these five years.

It is interesting to analyze why this increased demand for imports benefitted only the Finnish producers (the Canadian producers' market share increased only from 25% to 26%, while that of the Swedish producers increased only from 4% to 5%). At the time, Canadian shipments to the United Kingdom were apparently less profitable than shipments to the United States market, as shown by the data in Table 26. The Canadian producers had little incentive to increase their share of the United Kingdom market.

Table 26. Average f.o.b. Value of Canadian Newsprint Exports
(\$/ton)

	<u>United Kingdom</u>	<u>United States</u>
1968	\$125	\$134.6
1969	\$124.5	\$141
1970	\$129	\$140

Source: CPPA Import Export Statistics

The case of the Swedish producers appears to have been slightly different. Between 1965 and 1970 they added approximately 400,000 metric tons of new capacity, a 50% increase. However, most of these capacity increases found their way to other markets, (particularly Germany, France and the Netherlands), with very little going to the United Kingdom. Since the Swedish producers were experiencing relatively low operating rates during this period (86% in 1968), no immediate reasons appear to account for their absence of aggressiveness in the United Kingdom market. The fact that the Finnish, Swedish and Norwegian producers belong to a "common interest" organization (i.e., Scan News), as well as the fact that the Finnish producers let the Swedish producers assume a clear leadership on the German market, may have something to do with this development, which appears to be some kind of "tacit market sharing".

In contrast, the 1970-1975 period saw a relative stagnation of newsprint demand accompanied by a further decline of the British suppliers. Their market share fell by twenty points between 1970 and 1972, probably as a result of a mill closure or conversion to other products. At least during the first two years, this decline in domestic suppliers' market share was fairly evenly redistributed among the existing foreign suppliers. The Canadian producers increased their share from 26% to 33%. Finnish producers increased their share from 16% to 25%. The Swedish and Norwegian producers jointly increased their share from 7% to 10%.

These arrangements, however, were short-lived. In 1973, market pressures started to appear on both sides of the Atlantic, and Canadian and Finnish producers found themselves in a difficult situation. The Canadian producers were still

receiving lower average prices on the United Kingdom market than those they could command in the U.S., their primary market (in 1972 f.o.b. values per ton were \$143 for the United Kingdom and \$146 in the United States). The Finnish producers, who for years had been shipping around 25% of their total output to the U.S. market, found themselves in a similar situation with the value of their own shipments on the U.S. market trailing significantly behind their average net values on other markets. As demand in Europe increased rapidly in 1973 and early 1974, the opportunity cost represented by these shipments became higher and higher.

A compromise was apparently reached sometime in 1973. The Canadian producers relinquished some points of market share (their share fell from 35% to 27% between 1972 and 1974). The Finnish producers increased their share on the United Kingdom market, (from 25% to 35%) and discontinued their shipments to the United States market (according to the FAO, their shipments fell from 381,000T in 1973 to 33,000T in 1975).

In 1975, in spite of the relatively sharp decline in the demand for newsprint, market shares remained relatively stable, with the domestic producers increasing their share by two points, the Finnish producers by one point, and the Canadian and Norwegian producers losing one point and two points respectively.

Some tensions began to build up as the net value for Canadian exports to the United Kingdom became larger than the net value for exports to the United States for the first time in 1974 (see Table 27). This factor probably created an incentive for the Canadian producers to increase their market share, and in 1976 they succeeded in increasing their share to slightly above 30%.

Table 27. Average f.o.b. Value of Canadian Newsprint Exports
(\$/ton)

	<u>United Kingdom</u>	<u>United States</u>
1973	\$155	\$155
1974	\$217	\$191
1975	\$273	\$241
1976	\$273	\$255

Source: CPPA Export Import Data

The United Kingdom Publishing Industry

The United Kingdom publishing industry appears to be in a different position from that of the U.S. industry. Since 1947, the total circulation of daily newspapers has experienced a 13% decline in circulation, (28.6 million copies in 1947 versus 24.8 million in 1974). The total circulation of Sunday newspapers has declined from 30.2 million copies in 1957 to less than 24.9 million in 1974. Most of the large newspapers have reported relatively large losses. A recently-appointed Royal Commission commented in its interim report that approximately "£55 million were needed to introduce new printing technologies and to pay for redundancies of 9,000 people" if continued losses were to be eliminated. In addition, the same Royal Commission quoted the following returns on sales for each of the major classes of newspapers:

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Popular dailies	2.8	6.9	5.8	-.2	-.4	4.0
Quality dailies	-3.9	2.5	7.1	2.7	-2.2	-4.8
Popular Sundays	7.7	5.6	6.2	3.6	-1.0	5.0
Quality Sundays	-2.8	-4.9	1.3	3.0	-3.2	-8.1

This declining performance has led many commentators to predict a rather grim future for the press in the U.K. and possibly a continuous decline of newsprint consumption over the next few years.

Globally, most of the newsprint consumption registered during the last decade appears to be traceable to an average increase in the number of pages per copy, rather than any increase in the number of newspapers or to a change in average circulation. This development appears to make the future evolution of newsprint consumption in the United Kingdom largely dependent upon advertising expenditures and particularly on that share of advertising monies accruing to the newspapers.

The Structure of the United Kingdom Publishing Industry

The United Kingdom publishing industry is dominated by five relatively large groups who are reported to control more than 60% of the total newspaper circulation. These are:

1. Associated Newspapers (Daily Mail, Evening News, in addition to about 15 provincial dailies). Until 1974, through the Grand Falls newsprint mill in Newfoundland, AN controlled approximately 17% of the Price Company. Since the Abitibi merger, AN has exchanged its share in the Price Company for some financial interest in Consolidated-Bathurst. The actual amount of newsprint purchased by AN from either of these two companies is unknown.
2. Beaverbrook Newspapers Ltd. (Daily Express, Evening Standard and some provincial dailies).
3. IPC (Daily Mirror and affiliates, about 20 provincial newspapers and 200 weeklies). IPC, which is the

largest United Kingdom publishing group, is controlled by Reed, which produces newsprint in both the United Kingdom and Canada. When Reed acquired IPC, however, a clause in the acquisition contract imposed some limitations upon the amount of newsprint which could be bought from Reed. As a result of this limitation, and the relatively low profitability of newsprint shipments to the U.K. in the 1960's, only limited quantities appear to be sourced from the company's Quebec newsprint mill.

4. Westminster Press National Newspaper Ltd. (nine provincial newspapers and about forty local weeklies).
5. Thompson Organization Ltd. (Sunday Times, London Times, in addition to about 46 daily and non-daily newspapers).

Besides this high level of concentration (indicative of the mature character of the U.K. publishing industry), it is interesting to note that four of these five groups have direct or indirect relationships with Canadian newsprint firms. Reed and Associated Newspapers both have direct financial links to Canadian newsprint producers (Reed and Consolidated-Bathurst). The Thompson and the Beaverbrook groups both have business activities in Canada. Lord Thompson of Fleet and Kenneth R. Thompson, the Chairman of the Board of Thompson Newspapers, Ltd., are directors of Abitibi Paper Company.

Procurement Policies

Because of the existence of these relatively large and powerful publishing groups, the purchase of newsprint appears to

be left entirely to the discretion of the newspapers themselves. Some complications are added, however, by the quota system regulating newsprint imports and by the control exerted by the British government over newsprint prices.

The volume of the quota, which determines how much will be left to the domestic producers, has traditionally involved some bargaining between the Newspaper Publishers Association and the representatives of the newsprint producers (namely Bowater and Reed). In these negotiations the British newsprint producers, by attempting to limit the amount of newsprint that can enter the United Kingdom duty-free, have attempted to protect their market share. The publishers, who were more concerned with cheap supplies, pursued the opposite goal. The fact that the duty-free quota has never constituted a serious factor in controlling the amount of imports seems to indicate that the relative power lies on the side of the publishers.

Additionally, since newsprint prices were government controlled, a second round of negotiations usually dealt with the issue of price increases for the domestic producers. Since newsprint prices appear to be similar for both foreign and domestic suppliers, this mode of government intervention may amount to an effective price control mechanism for the whole industry.

Price Policies

The fact that a common price of newsprint seems to prevail for both the domestic and foreign suppliers has created some difficulties for the domestic suppliers during the last

twenty years. Some problems also appear to have emerged because of the fluctuations affecting the various currencies involved, (the British pound, the Canadian dollar, the Swedish crown, and the Finnish mark), particularly since these currencies fluctuate in relation to different standards.

The Structure of Competition

The United Kingdom market appears to be essentially a "triangle market" involving two domestic producers, the Canadian and the Finnish producers. The two domestic producers (Reed and Bowater) appear to be in a rather difficult situation because of the scarcity of raw materials. They traditionally have had to resort to pulp imports (Bowater in particular has an interest in a Swedish mechanical pulp mill), or to a growing use of recycled fibres (Reed plans to convert one of its two mills to use a furnish consisting of up to 60% recycled fibres, significantly higher than the present 35% level). The paper machines in the four mills appear to be mostly of the 1930 vintage (the largest one, in one of the Bowater's mills, is only 686 cm wide) and as such appear to be in no position to compete with the more modern Scandinavian or Canadian machines. These difficulties, in turn, probably constitute the background of Reed's decision to shut down one of its machines in the summer of 1977.

On the positive side, both Reed and Bowater appear to enjoy some advantage as a result of the inventory policy pursued by the British newspapers. With most printing plants located in central areas, British newspapers carry only very limited inventories. This practice tends to favour domestic producers, who do not require expensive warehousing facilities.

Finally, since Bowater operates two newsprint mills located on the Eastern Canada seaboard, some Canadian newsprint is likely to be sold by Bowater U.K. No information, however, regarding the exact amount involved is available at this time.

Although the United Kingdom as a whole does not represent a very large share of Canadian newsprint shipments, it is likely to be a key market for some eastern mills in Canada. In a study released in 1971, the Quebec Pulp and Paper Producers Association indicated that of a total of 451,000 short tons of Canadian newsprint exported to the United Kingdom market, 239,000 tons originated from Quebec mills. From the list of companies maintaining sales offices in the United Kingdom it appears that CIP, Consolidated Bathurst and Abitibi-Price are likely to be among the main firms involved. The rest of the shipments appear to originate mainly from Bowater and Price in Newfoundland (Price's Grand Falls mill was originally owned by Associated Newspapers).

Traditionally, the Canadian producers have been known to follow cooperative policies, as evidenced by the fact that for a while CIP acted as sales agent on the United Kingdom market for most of the companies. However, some shipments now appear to be related more to the institutional ties existing between U.K. users and producers and Canadian producers than to the success of these policies, which have probably been discontinued. However, the existence of the quota system and the price negotiation mechanisms will likely continue to motivate the Canadian producers to present a relatively "united front" on the United Kingdom market.

The Finnish Producers

Following their exit from the U.S. market, the Finnish producers have seen the U.K. become their chief market in Europe. In 1975, approximately one third of total Finnish newsprint exports went to the U.K.

Since the mid sixties, the Finnish producers have engaged in the production of "non-standard" (i.e. essentially lightweight), newsprint. In several countries their business appears to be associated with specific customers for these lightweight grades. In France, for example, most of their shipments appear to have been delivered to "Le Monde", one of the largest national dailies, which prints on very thin paper. However, given the size of their shipments the Finnish producers likely export a certain amount of standard newsprint. Because of its weight and the relatively high Finnish wood costs, standard newsprint is probably the least competitive grade they can manufacture. If this hypothesis is correct, there may be opportunities for Canadian producers, particularly since the credibility of the threat of retaliation by the Finnish producers on the U.S. market has declined considerably since 1974.

2.3 The Latin American Market

With a consumption of approximately 1 Mt per year, the Latin American market absorbs less than 5% of the world production of newsprint. However, because of Canada's dominant role, it represents a significant outlet to the Canadian newsprint industry, absorbing about 6% of Canada's production.

Table 28
Canada's Position on the Latin American Market
(000 short tons)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Total demand	1139	1097	1134	1038	1036
Domestic Production					
- Argentina	-	-	-	-	11
- Brazil	130	130	120	128	125
- Chile	104	116	131	132	146
- Mexico	<u>54</u>	<u>58</u>	<u>48</u>	<u>51</u>	<u>54</u>
Total	288	304	299	311	336
Non-Latin American Imports	851	793	835	727	700
Canadian Exports	546	539	617	502	509
Canada's Share					
- as a % of total demand	48%	49%	54%	48%	49%
- as a % of non-Latin American imports	64%	68%	74%	69%	73%

Source: CPPA

In recent years, as indicated in Table 28, Canadian producers have supplied approximately 50% of all the newsprint consumed in South and Central America. This relatively high level of market share has been achieved mainly because of:

- the relative stagnation of local production during the last decade (production increased only from 230,000t in 1964 to 336,000t in 1976);
- a relatively high level of market growth during the mid-sixties (the total market has apparently remained virtually stagnant around 1 Mt since 1969);
- the progressive withdrawal of other exporters from the market, particularly after 1968 (as evidenced by the surge in Canadian exports which took place between 1967 and 1969).

Canadian producers now face a variety of competition patterns:

- in the Caribbean and Central American markets, they appear to enjoy a dominance comparable to that which they enjoy on the Northern U.S. markets;
- in Mexico, they still enjoy a dominant position but are more confronted with increasing imports from the U.S. South and recently rising domestic production;
- in Brazil and Argentina, their influence is balanced by that of the Scandinavian producers, particularly the Finns, and by local producers, who appeared for the first time on the Argentinian market in 1974;
- finally, the Andean market appears to be mainly a shared zone of influence between the Chilean and the Canadian producers.

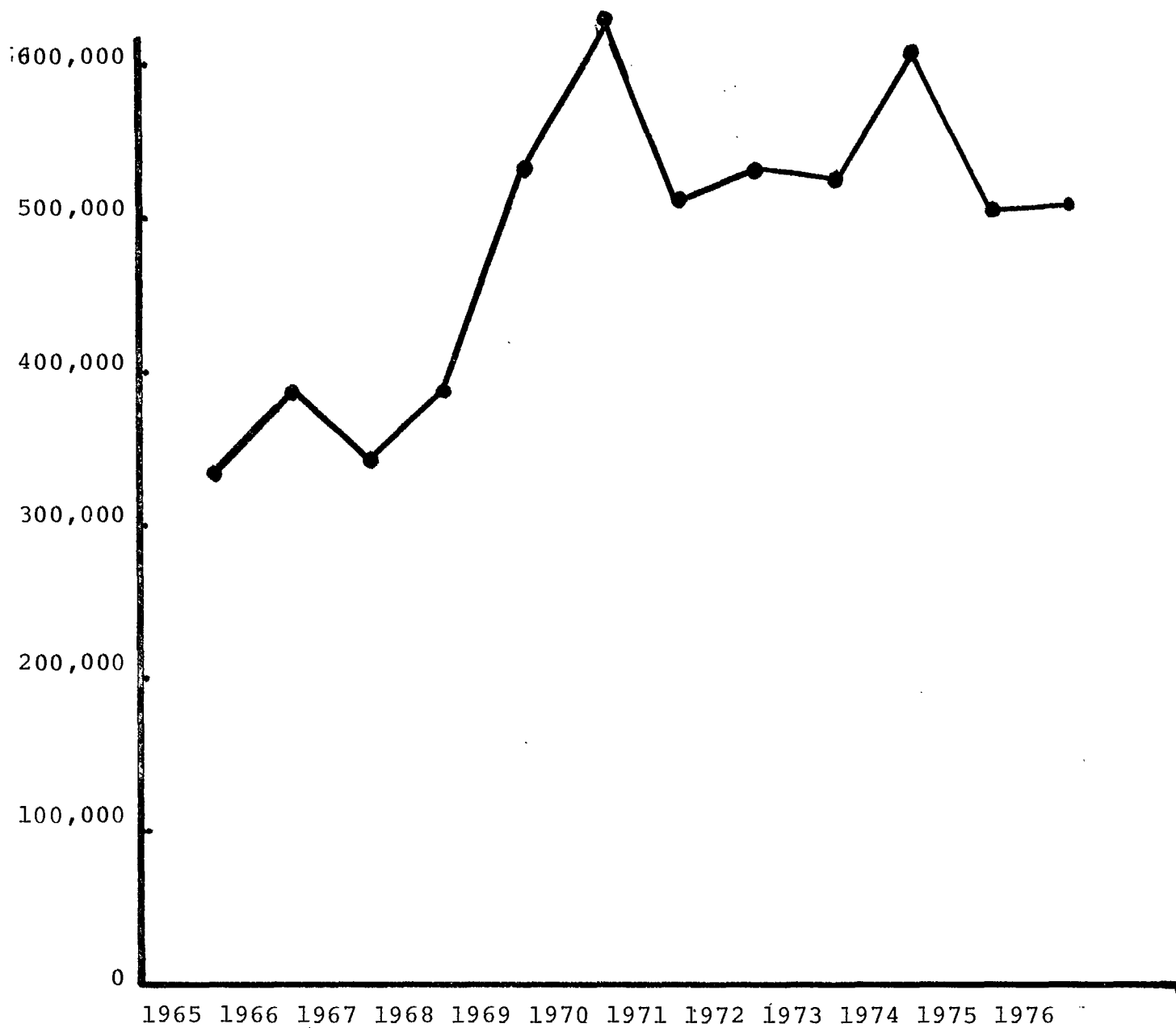
To a large extent, the Canadian producers' position on this market appears to be a defensive one since (1) market

Table 29
Canada's Share of Total Imports
in Key Latin American Markets, 1976
(000 tons)

	<u>Total Imports</u>	<u>Canadian exports to</u>	<u>Canada's share of imports</u>
Mexico	230	153	66%
Brazil	130	84	65%
Venezuela	100	49	49%
Argentina	87	38	44%
Colombia	40	41	100%
Peru	31		0%
Ecuador	24	13	54%
Other countries	<u>168</u>	<u>132</u>	78%
Total Imports	810	509	

Source: CPPA

Figure 4 Canadian Newsprint Exports to the Latin American & Caribbean Markets
(000 short tons)



Source: CPPA

growth appears to have virtually stopped for the last five years, (2) the U.S. producers have comparatively better logistics than the Canadian producers to serve the Central American market, (3) the Scandinavian producers have virtually retreated to a marginal role in the area, and (4) several countries have made announcements of increases in local newsprint capacity.

2.4 The Asian Market

The Asian Market represents about 15% of the world consumption of newsprint (3.3 Mt out of total consumption of about 20 Mt). This figure is slightly misleading since the whole Asian area is heavily influenced by two relatively closed markets. The Chinese market, with a total production of less than 1 million tons, is virtually self sufficient. The Japanese market with overall production of 2.1 million tons, entertains only a very limited, though growing, current of foreign trade (imports of about 92,000t in 1974 and exports of about 107,000t in 1975). The remaining Asian markets (India, South East Asia) are relatively limited (total consumption is only around 600,000t).

On a historical basis the evolution of the Asian market, has been characterized by:

- the rapid growth of Japanese newsprint production which nearly doubled during the 1965-1975 decade (from 1.1 Mt in 1965 to 2.1 Mt in 1975);
- a rapid increase in total imports to Asia during the 1965-1969 period;
- a relative stagnation of total imports in the early seventies, accompanied by a progressive increase in

Japanese shipments to other Asian markets (from 4,000t in 1969 to 112,000t in 1974).

These various developments resulted in a noticeable change in the role of Canadian exports to the area (see Table 30). During the early sixties, Canadian exports grew in importance, largely at the expense of other non-Asian suppliers (probably the Finns). From a 22% market share, measured on the basis of total imports, Canadian exports attained a 60% market share by 1968. These rapid market developments partly account for the significant newsprint capacity expansions that took place in British Columbia during the 1967-1969 period. However, the expectations of B.C. producers were not met as other non-Asian exporters captured the further growth of imports and Canada's exports to Asia stagnated around their 1968 level.

Since 1971, a decline in total imports, accompanied by the progressive development of Japanese exports, has gradually eroded the importance of Canadian exports. This phenomenon was particularly marked in 1975, when Canadian exports dropped to 190,000 tons and Canada's share of total non-Asian imports fell to about 40%. At this point it is difficult to estimate whether this decline was due to temporary circumstances (such as the strikes that affected the industry) or whether it represents a more fundamental change (for instance, the effects of the reduction in capacity that took place on the west coast in 1974).

Ultimately, however, the physionomy of this market appears likely to transform. Evidence of this is provided by the growing importance of Japanese exports (particularly during times of slackening internal demand), and by the development of a joint venture between a Japanese firm and Weyerhaeuser on the west coast, for the manufacture and shipment of newsprint to Japan.

Table 30

Canadian Share of the Asian Import Market
(000t)

	<u>Japanese Newsprint Production</u>	<u>Total Imports to Asia</u>	<u>Japanese Exports (mainly to Asia)</u>	<u>Imports from others (non-Asian)</u>	<u>Canadian Exports to Asia</u>	<u>Canadian Share of non-Asian Imports</u>
1963		296	7	291	66	22.6%
1964	1137	376	5	371	108	29.0
1965	1184	332	7	325	135	41.5
1966	1177	405	26	479	156	32.5
1967	1321	435	7	428	260	60.7
1968	1471	597	6	591	357	60.4
1969	1614	739	4	735	345	46.3
1970	1917	615	32	583	285	48.7
1971	1951	764	36	728	330	45.3
1972	2060	666	51	615	193	31.4
1973	2106	639	44	595	306	51.4
1974	2233	669	112	557	294	52.8
1975	2160	575	107	468	190	40.4

1
69
1

Source: FAO Yearbook of Forest Products CPPA.

2.5 The Western European Market

Historically, Canadian producers have never played a significant role in the Western European market. This market has been predominantly supplied by domestic and Scandinavian suppliers (see Tables 31, 32 and 33).

To a large extent, this fairly homogeneous pattern is relatively difficult to account for, in that:

- during the last twenty years, western Europe significantly increased its newsprint imports, and hence offered a major growth opportunity for the established newsprint producers;
- there does not appear to exist any special form of discrimination against Canadian newsprint, although the EEC quota system imposed upon all outside producers (mainly Finland, Sweden and Canada) tends to protect the EEC's domestic industry;
- Canadian producers enjoy approximately a 30% market share in the United Kingdom, which is an EEC member and whose logistics, in terms of costs, appear fairly similar to those of other European countries;
- the various European countries have organized their newsprint purchases in very different ways, ranging from France's centralized purchasing system to Germany's relatively free market. As a consequence, there is no uniform barrier to entry.

The European market does have some peculiarities. Among these are the greater diversity of base weights, the institutional links connecting Scandinavian and domestic producers, and the low level of inventories traditionally maintained by European publishers. While these appear to have

Table 31
Western European Newsprint Demand
Imports and Canadian Exports, 1976.

	<u>Demand</u>	<u>Total Imports</u>	<u>Canadian Exports</u>	<u>Share of Demand</u>	<u>Share of Imports</u>
	(000 tons)				
<u>EEC Countries</u>					
Ireland	53	53	12	23%	23%
Denmark	161	161	0	0%	0%
Belgium	220	143	8	4%	6%
France	609	348	22	4%	6%
Germany West	1154	699	61	5%	9%
Italy	284	16	0	0%	0%
Netherlands	376	260	16	4%	6%
<u>Non-EEC Countries</u>					
Austria	114	9	0	0%	0%
Greece	35	35	1	3%	3%
Iceland	4	4	0	0%	0%
Malta	1	1	0	0%	0%
Portugal	36	35	6	16%	16%
Spain	194	83	20	10%	24%
Switzerland	175	10	0	0%	0%
Turkey	124	40	0	0%	0%

Source: CPPA

Table 32
Western European Sources of Newsprint
(United Kingdom excluded)

	EEC			Non EEC Countries		
	Canada	Scandinavia	Domestic & Others	Canada	Scandinavia	Domestic & Others
1972	2%	43%	55%	3%	10%	87%
1973	2%	36%	62%	1%	21%	78%
1974	3%	38%	59%	8%	24%	68%
1975	4%	39%	57%	5%	23%	72%
1976	5%	40%	55%	4%	20%	76%

Source: CPPA

Table 33
Canadian Newsprint Shipments to
Western European Countries
Outside the United Kingdom
(000 short tons)

1965	74
1966	98
1967	93
1968	92
1969	123
1970	161
1971	83
1972	81
1973	72
1974	152
1975	144
1976	170

Source: CPPA

added to the difficulties of penetrating the European market, none of these elements in itself would seem compelling enough to account for the extremely low profile of the Canadian producers in this market.

In fact, the real causes appear to have more to do with the past low comparative profitability of shipments to the Western European market and the implicit division of markets which seems to have existed between the Canadian and Scandinavian producers. Import value figures released by the FAO indicate that newsprint C.I.F. prices in the mid-sixties and early seventies were relatively comparable between the U.S. and most European countries (around \$140-150 per ton). Given the higher transportation costs incurred by Canadian producers on shipments to Western Europe in comparison to shipments to the U.S. market, Western Europe is likely to have been a less profitable market than the United States. This interpretation was corroborated by the comments of various industry sources, who indicated that until 1973-1974 shipments to the United Kingdom and Western Europe were not "that profitable".

This relatively stable situation, however, has come under several types of pressure. First, the price relationship prevailing between the U.S. and European markets has changed significantly in favour of the European market, to the point that in 1977 Canadian producers involved on the United Kingdom market probably received \$25 per short ton more than on comparable shipments to the U.S. market. Apparently this distortion arose between 1973 and 1975, as the relatively tense market conditions and general increases in production costs affecting the domestic producers enabled the Scandinavian producers to significantly raise newsprint prices. Second, some countries, which felt they had been "badly served" by the Scandinavian suppliers during the 1973-1974 boom, attempted to

increase their imports from Canadian mills. This is the case in particular of France, which since 1977 appears to have noticeably increased its imports from Canadian sources. Finally, the growing perception of both the cost increases and potential fiber utilization constraints affecting the Scandinavian producers will cause pressures as well.

Given the complexity of these issues, a separate report (Opportunities and Threats for Canadian Forest Products in Europe: An Overview, Newsprint Section) has been devoted to them. The fact that Canadian shipments to Western Europe during 1976 and 1977 have not changed significantly, however, indicates that no major change in the strategy of the Canadian producers has taken place.

2.6 The Australian Market

Despite its relatively small size (around .5 Mt per year), for historical reasons the Australian market has been an area of traditional Canadian influence. The needs of the Australian market have normally been met by: increased Australian production from Tasmania (Tasmania Pulp and Paper), regular shipments from New Zealand, regular Canadian exports, and irregular shipments from other areas (probably essentially from Finland). Given the logistical problems created by the location of the Australian market, Canada's position appears to be principally vulnerable to local capacity increases in New Zealand or Australia.

2.7 The African Market

With consumption of only .33 million tons per year, the whole African market represents less than 1.5% of total

Table 34
The Australian Market
 (000t)

	<u>Australian Production</u>	<u>Australian Imports</u>	<u>New Zealand Exports (mainly to Australia)</u>	<u>Estimated "Net" Imports</u>	<u>Canadian Exports to Oceania</u>	<u>%</u>
1964	94	256	114	142	130	91.5
1965	95	284	111	174	122	70
1966	95	278	112	166	146	88
1967	99	281	109	172	131	76
1968	94	302	120	182	135	74
1969	126	294	120	174	141	81
1970	173	275	119	156	174	111
1971	179	288	127	161	139	86
1972	182	221	131	90	125	143
1973	199	261	123	138	151	109
1974	201	288	103	170	158	93
1975	196	324	121	203	CPPA 99 FAO 150	

Source: FAO Yearbook of Forest Products 1975
 CPPA

world demand. Production (.25 Mt) and consumption are concentrated mainly in Rhodesia and South Africa.

The limited exports that supply the African market come essentially from Scandinavia, with Canada playing mainly the role of a marginal supplier (only 10,000t in 1975) with irregular exports to South Africa and to Egypt.

Table 35
The African Market
(000 short tons)

	<u>Total Imports</u>	<u>Local Production</u>	<u>Can. Exports</u>
1963			
1964	141	45	58
1965	136	59	15
1966	126	87	6
1967	93	91	6
1968	68	145	26
1969	102	168	60
1970	136	171	38
1971	133	178	25
1972	114	177	19
1973	96	231	33
1974	129	214	32
1975	119	224	10

Source: FAO Yearbook of Forest Products, 1975
CPPA

3. The Key Competitors: Canada's Position in
Comparison to its Major Competitors

3.1 The U.S. Newsprint Industry

Historical Development

As shown in Table 36, the U.S. newsprint industry has gone through a four-fold expansion during the last twenty-five years. To a large extent, however, this expansion has been founded on growth of the U.S. South newsprint industry, which has increased nearly ten-fold. In fact, a detailed analysis at the regional level reveals that:

- The Northeastern and Midwestern producers increased their capacity by only 260,000 tons between 1950 and 1975. Since two recycled paper mills were set up in these regions, with a total 1975 capacity of 295,000 tons, it is apparent that the traditional wood based newsprint industry has been virtually stagnant since the end of World War II. This conclusion is confirmed when the evolution of the three main producers is examined (see Table 37).

From 1950 to 1960, the Northeastern newsprint industry expanded, largely in response to the upsurge in demand which followed World War II. The first wave of capacity increase in the U.S. South (1957-1960) stopped this expansion. Within the next five years, the two main producers involved started reducing their newsprint capacities. In the case of Great Northern-Nekoosa, this was accomplished by converting machines to papers other than newsprint. During the mid-sixties and early seventies this trend persisted and additional capacity retrenchments were implemented. Representatives of the Northeastern industry have stated that these retrenchments were made necessary by both the inadequacy of the existing equipment and the rising costs particularly in

Table 36

Evolution of U.S. Newsprint Capacity
(000 t)

	<u>Total Capacity</u>	<u>N. East & Midwest</u>	<u>South</u>	<u>West</u>
1950	992	456	120	316
1955	1,407	706	400	380
1960	2,405	736	1,200	469
1965	2,517	710	1,223	584
1970	3,535	680	1,970	885
1975	3,835	720	2,225	900

Source: CPPA

Table 37

Companies' Newsprint Capacities in the Northeastern
and Midwestern Regions
('000 tons)

	<u>St. Croix Paper</u>	<u>Great Northern- Nekoosa</u>	<u>Manistique Pulp & Paper</u>	<u>Garden State Paper (Recycled)</u>	<u>FSC (Recycled)</u>
1950	81	341	-	-	-
1955	90	450	-	-	-
1960	150	554	32	-	-
1965	160	455	35	60	-
1970	110	400	25	150	85
1975	90	360	55	160	103

Source: ANPA

comparison to costs in the U.S. South. It is interesting to note, however, that one of the two leading firms in the area originally tried to correct these factors by a rather extensive modernization program. Largely because of the disappearance of some of this company's traditional markets, the program has proven inconclusive.

- The Western Region producers tripled their capacity (316,000t in 1950, 900,000t in 1975, see Table 38). Since the end of World War II, the industry's development has been heavily influenced by the west coast publishers. Crown Zellerbach, the only established pulp and paper producer, increased capacity between 1950 and 1965 by 80,000 tons, but progressively reduced capacity between 1965 and 1975. To some extent, their limited expansion in the U.S. was balanced by capacity increases in their Canadian subsidiary, at least until 1970. The overall pattern however, appears to be one of capacity curtailment in the newsprint field.

Nearly all capacity increases during this period were made by publisher-supported ventures (particularly Publishers Paper, who increased capacity by nearly 300,000t). This involvement of the publishers appears related to both the dissatisfactions generated by the Crown Zellerbach-MacMillan Bloedel dominance on the western market and by fears which developed in the late 1940's regarding adequate newsprint supplies. Of particular concern was the likely withdrawal of the Scandinavian producers, who at the time maintained a relatively important trade volume with the west coast. Whatever the balance of causes, this early involvement resulted in an increased reliance on publisher-supported ventures. This trend continued in the early 1970's with the installation of a recycled paper mill in the Los

Table 38

Companies' Newsprint Capacities in the Western Region
(000 tons)

	<u>Boise Cascade (Tacoma)</u>	<u>Inland Empire Paper (Millwood)</u>	<u>Crown Zellerbach</u>	<u>Publishers Paper</u>	<u>Garden State Paper</u>
1950	22	20	173	75	-
1955	60	20	210	90	-
1960	68	23	253	125	-
1965	70	24	254	160	-
1970	126	22	216	338	82
1975	127	22	209	360	105

Source: ANPA

Angeles area. The Garden State Company which set up this mill is a subsidiary of Media General, a medium sized publishing concern.

- The Southern producers, as already mentioned, accounted for about two-thirds of total U.S. growth in newsprint capacity. Most of this capacity increase took place in two successive waves (see Table 39).

Between 1957 and 1960 about one million tons of capacity was added, largely in response to the mixture of pressures and enticements initiated by the southern publishers. These publishers had grown increasingly restless about their dependency on Canadian newsprint sources. This first wave saw the development of two directly-publisher-supported ventures (Coosa Pine and Southland) as well as the establishment in the South of two traditional newsprint producers (Bowater and International Paper).

Another million tons of capacity was added between 1965 and 1970. The driving forces in this case, however, were rather different: the South had progressively emerged as the U.S.'s leading market and as the optimal location for newsprint production in North America. Capacity increases during this period came from expansions made by the established producers (with the exception of International Paper) and from the installation of new mills by "newcomers", including two traditional Canadian producers (Price and Abitibi).

The Industry's Structure

The firms in the U.S. newsprint industry (see Table 40) can be grouped into three general categories: the large,

Table 39

Companies' Newsprint Capacities in the Southern Region
(000 tons)

	Boise Cascade <u>- Price</u>	<u>Bowater</u>	<u>Abitibi</u>	Kimberly <u>- Clark</u>	Southwest Forest <u>Industries</u>	International <u>Paper</u>	<u>Southland</u>
1950	-	-	-	-	-	-	120
1955	-	140	-	130	-	-	130
1960	-	400	-	270	-	240	290
1965	-	415	-	270	75	273	265
1970	61	665	155	440	85	258	485
1975	162	700	153	420	85	252	592

Source: ANPA

U.S. Newsprint Capacity, by Firm, 1975

<u>Northeast</u>	<u>Newsprint Capacity</u>
St. Croix Paper Co., Woodland, Maine (Georgia-Pacific)	90,000 t
Great Northern-Nekoosa, Millinocket, Maine	360,000 t
Garden State Paper Co., Garfield, New Jersey	<u>195,000 t</u>
	645,000 t
<u>Midwest</u>	
Manistique Pulp and Paper, Michigan	55,000 t
FSC Paper Corporation, Alsip, Illinois	<u>100,000 t</u>
	155,000 t
<u>West</u>	
Boise Cascade, West Tacoma, Washington	127,000 t
Inland Empire Paper, Millwood, Washington	22,100 t
Crown Zellerbach, Wauna, Oregon	128,500 t
Crown Zellerbach, West Linn, Oregon	5,000 t
Publishers Paper, Oregon City, Oregon	200,000 t
Publishers Paper, Newberg, Oregon	160,000 t
Garden State Paper, Pomona, California	<u>105,000 t</u>
	823,000 t
<u>South</u>	
Boise Cascade-Price Southern, De Ridder, Louisiana	161,500 t
Bowater Southern, Calhoun, Tennessee	500,000 t
Bowater, Catawba, South Carolina	200,000 t
Abitibi Southern, Augusta, Georgia	153,000 t
Kimberly-Clark, Coosa Pines, Alabama	420,000 t
Southwest Forest Industries, Snowflake, Arizona	85,000 t
International Paper, Mobile, Alabama	129,000 t
International Paper, Pine Buff, Arkansas	123,000 t
Southland Paper Mills, Lutkin, Texas	276,000 t
Southland Paper Mills, Houston, Texas	<u>316,000 t</u>
	2,263,500 t
Total U.S. Capacity	3,887,300 t

Source: ANPA

broad-product-line paper companies, the newsprint-oriented paper companies, and the publisher-sponsored newsprint ventures.

Large, broad-product-line paper companies are companies like International Paper, Crown Zellerbach, Kimberly-Clark and Boise Cascade. Historically, for Crown Zellerbach and International Paper, newsprint appears to have been the key strategic product. In fact International Paper was formed in the late 1800's as a newsprint producers' trust. Since the 1960's both companies appear to have placed limits on their newsprint operations in the United States, as evidenced by the stagnation of their respective production capacities.

Kimberly-Clark and Boise Cascade, on the other hand, were never committed to newsprint to the same extent. Before the development of the Coosa Pine mill, Kimberly-Clark's only newsprint involvement was in the Spruce Falls mill, a joint venture with the New York Times and the Washington News. Its initial involvement in the Coosa Pine mill, through a management contract, was only because of the company's doubt about the soundness of the venture. Only years later did the company acquire full ownership of the mill. While expansion is under consideration, any definitive decision would require both better prices and a significant commitment from the publishers.

Boise Cascade entered the newsprint field in the mid-sixties through acquisitions in Canada (Ontario-Minnesota) and the U.S. West (Steilacoom which appears to supply the Wall Street Journal Western Edition). The company later joined Price in a joint venture in Louisiana. The company's interest, however, in that case appeared to have been much more the

linerboard mill adjoining the newsprint mill than the interest it retained in the newsprint mill.

These elements pinpoint the same factor - the relatively limited attractiveness of newsprint for these companies in comparison to alternative fiber utilizations. These attitudes are largely sustained by three main factors: the relatively low growth of the newsprint market, the absence of forward integration possibilities, and the relative power of the buyers in this market (in terms of size and political clout).

Newsprint-oriented paper companies are ones such as Price, Bowater, Abitibi and, to a lesser extent, Great Northern-Nekoosa. These companies have followed the economics of the newsprint business by progressively expanding their production to the U.S. South. They have made major organizational commitments to the newsprint business from which they derive most of their income.

Great Northern-Nekoosa falls between this category and the preceding one, in that the company is the result of mergers between three existing firms, each specialized in one particular line of business (newsprint, linerboard and fine paper). Great Northern, the original newsprint producer, originally envisioned the acquisition of Great Southern (the linerboard component) as a way for them to extend their newsprint facilities in the U.S. South. However, the dynamics of the two markets at the time of the decision (around the mid-sixties) pushed the company to expand its linerboard production and since that date it does not appear to have shown much predisposition towards increasing its exposure in the newsprint business.

Publisher-sponsored newsprint ventures, such as Southland Paper Mills, Publishers Paper, Inland Paper and Garden State Paper, tend to concentrate on newsprint as a dominant product, even when economic circumstances provide an incentive to expand in other forest products. A large portion of their production is supplied to their supporting publishers. Because of the savings that can be generated through integration (smoother product flow, reduced business cycle exposure) and their favourable locations (particularly for Southland) these companies have tended to be reasonably profitable. In addition they have, to some extent, exerted a depressing effect on the newsprint market by:

- delaying their price increases (Southland posts average prices per ton significantly below the industry's "list price"), presumably under the influence of their stockholders; and by
- delaying cost-saving improvements introduced by the Canadian industry; Southland Paper converted to 30 lbs. paper two years after the rest of the industry.

Finally, it should be noted that since the acquisition of Southland's remaining shares by St. Regis in 1977, St. Regis-Southland has now entered the "large, broad-product-line paper company category".

Two companies which present somewhat different features are:

1. Garden State Paper (a Media General Subsidiary), which operates recycled paper mills around three major urban areas. Because of the countercyclical nature of the waste paper market, GSP appears to be doing remarkably well in "depressed markets", even if its profits tend to

shrink significantly in "boom markets". Additionally, its technology enables the company to minimize its energy (since waste paper is already processed fiber) and transportation costs (by being located close to major consumption centers).

2. Southwest Forest Industries, closely linked to the Hearst Publishing group, is only partly dependent on newsprint. This limited dependency is largely attributable to the pulping technology used to produce newsprint in the U.S. South. Since economies of scale are extremely important in the kraft pulp field (the scale of an optimal mill being between 750 and 1,000 tons per day), most newsprint producers, for whom kraft pulp constitutes only 25% of their total pulp needs, find themselves confronted with a balancing problem. Some (like Abitibi Southern) have resolved this problem by buying their pulp on the outside. Others, like Southland, have disposed of their excess kraft by signing a sales agreement with established producers (in this case St. Regis). Southwest Forest Industries, which is a relatively small company, has tried to manage the two products concurrently and as a result has acquired a somewhat different physiomy.

Altogether, the strategic interests of the various groups comprising the U.S. industry appear to be quite different. The established paper companies like International Paper, Crown Zellerbach, Kimberly-Clark and Great Northern are probably less interested in expanding their activities than in securing comparatively high returns on their existing investments. The newsprint oriented producers, on the other hand, are probably more interested in capacity increases, inasmuch as these are

likely to constitute the main sources of corporate growth available to these companies. Finally, the strategic interest of the publisher-controlled producers appears to reside less in the profits accruing from the newsprint business (which by all accounts are significantly below those that are generated in the publishing business) and more to the strategic value of these investments in terms of security and stability of supplies. As a result of these differences in strategic interests, future capacity investment decisions are likely to be approached in different ways by the various companies involved.

Finally it should be noted that, with the exception of the publisher-sponsored ventures and of Boise Cascade, no company has really entered the industry since the end of World War II. While this bespeaks the maturity of the newsprint business, this situation also hints at some of the dilemmas faced by a potential new entrant. Among these are the need to achieve a sufficient bunching of orders, the structure of the newsprint contracts, and the reputation of the customers.

3.2 The Canadian Newsprint Industry

As shown in Table 41, the Canadian newsprint industry has experienced a slightly different growth pattern than its U.S. counterpart, largely because of its already established position at the end of World War II. Capacity increases have matched the upsurges noted in the evolution of the U.S. newsprint capacity (mainly in the late 50's and the late 60's). Unlike the U.S. industry, however, the Canadian newsprint industry, particularly since 1974, seems to be experiencing its first "capacity" plateau since the end of World War II.

Table 41

Evolution of Canadian Newsprint Capacity (1950-1975)
(000 tons)

	<u>Total Capacity</u>	<u>Quebec</u>	<u>Ontario & Manitoba</u>	<u>Atlantic</u>	<u>B.C.</u>
1950	5227	2723	1308	813	383
1955	6064	3113	1481	898	562
1960	7611	3557	2065	992	996
1965	8500	3844	2134	1170	1352
1970	9845	4560	2310	1597	1572
1975	9827*	4553	2170	1550	1540
Rate of Change 1950-1975	+87%	+67%	+67%	+90%	+305%

* 30 lbs. basis

Source: CPPA, Newsprint data 1976
1965, 1955

Historical Development

As in the case of the U.S. industry, the Canadian newsprint industry presents differentiated regional growth patterns. These reflect the dynamics of the various producing regions and their access to specific markets.

Quebec remains Canada's largest newsprint producer, even though its proportion of total Canadian capacity has declined since 1950 (down from 50% to 43%). Over time capacity increases in Quebec appear to have gone through three main phases: continuous growth between 1950 and 1965 with capacity annual additions of about 100,000 tons; a rapid capacity upsurge between 1965 and 1970, with a total capacity addition of more than 700,000 tons; and a relative stagnation since 1970.

At the level of the companies involved (see Table 42), these capacity changes appear to reflect quite different approaches:

- Canadian International Paper achieved these capacity additions by machine speed-ups and, in the late sixties, by the replacement of several old machines by a large and highly efficient one in its Gatineau mill.
- Consolidated-Bathurst achieved these increases mostly by speed-ups and the addition or the rebuilding of a few high-speed medium-sized machines in the late sixties (Grand'Mere in 1966 and Shawinigan in 1973).
- Quebec North Shore added new machines in 1964 and 1971 to its Baie Comeau mill, (which, in spite of its pre-World War II design, is Quebec's second most recent mill).

Table 42

Newsprint Capacities of Companies in Quebec
(000 tons)

	<u>Canadian International Paper</u>	<u>Consolidated Bathurst</u>	<u>Domtar</u>	<u>Ontario Paper Baie Comeau</u>	<u>Price</u>	<u>Kruger (Bromptonville Trois Rivieres)</u>	<u>Others</u>
1950	595	685	203	150	399	193	498
1955	595	765	266	160	460	215	652
1960	657	857	336	177	507	357	666
1965	702	876	336	275	594	320	783
1970	831	975	376	365	770	314	929
1975	848	1001	327	479	758	429	865

Note - Mills have been regrouped according to their present corporate affiliation.

Source: Pulp and Paper Directory, 1976. ANPA

- Price doubled its capacity over the period by converting its Chandler sulfite mill to newsprint in the mid-sixties, fitting it with medium-sized relatively high-speed machines, and by installing a large efficient machine in its Alma mill in 1967.
- Donohue expanded its capacity by adding new machines in 1958 and 1968 to its Clermont mill.
- Domtar, in contrast to other producers, has limited its capacity expansion and even divested itself of one of its newsprint mills (Three Rivers, which was sold to Kruger). This policy appears to be related to the fact that Domtar is a late entrant to the industry, is one of the few companies with significant business involvements outside of the pulp and paper industry, and has a clear leadership position in paper grades other than newsprint.

Most capacity expansions in Quebec appear to have been secured through machine speed-ups and some machine replacements or additions. Thus the pulping facilities of the mills (at least until the introduction of TMP by a few mills in the early 1970's) have been little affected by these successive transformations and have tended to perpetuate the original pulping processes in use at the time of the mill start-ups.

The Ontario and Manitoba newsprint industries present rather striking similarities with that of the Province of Quebec. From an infrastructure dating back to the early or mid-twenties, the industry evolved through a series of small expansions. In contrast to the Quebec case, the main phase of capacity expansion materialized much earlier, between 1955 and 1960, and the total capacity of the industry virtually stabilized after that period (only 15% incremental capacity was added

Table 43

Newsprint Capacities of Companies in Ontario and Manitoba
(000 tons)

	<u>Abitibi</u>	<u>Great Lakes</u>	<u>Spruce Falls</u>	<u>Ontario- Minnesota</u>	<u>Ontario Paper (Thorold)</u>
1950	571	150	207	150	175
1955	637	156	230	172	189
1960	847	359	277	293	211
1965	826	368	309	291	211
1970	872	442	342	319	218
1975	920	413	356	257	245

Source: Pulp and Paper Directory, 1976. ANPA.

between 1960 and 1975, see Table 43). This earlier maturation appears related to the continental character of the Ontario industry and to the early maturing of its natural U.S. markets.

In analyzing the main firms involved, some key differences emerge:

- Abitibi increased its capacity primarily between 1950 and 1960, essentially by speeding up or rebuilding its machines, with practically no machine replacements or additions. During the last few years the company has converted one of its mills to less bulky products, which can be better accommodated by its equipment. To a large extent, these developments appear to result from Abitibi's decision in the early 1960's to de-emphasize and consequently to limit its investments in the newsprint business (Abitibi's most recent machine at Fort William appears to date back to 1958);
- Ontario-Minnesota appears to have followed a path similar to Abitibi's, and to have increased its capacity through machine speed-ups and by the addition of a new machine in the late 1950's. Ontario-Minnesota's decision to devote the output of its Fort Frances mill to groundwood papers seems to have resulted from the same causes that led Abitibi to convert its Sault Ste Marie facility;
- Spruce Falls and Great Lakes have secured their capacity increases by the addition of efficient high speed machines (Great Lakes has two machines about 300 inches wide, which were installed between 1955 and 1958, while Spruce Falls installed a high speed machine in 1967);

- Ontario Paper relied upon speed-ups to extend its capacity in Thorold, while enhancing the continuing viability of the mill by developing an integrated chemical business.

This particular development of the Ontario industry appears to have promoted an increased reliance on products other than newsprint, with the conversion of two mills to specialty groundwoods and the development of three kraft pulp mills in the area (Thunder Bay, Terrace Bay and Fort Frances).

In terms of overall capacity developments, the Atlantic Provinces have had a history similar to that of the rest of Canada (total increase 90% versus 87% for Canada as a whole since 1950). Some important differences, however, emerge when the pattern of growth is analyzed on a firm by firm basis (see Table 44).

- Both the MacMillan Rothesay mill and the Nova Scotia Forest Products mill are technologically recent mills which came in production after 1965. Each of them was apparently set up with different goals in mind. While the Rothesay mill attempted to capitalize upon the European market (as evidenced by the early connection with Feldmühle), the Nova Scotia mill was more the result of an attempt by the parent company to exit from the sulphite pulp market.
- Bowater appears to have secured capacity additions from its Mersey and Cornerbrook mills through successive adjustments. The long term viability of the Cornerbrook mill appears to be of growing concern to the company.
- Price increased the capacity of its Grand Falls mill by marginal adjustments and, in the late sixties and early seventies, by the addition of a large new high-speed machine and the complete replacement of the groundwood pulping facilities.

Table 44

Newsprint Capacities of Companies in the Atlantic Provinces
(000 tons)

	<u>Nova Scotia Forest Products</u>	<u>Bowater (Cornerbrook and Liverpool)</u>	<u>New Brunswick International Paper (CIP)</u>	<u>MacMillan Rothesay</u>	<u>Price Newfoundland</u>
1950	-	425	226	-	208
1955	-	440	248	-	230
1960	-	468	281	-	241
1965	-	475	304	109	272
1970	-	573	279	183	296
1975	156	553	282	304	281

Note: Mills have been regrouped according to their present corporate affiliation.

Source: Pulp and Paper directory, 1976. ANPA.

- CIP increased the capacity of its Dalhousie mill by machine speed-ups.

In comparison with the rest of Canada, British Columbia is the province where the expansion of newsprint capacity has been the strongest since 1950 (see Table 45). Some of the reasons which explain this rapid growth include:

- the vitality of British Columbia's prime market, the U.S. west coast;
- the apparent cost advantage historically enjoyed by the British Columbia producers over their U.S. counterparts, as evidenced by Crown Zellerbach's strategy of limiting its newsprint expansion in the U.S. in favour of its B.C. mills; and
- the easy access of British Columbia producers to the rapidly growing Asian market in the late sixties and to other overseas markets.

MacMillan Bloedel was the prime beneficiary of these favourable circumstances, and within twenty-five years it increased its newsprint production by more than 600,000 tons. After expanding its Powell River mill to 570,000 tons (the largest newsprint mill in North America), the company set up a new mill in Port Alberni in the late 1950's. In a similar fashion, Crown Zellerbach expanded its Ocean Falls mill and then initiated the Elk Falls mill in the early fifties. This expansion was continued by the entrance of BCFP into the newsprint field in the mid-sixties.

However, some limits soon started to appear. The U.S. west coast market growth began to slacken. U.S. Northwest integrated producers (Publishers Paper, Boise Cascade Steilcoom) sharply increased their capacities. The Asian market began to contract.

Table 45

Newsprint Capacities of Companies in British Columbia
(000 tons)

	<u>Crown Zellerbach</u>	<u>MacMillan Bloedel (BC Operations Only)</u>	<u>British Columbia Forest Products</u>	<u>Ocean Falls (ex Crown Zellerbach)</u>
1950	86	290	-	-
1955	188	395	-	-
1960	265	731	-	-
1965	329	906	107	-
1970	348	982	225	-
1975	250	971	268	100

Source: Pulp and Paper Directory, 1976. ANPA.

Following these developments, attempts to cut back capacity were implemented. Crown Zellerbach tried to close its oldest mill, at Ocean Falls. Because of local pressures, however, this attempt did not succeed and the mill was taken over by the B.C. government. MacMillan Bloedel modernized, and proceeded to retire some of its oldest machines at Powell River (resulting in a 55,000t capacity decrease).

The Industry Structure

As shown in Table 46, the Canadian newsprint industry consists of eighteen major firms. These eighteen producers have different orientations, which can be grouped into the following classifications:

Exclusive or nearly exclusive newsprint producers account for 25% of Canadian newsprint capacity. Presently seven companies appear to belong to this category (Bowater, Kruger, Ontario Paper, Spruce Falls, Donohue, F. Soucy and Ocean Falls). Six have ownership or other financial links with U.S. publishers:

- Kruger (Gannett)
- Spruce Falls (The New York Times)
- Donohue (Gannett, The New York Times, Rochester Tribune)
- Ontario Paper (Chicago Tribune and New York Daily News)
- Soucy (The Wall Street Journal)
- Bowater Mersey (The Washington Post)

Table 46

Canadian Newsprint Capacity by Firm, 1976

(short tons)

Abitibi-Price	2,081,390	
MacMillan Bloedel	1,293,660	(Spanish Group, Rothesay mill)
Canadian International Paper	1,156,340	
Consolidated-Bathurst	1,023,550	(Associated Newspapers UK)
Ontario Paper	714,140	(Chicago Tribune)
Bowater Canadian Ltd.	556,735	
Kruger Pulp and Paper	445,470	(Gannett)
Great Lakes Paper	414,900	
Spruce Falls Power & Paper	347,400	(New York Times)
Dontar Newsprint	322,390	
British Columbia Forest Products	273,665	
Ontario Minnesota	258,120	
Crown Zellerbach Canada	256,800	
Donohue Company Ltd.	252,240	(New York Times, Gannett)
Nova Scotia Forest Industries	159,055	
James Maclaren Ltd.	152,700	
F. Soucy Inc.	102,800	(Wall Street Journal)
Ocean Falls Corp.	97,900	
Beaver Wood Fiber	36,415	
St. Raymond Paper	14,340	

Source: CPPA

This group of producers is characterized by their commitment to newsprint, publishers integration, and operations concentrated in one or two mills. Relatively small mills tend to lack the scale required to match the buyer concentration and power in the industry. The development of integration links appears to have been one solution to this imbalance problem.

The existence of a privileged-customer stockholder is likely to exert a strong influence on the company's strategic orientation, since such a stockholder has a vested interest in the company's newsprint orientation. As a consequence, for these mills diversification into other grades is less common. Some other companies (like Price through Gaspesia Pulp and Paper, and Donohue through Malbaie and Charlevoix Papers) have created corporate entities distinct from the parent company to avoid the problems associated with such a relationship.

The tightness of the relationship with the publishers appears to vary. While Ontario Paper, Bowater Mersey, Gaspesia Paper, and Donohue appear to devote more than 50% of their output to their sponsoring publishers, Soucy, Kruger, and Spruce Falls limit these shipments to about 20% to 40% of their total output. It should also be noted that since 1970 at least two "integrated producers" (Spruce Falls and Ontario Paper) have sought increased open market exposure.

While both Ocean Falls and Kruger operate mills formerly run by other firms (Crown Zellerbach and Domtar respectively), these companies provide an interesting contrast. Ocean Falls, which the B.C. government took over for social reasons, has remained a relatively marginal mill with a rather

poor performance record. Three Rivers, which was taken over by Kruger with the support of a publisher, has apparently been able to return to some level of profitability. At this point, it is difficult to draw any reliable conclusion regarding the effectiveness of the two approaches. However, at a time when several mills are reported to be economically threatened, these two approaches seem to provide an interesting area for investigation.

The category of producers for whom newsprint is a major product line groups companies for which newsprint represents between 30% and 60% of total sales. Included in this group are: the Abitibi-Price Group, Canadian International Paper, Ontario-Minnesota, Great Lakes Paper, Nova Scotia Forest Industries, James Maclaren Co. and Consolidated-Bathurst. From an historical perspective, these companies (with the exception of NSFI) appear to be in the process of moving away from the preceding category, i.e. in the process of trying to reduce their dependency upon newsprint. This is hardly surprising given both the maturity of the newsprint market and the relatively stronger development of other product grades since the end of World War II. Although by its profile (newsprint and pulp) NSFI can be related to this group, its present posture largely derives from other circumstances, namely that it had to reduce its involvement in sulphite pulp and chose newsprint as a convenient product into which to diversify.

Several patterns of diversification have begun to emerge for this group of companies. Some companies (Great Lakes, Maclaren Pulp) have chosen to concentrate on bleached kraft pulp for which eastern spruce has some quality advantages. Others have concentrated their primary efforts on other grades (even if at one time or another they have invested or have considered investing in market pulp). Abitibi slightly expanded

its printing and fine papers operations in Canada in the 1960's, but eventually concentrated its most strategic resources on its building board and lumber businesses. Ontario-Minnesota progressively converted its Fort Frances operations from newsprint to groundwood papers and finally phased out newsprint production at Fort Frances in the early seventies.

Consolidated Bathurst bought St. Regis packaging operations in Canada in the early 1960's and later acquired Bathurst Paper, which was primarily oriented toward the "brown" paper business. In the late 1960's the company attempted to forward integrate into converting operations in Germany (apparently with the expectation of supplying its German affiliate with the paperboard from a British Columbia linerboard mill which never materialized). The company also invested in other branches of the packaging business (glass containers, plastics). Canadian International Paper chose a fairly similar route by investing in the La Tuque linerboard mill and by developing its rotogravure newsprint business. Because of the benefits that could be derived from better fibre utilization, many companies entered the sawmilling and lumber business, with relatively meager success altogether.

The decade of the 1960's can be considered the "diversification era" for most of the large Canadian newsprint producers. The timing was appropriate: the first developments of capacity in the South had just started to challenge Canada's dominance on the U.S. market and the companies were still relatively cash rich. This diversification process, however, was constrained by several factors. The relative smallness and dispersion of the Canadian market limited the scope of most projects. The

protected nature of the Canadian market for most paper grades did little to encourage efficiency. Tariff restrictions protecting the U.S. market for most of the other paper and paperboard grades (with the exception of pulp and newsprint), the lack of international competitiveness of most of the packaging paper grades produced in Eastern Canada, as well as a certain conservatism in searching for new products and markets (as was done by the Finnish newsprint industry, for example) introduced some strain to the diversification process.

As a result, companies (even though they attempted to define some priorities) tended to end up in similar product market segments, such as containerboard and various paperboard grades. This process, which did not result in a restructuring of these "invaded" market segments, made further diversification more difficult and limited the ability of most companies to evolve a distinctive competence in any of these new fields.

There are five Canadian producers only marginally involved in newsprint. Their situation appears to be far from homogeneous:

- Two of the B.C. companies never really had newsprint as their main business: MacMillan Bloedel was a solid wood product company which because of fiber "push" went into paper production, and BCFP is a comparatively late entrant into the newsprint field (from a solid wood products and pulp base). In the third B.C. company in this group, Crown Zellerbach Canada, newsprint was once a significant portion of

operations. However, the company has progressively reduced the importance of its newsprint involvement by acquiring sawmills, extending its kraft paper production, integrating into conversion operations and finally divesting itself of its Ocean Falls mill.

- The position of Reed Paper, which operates a single newsprint mill in Quebec City, appears to be related mainly to the company's historical European newsprint and newspaper ties. The Quebec mill has not been heavily involved in overseas newsprint shipments during recent years, however, and has progressively developed a specific orientation of its own (mainly concentrating on the least price-sensitive segment of the newsprint market).
- Domtar, which operates three newsprint mills in Quebec and Ontario, did not grow out of the paper industry. It entered the industry in the early sixties through two acquisitions (Howard Smith Paper Mills and St. Lawrence Corp.). Since then the company has been progressively de-emphasizing its newsprint operations (477,081 tons of production in 1960 versus only 234,104 tons in 1975) in favour of its fine paper, (up from 116,156t to 350,985t between 1960 and 1976) packaging, market pulp and construction material businesses.

3.3 The Swedish Producers Historical Development

While the Swedish newsprint industry did exist before the Second World War, (in the immediate prewar years it

contributed an average 200,000T to the worldwide export market), most of its development took place during the late fifties and sixties.

Between 1955 and 1960, Swedish newsprint production increased by approximately 90%, while exports doubled (to 400,000T). Rising demand from the German market appears to have been the main force behind this development. Between 1955 and 1960, German newsprint imports grew by about 200,000 metric tons. Some opportunities also developed on the United Kingdom market. Because of its proximity, however, (particularly as far as the more import-dependent northern German market is concerned), Germany is likely to have been the main centre of attraction for the Swedish producers.

The 1960-65 period saw more modest developments, and a certain slowing down in the rate of capacity increases. Total capacity increased only by 150,000 tons during this period. Again, the rapid growth of the German market (whose imports increased by 300,000T) was an important factor. However, for the first time, the Swedish producers started penetrating other European markets: their share of the Belgian, Dutch and French markets increased noticeably.

This period of relative consolidation was followed by a period of rapid capacity expansion. Between 1966 and 1976, total capacity more than doubled (from around 800,000t to 1,700,000t) and in 1975 for the first time, the Swedish producers' total capacity surpassed that of the Finnish producers. This rapid growth was accomplished by several developments. During those ten years, the Swedish producers managed to:

- maintain and then increase their share of the German market in the face of a rapid growth in domestic German capacity (this achievement was probably supported by the associations developed between Feldmühle and Hylte Bruk);
- double their share (from 4 to 9%) of the large United Kingdom market;
- significantly increase their share of three of the largest secondary markets (France, Belgium and the Netherlands).

While this rapid growth resulted in some temporary deterioration of the Swedish industry's operating rates, (particularly in 1968-69 and in 1971-72) by 1973-74 the industry was operating at close to full capacity.

The Market Posture of the Swedish Producers

Swedish newsprint exports are relatively well balanced, with no single market representing more than 27% of total exports (see Table 47). With the exception of the markets in the United Kingdom and France, Swedish producers have concentrated on the "healthier" markets. It is difficult to assess how much this situation is due to careful planning rather than to the relatively late development of the industry (hence linking its development to the progress of the less mature markets).

While there is some resemblance between the Swedish and Finnish producers' market postures, in that each seems to have obtained particular spheres of influence (the United Kingdom for Finland, Germany and the Benelux countries for Sweden), it is uncertain whether or not this division of influence results from any explicit agreement between the two groups of producers.

Table 47
Swedish Newsprint Exports, 1975
(metric tons)

Germany	254,000	27.5%
United Kingdom	159,000	17.2%
Netherlands	119,000	13.0%
France	86,000	9.0%
Denmark	49,000	5.0%
Belgium	40,000	4.0%
Spain	30,000	3.0%
Other countries	<u>184,000</u>	<u>21.0%</u>
Total Exports	921,000	100%

Source: FAO

The Industry's Structure

The Swedish newsprint industry is composed of only four firms: SCA, Homen, Stora Kopparberg and Hylte Bruk. Moreover, since Stora Kopparberg owns part of Hylte Bruk, the level of concentration in the industry is even higher. The positions of the various firms appear to differ significantly.

- Holmen (total sales (\$282 million, 1975) is both the leading producer, (the capacity of its two mills represent approximately 45% of the total industry's capacity), and the most "newsprint dependent", (newsprint and printing paper sales constituted over 90% of the company turnover in 1975). During the last three years the company has invested heavily in newsprint by installing a thermo-mechanical pulping (TMP) facility in its Hallstavik mill, and by establishing a second newsprint mill relying entirely upon TMP (Braviken, which started production in the last months of 1977).

Holmen appears to control a disproportionate share of the Swedish domestic market, which absorbs about one third of its total sales. Otherwise the distribution of its sales appears to be similar to that of the industry as a whole. Statements made at the inauguration of the Braviken mill indicate that the company expects the Asian and African markets to absorb some of the company's increased capacity.

- Stora Kopparberg (total sales \$785 million, 1975) is much less dependent on newsprint. Forest products total less than 50% of its total sales and newsprint represents approximately 50% of its total forest product sales. Its Kvarnsveden mill, which relies partly on waste paper, does not appear to be as recent as those of Holmen or SCA, inasmuch as its machine sizes appear relatively smaller than those of the other Swedish producers.

Stora Kopparberg, through its ownership of Nova Scotia Forest Industries, is also involved in the manufacture of newsprint in Canada. However, it does not seem that the company has ever used its Canadian mill to supply any of its existing European markets.

- SCA (total sales \$830 million), appears to be in a position similar to Stora Kopparberg's, since, as a whole, its newsprint and printing paper operations account for less than 25% of its total forest product sales. SCA's Ortviken facilities appear to be relatively modern (thermo-mechanical pulping and at least one machine above 300"). In its last annual report the company commented that "roughly 80% of mill's production capacity could be utilized" but that "profit was satisfactory".

- Hylte Bruk, is a new mill with a rather complex ownership pattern, (see Figure 5), involving both Swedish and European producers. Its performance, however, is unknown.

In contrast to the Finnish firms, the four Swedish newsprint producers have their own sales organizations. The four of them, however, appear to cooperate through Scannevs, which also provides a link with the other Scandinavian producers.

3.4 The Finnish Producers

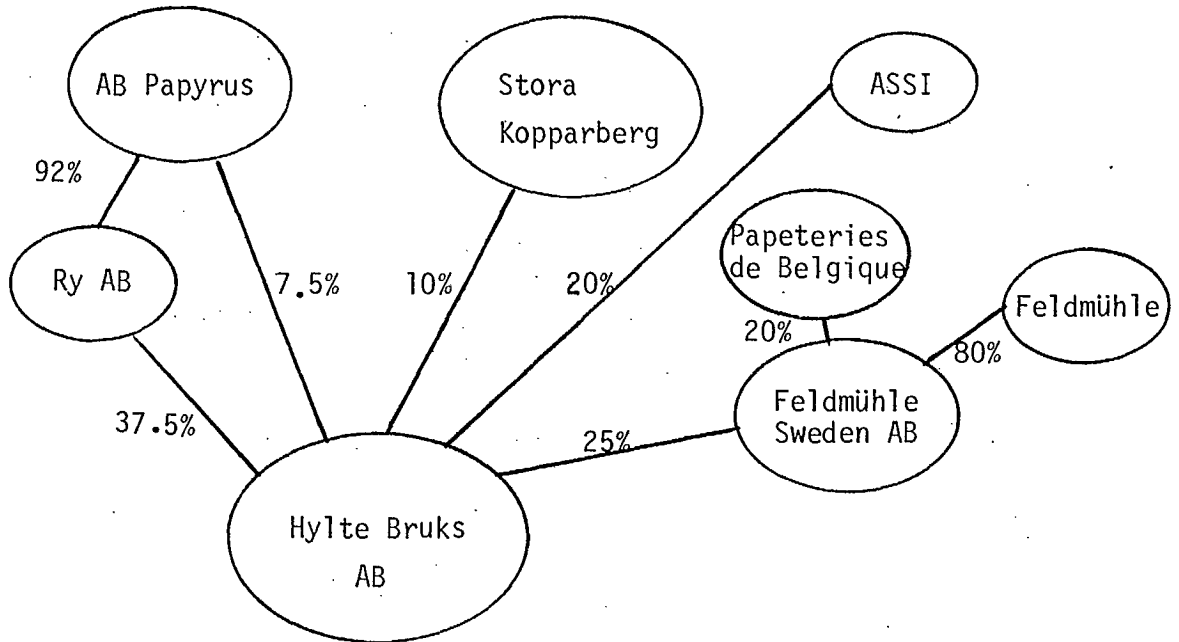
Historical Development

The development of the Finnish newsprint industry largely predates World War II. With a total capacity of 611,000 tons in the late 1930's, Finland was already the fourth largest newsprint producer in the world (after Canada, the United States and Britain). Because of the small size of its domestic market, the Finnish industry supported its development through export sales, mainly to the United States, (which until the early 1970's was Finland's main market), Latin America, and the United Kingdom. World War II temporarily cut Finland off from these markets, and left the country in a difficult situation. The demand for foreign exchange, created by Finland's obligation to pay the war indemnities imposed by the Soviet Union and the FAO forecasts for newsprint demand in Western Europe, provided a second impetus for the development of the industry.

Between 1955 and 1962, the Finnish producers doubled their newsprint capacity by installing new machines and gradually converting their older equipment to other products

Figure 5

Hylte Bruks AB Ownership Pattern, 1975



(non-standard newsprints and light-weight coated publication papers). This increased production, in addition to maintaining the Finnish producers' presence in their traditional markets, (the United States, South America and Denmark), supported the penetration of new markets, mostly in Northern Europe, (including increased sales in the United Kingdom market).

The mid-sixties seemed to mark the end of this first period, as the Finnish producers found themselves facing rapidly rising costs. The problem was apparently solved by a dramatic devaluation of the Finnish mark (17% in 1967), and a wave of investment in new capacity, accompanied, as earlier, by a conversion of the least efficient mills or machines to products other than newsprint (mostly printing and writing papers). To a large extent these decisions also appear to have been influenced by the rapid growth of Swedish newsprint capacity, which practically doubled between the mid-sixties and the early seventies.

The early seventies brought a new challenge to the Finnish producers, inasmuch as the profitability of their shipments to the U.S. market started lagging considerably behind that of their shipments to other markets. The problem was a sizeable one since shipments to the U.S. market in 1973 still represented 29% of total Finnish newsprint exports. In spite of the inherent advantages the Finnish producers enjoyed on this market (for example the fact that several newsprint producers, like Enso Gutzeit, possessed shipping fleets which regularly served U.S. ports), the opportunity cost of these shipments became such that between 1974 and 1975, exports to the U.S. market practically stopped (they fell from 381,000t in 1973 to a mere 33,000t in 1975; see Figure 6). To offset this market loss the Finnish producers increased their market share in the

United Kingdom (from 16% to 37% between 1970 and 1975) and reduced their newsprint capacity (from 1.7 Mt to 1.3 Mt between 1973 and 1975). This capacity reduction, however, apparently did not entail any mill closure, inasmuch as the bulk of the decrease appears attributable to machine conversions to other products and also probably to lower basis weights.

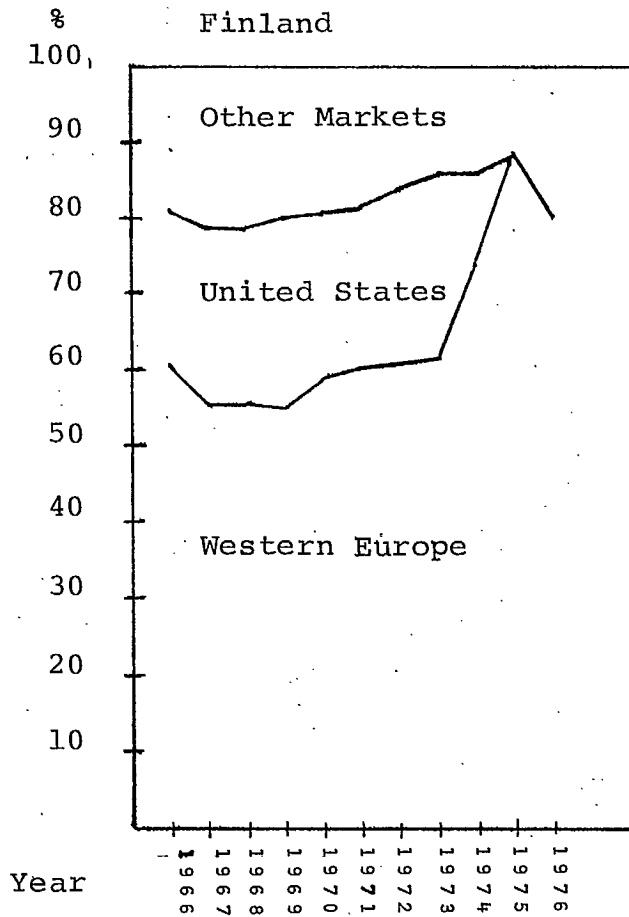
As a whole, the evolution of the Finnish newsprint industry offers an interesting solution to the problems experienced by international commodity producers. Faced by growing competition and market losses, the Finnish newsprint industry managed largely to preserve its position by invading other product markets (the general field of groundwood printing and writing papers) and by "destabilizing" its basic product, (i.e., promoting light weight newsprints, which minimized Finland's relatively high wood costs).

The Market Posture of the Finnish Producers

Since their withdrawal from the U.S. market, the Finnish producers appear to have concentrated upon the United Kingdom market (see Table 48), which represented 40% of their total worldwide newsprint exports in 1976. By comparison, their second and third largest markets, France and Germany, represented only 25% of total Finnish exports for the same year. In turn, this heavy concentration on a few key markets has led to a growing "Europeanization" of Finnish exports and to a reduction of the Finnish industry's role in the international newsprint oligopoly (Western Europe absorbed only 60% of Finnish exports in 1966 compared to 80% in 1976).

Figure 6

Market Distribution of Finnish Newsprint Exports



Source: The Pulp and Paper Industry, OECD.

Table 48
Composition of Finnish Newsprint Exports
(metric tons)

United Kingdom	345,885	40%
Germany	127,356	15%
France	96,707	11%
Denmark	63,895	7%
Netherlands	39,256	5%
Australia	29,755	3%
Iran	21,219	2%
Other countries	142,395	17%
Total Exports	866,488	100%

Source: Finnish Timber and Paper Calendar 1976/1977

The Industry's Structure

The Finnish newsprint industry includes approximately nine producers, each with a different manufacturing program. Firms like Enso-Gutzeit and Rauma-Repola appear mostly to cater to the standard newsprint market, with relatively large and modern facilities. The Rauma-Repola mill, for example, is equipped with two large less-than-two-years-old newsprint machines. Other companies like Kymi Kymmene, United Paper mills, and Veitsiluoto appear to produce a more complex assortment including groundwood and other printing papers in mills including relatively large and modern machines (often above 300") as well as older and smaller equipment. This structure appears to reflect the development of the industry, which since the early 60's has continually added new machines, while converting its less efficient equipment to less bulky products.

In addition, this development process appears to have been aided by the existence of an industry sales organization, (Finnpap), enabling some mills to specialize for part of their output without having to individually support completely different sales organizations. While Finnpap appears to have facilitated the adaptation of the Finnish newsprint industry to changing competitive conditions, during the last few years it has become the subject of growing criticism. On the one hand, the most efficient firms complained that Finnpap, by allocating demand among the mills on a capacity basis, prevented them from reaping the benefits of their more efficient facilities. On the other hand, the most specialized firms have complained that Finnpap constituted some kind of barrier between their mills and their markets, hindering their market penetration. At this point, however, no firm has officially severed its contacts with Finnpap.

Finally, it should be noted that the Finnish producers, through Scannevs, fostered extensive contacts with their Norwegian and Swedish counterparts. While Scannevs does not operate as a regular subsidiary or sales organization, it is still likely to provide a coordinating mechanism for the various Scandinavian producers.

3.5 The Norwegian Producers

With a capacity of 660,000 short tons, the Norwegian newsprint industry accounts for only 17% of total Scandinavian newsprint exports. As a whole, its market posture appears to be as widespread as that of Sweden. This dispersion has resulted

in some problems for the Norwegian producers, who had difficulties in meeting their many commitments in 1973-1974, particularly to France and Belgium.

The structure of the Norwegian newsprint industry breaks down into three firms with relatively small mills in comparison to their Swedish counterparts. The situation of these mills is unknown at present. One of them (A/S Union), however, has been reported as being in the process of expanding its newsprint facilities.

As a group, the Norwegian producers are members of Scannevs and, as such, take part in the negotiations between Scannevs and the Danish newsprint purchasing agency, which in turn explains their relatively high share of the Danish market.

Table 49
Structure of Norwegian Newsprint Exports, 1975
(metric tons)

Germany	119,000	31%
United Kingdom	63,000	17%
Netherlands	53,000	14%
France	49,000	13%
Denmark	30,000	9%
Other countries	<u>56,000</u>	<u>16%</u>
Total Exports	380,000t	100%

Source: FAO

Table 50
Scandinavian Newsprint Capacity
(000 short tons)

	<u>Finland</u>	<u>Norway</u>	<u>Sweden</u>	<u>Scandinavia</u>
1950	547	229	364	1161
1955	657	220	402	1279
1960	909	286	700	1895
1965	1399	402	794	2595
1970	1417	638	1156	3211
1975	1305	570	1598	3473

Source: CPPA's Newsprint division

3.6 Relative Costs and Profits

This section of the report compares the relative costs and profits of various competitors. The comparisons are based on published data (essentially the report prepared by Sandwell for the Department of Industry, Trade and Commerce) and primary research on U.S. and Canadian companies. While reservations have been expressed concerning some findings of the Sandwell Report (namely their absence of reference to the representativeness of specific figures quoted), this report is the best source of data available at this time. Wherever possible, Sandwell's work has been corroborated through other sources.

Since competition in the newsprint business is essentially regional, the focus of these comparisons is on the groups of producers that are in "head on" competition with each other (see Tables 51 and 52). Before making these direct comparisons, however, it should be kept in mind that:

- wood, energy, labour and transportation usually constitute the key cost determinants;
- if the labour component included in the wood costs were reported together with the other labour costs, labour would probably represent 50% of the total cost per ton of newsprint;
- all data refer to 1976, when the newsprint list price was US\$285.

3.6.1 British Columbia Coast versus Northwest USA

The Sandwell report identifies a \$16 difference* in average costs for producers in these two regions, who compete

* For ease of comparison, the Sandwell report assumes parity between the U.S. and the Canadian dollars.

Table 51

Range of Newsprint Manufacturing Costs
(\$/Finished Ton)

	<u>British Columbia Coast</u>	<u>North Western U.S.A.</u>	<u>Eastern Canada</u>	<u>South Eastern U.S.A.</u>
Wood	56-66	40-50	62-91	40-50
Chemicals	6-9	6-14	2-11	9-11
Energy	24-25	36-42	16-38	40-71
Other Materials	22-26	23-25	14-26	23-25
Labour	36-64	35-51	39-65	34-40
Administration	17-29	10-19	15-36	17-20
Depreciation	8-13	15-25	5-12	12-17
Transportation	31-35	25-29	30-53	10-13
Total	224-244	220-225	221-276	200-232
Average	238	222	243	210

Source: Forest Product Industry Manufacturing Cost Analysis
Sandwell Report April 1977.

Table 52

Estimated Average Newsprint Cost Differences
(\$/Finished Ton)

	<u>British Columbia Coast Over US Northwest</u>	<u>Eastern Canada Over U.S. South</u>
Wood	+16	+27
Chemicals	- 3	- 4
Energy	-15	-24
Other Material	+ 1	- 6
Labour	+ 8	+11
Administration	+11	+ 8
Depreciation	- 9	- 5
Transportation	+ 7	+26
Total difference on manufacturing costs	+ 7	+ 4
Total difference on costs exclusive of transportation	+ 9	+ 7
Total cost difference	+16	+33

Source: Data from the Sandwell Report, April 1977.

directly on the U.S. western market. On a detailed basis several factors appear to account for this difference.

Wood costs are reported to be \$16 higher per ton in British Columbia than in the Northwest. Part of this difference, however, may be related to a sampling problem, inasmuch as the Sandwell report appears to assume that all U.S. Northwest mills rely on refiner mechanical pulping (RMP), which uses chips (which are noticeably cheaper than roundwood), and that all B.C. mills rely on groundwood pulping (which uses roundwood). Because of this methodological problem it is difficult to estimate the true difference in wood costs between the two regions. However, it should be noted that on the basis of chip costs alone, B.C. mills appear to enjoy an advantage of approximately \$4.00 per cunit.

Energy costs are reported to be around \$15 lower in British Columbia. This difference appears to be related to several elements:

- lower average energy prices: as evidenced by the lower cost of purchased power (\$8.30 per Mwh in B.C. versus \$10.20 in the Northwest) and of purchased fuel oil (\$1.64 per MBtu in B.C. versus \$2.30 in the Northwest)
- higher reliance on hog fuel as a source of heat in B.C. (41% versus 33% of total sources of heat)
- higher level of internal power generation for the B.C. mills (29% versus only 1%)
- apparently better energy efficiency, as shown by the lower consumption figures for electric power in the case of the B.C. mills (2040 kwh/ton versus 2700 kwh/ton in the U.S.).

Since these measures tend to be consistent across the various product lines analyzed in the report, they are considered to be reasonably representative.

Labour costs average \$8 higher per ton in British Columbia, although the total cost range for the two groups of producers appears to be fairly similar (\$36-\$56 for B.C. and \$35-\$51 for the U.S. Northwest). Most of this variance can be accounted for by the compensating effects of the differences in productivity (5.8 man-hours per finished ton in B.C. versus 3.6 mh/ft in the Northwest) and the higher percentage (45% versus 23%) of payroll additives paid by the Northwestern producers.

While base rates and average salaries per man-hour appear fairly similar (\$6.89 versus \$6.59 and \$8.20 versus \$8.18), the existence of a marginal producer in B.C. (Ocean Falls) and of at least one strongly performing mill in the U.S. suggests that these averages should be regarded with some caution and should not be allowed to mask the fact that significant differences are likely to exist among the various producers.

Administration overhead costs are reported to be about \$11 higher in British Columbia. To a large extent this difference appears to be related to three main elements:

- higher sales expenses for B.C. mills (\$4.30 versus \$1.20) which appear to be related to the fact that the B.C. industry is significantly more export-oriented and less integrated than its U.S. counterpart;
- higher head office salaries and expenses as well as higher sundry expenses, which are largely company-specific decisions, and which contribute about \$4.4 to the difference indicated above; and
- higher insurance costs and property taxes (by \$3.40). It should be noted, however, that this element does not appear consistently over all product lines. B.C. market pulp producers, for

example, appear to enjoy lower insurance costs and property taxes than their Northwestern U.S. counterparts (\$5.30 versus \$12.30 per ton).

Depreciation is reported to be nearly \$9 lower per ton in B.C. than in the Northwest. Once again the representativeness of this figure appears uncertain given the relatively wide differences existing among the various mills involved in the Sandwell analysis.

Transportation costs are \$7 per ton higher in B.C. than in the U.S. Northwest. As underlined in the Sandwell report, this difference is largely attributable to the overseas orientation of the B.C. newsprint industry. On the basis of shipments to the U.S. alone, however, it would not be surprising if, because of the Jones Act, some U.S. Northwest mills had in fact experienced higher freight charges.

This brief review of the major cost elements indicates that on the average B.C. mills appear to suffer from a moderate cost disadvantage when compared to their direct U.S. competitors. By and large, this disadvantage can be traced to four main sources: differences in technology, differences in labour productivity, higher administration charges, and higher transportation costs.

This finding, however, should be qualified somewhat because of the apparent sampling problem identified earlier. An analysis of the total cost ranges (\$224 to \$244 for B.C., and \$220 to \$225 for the U.S. Northwest) indicates that some B.C. mills are nearly as competitive as their U.S. counterparts. Since the B.C. industry consists of only five mills, competitive problems are more likely to be company- or mill-specific than "industry-wide".

Since acceptable newsprint-related profit figures are not available for the various producers involved, it is not possible at this time to compare the profitability of the various mills in the two regions.

3.6.2 Eastern Canada versus Southeastern USA

The Sandwell report indicates that an average cost difference of \$33 exists between Eastern Canada and the U.S. Southeastern Region. To some extent these comparisons, which focus only on Northwestern Ontario and Northeastern Quebec mills, leave aside part of the problem by not including other areas such as the St. Maurice area where possible mill closures have been or are being considered (Trois Rivieres, Cap de la Madeleine). Nevertheless, since Sandwell's is the only systematic set of data available to date, it will be used along with data from primary research conducted for this study (see Table 53).

Wood Costs reported by Sandwell for Eastern Canadian mills average \$27 per ton higher than those of U.S. South mills. With transportation costs, they represent the single most important disadvantage affecting Eastern Canadian mills.

To a large extent, these differences in wood costs per ton of finished product are traceable to differences in the costs of raw materials - on the average roundwood costs \$29 per cunit and chips \$14 per cunit more in Eastern Canada than in the U.S. South.

The impact of these differences in the basic costs of the raw materials is somewhat lessened by the fact that on the average Eastern Canadian mills tend to:

- rely on more wood-efficient chemical pulping techniques (high yield sulphite versus kraft) partly because of low density of their woods;

Table 53

Comparative Newsprint Manufacturing Costs

	<u>Company A</u>				<u>Company B</u>		<u>Company C</u>		<u>Company D</u>
	Canada		US South		Canada	US South	Canada	US South	US South
	Mill 1	Mill 2	Mill 1	Mill 2					
Wood	70	57	52	52	75	48	60	40	30
Chemicals	NA	NA	NA	NA	NA	NA	NA	NA	
Energy	22	24	30	30	35	30	NA	NA	
Other Materials	NA	NA	NA	NA	20	29	NA	NA	
					(chemicals incl.)				
Labour	63	52	32	27	59	26	NA	NA	
Administration	NA	NA	NA	NA	NA	NA	NA	NA	
Depreciation	NA	NA	NA	NA	NA	NA	NA	NA	
Transportation	NA	NA	NA	NA	NA	NA	NA	NA	
Total manufacturing Cost	196	172	155	141	NA	NA	NA	NA	
Total Cost before Selling and General Expense					255	189			
Average Selling Price					304	297			

Source: Company interviews

- emphasize more the use of chips than the U.S. South mills (26% versus 10% of total fiber usage). In this respect it should be noted that Eastern Canadian chips even if they entail some savings over the use of roundwood, are still \$13 costlier than U.S. South roundwood.

In comparison to the data received from company chief executives during interviews, it appears that the data reported by Sandwell may overstate the actual cost difference.

Energy Costs are reported to be lower by \$24 in Eastern Canada. Besides a few sampling problems reported in Sandwell's comments, these differences are the net effect of:

- the lower electric power consumption reported by Canadian mills, largely a function of the energy required to mechanically pulp the various wood species used by the mills
- the differences in the cost of purchased power, favouring the Canadian mills by about \$15/Mwh on average
- the slightly lower cost of oil enjoyed by the Canadian mills (\$9.50 per barrel for Eastern Canada as compared to \$14.00 in the U.S. South).
- the relative importance of generated versus purchased power for each group of mills. (In this specific instance the figures reported by Sandwell for internally generated power (Eastern Canada - 9%, Southeast - 71%) appear to contradict the conventional wisdom, and require further study).
- the higher heat requirements per ton of the Canadian mills

During interviews, executives of the companies involved quoted differences in energy costs of about \$6 to \$8

per ton between the Maritimes and the U.S. South and of about \$5 between Ontario and one specific location in the U.S. Southeast.

Labour costs average \$11 higher per ton of newsprint in Eastern Canada. This includes a difference of about \$4 on maintenance labour. From Sandwell's data this difference appears mainly traceable to:

- differences in the base rates (\$6.62 per man-hour in Eastern Canada versus \$5.10 per man-hour in Quebec);
- payroll additives (partly a reflection of employee seniority), higher by an additional 4% in Eastern Canada over the U.S. South's 27% base rate;
- differences in productivity in the order of 13% between Eastern Canadian and Southern mills. To a large extent, as indicated in Table 54, these differences appear to be related to the characteristics of the paper machines in use in the two regions. Canadian producers still employ a large number of narrow (below 190 inches wide) paper machines with no equivalent in the U.S. South (except possibly in the two IP southern mills). Rough calculations (shown in Table 54) suggest that the average capacity per newsprint machine is about 50% higher in the U.S. South than in Canada.

Direct contacts with companies' chief executives in the United States exposed significantly greater cost differences. Differences in the range of \$25 to \$36 were mentioned between mills in Eastern Canada and in the U.S. South. Of the \$36 difference, \$27 was attributed to differences in technology and \$9 to differences in labour rates. In one case, a difference of \$27 was mentioned between the average Canadian direct labour cost per ton (including fringe benefits and supervision) and that of a proposed greenfield mill in the U.S. South.

Table 54

Machine Widths
U.S. South and Eastern Canada

<u>Width in inches</u>	<u>No. of Machines</u>	
	<u>U.S. South</u>	<u>Eastern Canada</u>
190 and below	4*	51*
191 to 230	6	20
231 - 290	9	33
above 290	<u>5</u>	<u>5</u>
Total	24	109

Estimated
Average
Machine
Capacity
(000t/yr)

$$\frac{2283}{24} = 95.125$$

$$\frac{6841}{109} = 62.761$$

Source: Data from Pulp and Paper Canada, 1976,
and Post's Pulp and Paper Directory, 1977.

* probably includes some machines used for groundwood papers.

While the Sandwell report does not identify any difference in worker productivity per man-hour that would contribute significantly to the labour cost difference between the U.S. South and Eastern Canada, and while some company executives agree with this finding, at least one executive interviewed underlined his belief that, for similar types of equipment, productivity per man-hour was lower in Canada than in the United States.

An administration and overhead cost difference of \$8 is reported in favour of U.S. mills. This seems to correspond largely to some difference in sale and sundry expenses (\$2.30) but mainly to the difference in head office expenses of the companies in the sample (\$5.10 per ton). It is difficult to isolate any structural factor behind these differences. They appear much more specific to each company than to each industry or region.

Depreciation differences in the order of \$5 are reported, which is hardly surprising considering the different ages of the mills involved.

A transportation cost difference of \$26 is reported in favour of U.S. South mills. The difference seems to be related to

- the greater importance of exports for the Eastern Canadian industry (particularly for Quebec)
- the "local marketing" policy followed by the U.S. newsprint producers
- the fact that Quebec mills historically assumed the role of the dominant U.S. supplier, i.e. had to reach further south than their Ontario counterparts
- the general "ill health" of the North Central U.S. railways system (particularly when compared to the southern system)

- some discrepancies that penalized newsprint shipments from Canada, particularly when compared to the freight rates enjoyed by the American producers or by other imported pulp and paper products.

Overall Cost Positions

In summary, it is estimated that the total cost difference between Eastern Canada and in the U.S. South is in the order of \$21 to \$44 per ton of newsprint delivered. The main sources of this spread appear to be:

- in favour of the U.S. South: wood costs (from \$20 to \$45), labour costs (from \$5 to \$25) and transportation costs (from \$20 to \$40);
- in favour of Eastern Canada: energy costs (from \$2 to \$35) and lower depreciation costs (from \$10 to \$15 if one includes all the capital related charges).

As shown by the large divergences on the specific cost items reported above, these so called average comparisons should obviously be approached with some reservations:

- because of the deficiencies already noted in some sources (like the sampling problems affecting the Sandwell report)
- because of the tendency of these differences to be self-compensating at the mill level (presumably on the grounds that any location involves trade-offs between various advantages and inconveniences)
- because of the different nature of the cost elements involved. Some are fairly uniform: in Canada, for example, labour costs tend to be fairly similar because of the influence exerted by the unions. Others tend to vary in much larger proportions.

Transportation costs, for example, are heavily influenced by the marketing policies followed by the companies and hence should be expected to exhibit significant variations.

The extent of these differences is hardly surprising. In a mature, competitive industry it is to be expected that each mill will make the best trade-offs between various opportunities and constraints.

Although a \$21 to \$44 per ton average cost difference between Eastern Canada and the U.S. may well exist, any statement regarding the "uncompetitiveness of the Canadian industry" should be qualified by a caveat regarding the particular market being served and by recognition of the fact that noticeable cost differences exist among mills or groups of mills. The need to specify the particular market can be illustrated through a simple hypothetical example. Were a U.S. South producer to supply a U.S. market close to the Canadian border, it is reasonable to assume that the transportation costs identified previously would be reversed. The delivered cost of southern newsprint would then be around \$231 per ton, whereas the comparable delivered cost for Canadian newsprint would be approximately \$215 per ton, providing a competitive advantage of approximately \$16 per ton to the Canadian producers.

It is just as important to identify the particular group of mills within the Eastern Canadian industry to which a statement is meant to apply. From the range of costs shown for Eastern Canadian mills (from \$221 to \$276 per ton) in the Sandwell report, it is quite obvious that some noticeable cost differences exist among the mills. To some extent these variations can be attributed to the existence of several regional sub-groups with different cost levels. Several company

executives emphasized during interviews that average cost figures for Quebec mills tend to be aggravated by data for a few "bad" mills, and that if these "outlying" mills were excluded from the analysis, costs for Quebec mills would be even lower on average than costs for Ontario mills. As a result, generalizations about the competitiveness of the Eastern Canadian industry as a whole have only limited value.

In summary, the problems faced by the Eastern Canadian industry essentially can be seen as a matter of achieving an acceptable "fit" between three main variables: the markets served by the industry, the level of delivered costs achieved by the industry in these markets, and the proper level of capacity required to serve these markets adequately.

Relative Profitability

Aside from cost differentials, several other factors have a significant influence on the relative profitability of the Canadian and U.S. newsprint industries. Among these factors are:

- differences in selling prices: traditionally producers in the U.S. South have granted price discounts to their customers. These have tended to depress their average sales prices. In general, these explicit or implicit price discounts (for example, when a producer "lags" in applying industry wide price increases) appear to be related to the desire of the southern mills to fill their capacity on a local basis, or to respond to the pressures applied by some of their stockholders;

- volume stability: by and large, since Canadian producers play the role of the marginal supplier in several regions of the U.S., they have to absorb the ups and downs generated by the business cycle on the U.S. market. Given the capital intensiveness of the business, this tends to reflect negatively on the earnings of the Canadian suppliers;

- exchange differentials: since most of the Canadian producers' sales are denominated in U.S. dollars, any variation in the exchange between the Canadian and the U.S. dollar directly affects earnings. These variations tend to have a marked impact, particularly for those firms which are heavily oriented toward the U.S. market. For example, on the basis of Abitibi's 1976 financial data it has been estimated that a 5% drop in the exchange rate for the Canadian dollar would have resulted in a 150% increase in the company's pre-tax earnings;

- differences in capitalization: Despite the recent investments made by Canadian producers, on average they still enjoy the short term benefit of exploiting fairly fully depreciated facilities. This can be very roughly measured by considering that \$1 of assets generates nearly \$1 of sales at Abitibi, versus only \$.69 of sales at Southland Paper.

In the same way, the large landholdings which many companies have tried to secure essentially for security of supplies reasons in the U.S. can be thought of as having (or having had) a depressing effect on their profits.

The individual effect of these various factors is difficult to assess. What clearly emerges, at least since the early sixties, is a relative gap between the average profitability of the Eastern Canadian and the U.S. South producers. Since many companies do not supply profit data by product lines, the magnitude of this spread is difficult to measure precisely. However, the following information provides reasonably reliable indications:

- Table 55 shows a comparison between the returns on equity of Southland Paper, Abitibi and Price over the last twenty years. These time series clearly show a decline in the comparative performance of the Canadian firm up to 1972, followed by a brief outburst and a certain stabilization;
- during interviews with U.S. newsprint producers operating in both environments, it was stated that: the return on investment of their mills was significantly higher in the U.S. South than in Eastern Canada.

From this information, however, it should not be concluded that all Canadian newsprint producers experience a low profitability in comparison to their U.S. South competitors. In fact, a company by company analysis of the profitability of the Canadian newsprint producers reveals that at least one producer, Great Lakes, has managed to maintain profitability levels higher than those of Southland (the only Southern producer for which financial data is presently available).

The same analysis also appears to indicate that, on the average, the smaller newsprint producers have experienced rates of return superior to those of the largest producers. Given the inherent "softness" of these estimates (i.e., the fact they don't permit a disaggregation of profits by product lines),

Table 55

Relative Profitability (Return on Equity) of
Major Newsprint Producers

	<u>Consolidated Bathurst</u>	<u>Domtar</u>	<u>Abitibi</u>	<u>Price</u>	<u>Southland</u>
1960	11.9%	NA	9.3%	8 %	NA
1961	11.0	NA	9.9	8.7	NA
1962	11.5	NA	10.7	7.5	NA
1963	10.8	8.2%	10.6	7.0	NA
1964	10.9	10.2	11.4	10.2	NA
1965	10.9	10.4	10.2	8.6	NA
1966	9.2	7.8	9.3	7.9	NA
1967	8.4	3.9	7.2	7.0	11.8%
1968	6.0	4.6	5.8	4.5	11.4
1969	4.7	7.2	6.2	5	12.3
1970	.1	7.2	2.4	2.2	14
1971	.06	4.3	2.5	.6	13.3
1972	4.0	7.1	4.2	3.1	11.6
1973	11.7	15.0	13.1	3.3	12.2
1974	19.4	25.2	17.5	9.9	11.4
1975	12.6	10.4	4.4	3.7	11.8
1976	7.0	3.2	4.2	NA	12.2

Source: Company Annual Reports

Table 56

Average Return on Total Equity

	Average 61-75	Ave. 61-63	Ave. 64-66	Ave. 67-69	Ave. 70-72	Ave. 73-75
Great Lakes Paper	17.5	-	11.1	14.7	10.3	19.5
MacMillan Bloedel	10.6	12.9	13.4	11.0	6.3	9.2
Donohue Co.	10.1	-	11.6	7.2	5.6	16.4
Crown Zellerbach	10.0	11.0	10.6	8.7	6.6	12.6
Maclaren Power & Paper	9.6	-	8.8	5.8	6.2	17.7
Domtar Ltd.	9.2	8.2	8.7	6.2	6.2	16.9
B.C. Forest Products	8.8	6.9	6.7	8.7	5.9	15.6
Consolidated-Bathurst	8.8	11.2	10.3	6.1	1.6	14.6
Abitibi Paper	8.0	10.2	10.3	6.3	2.9	11.7
Price Co.	5.5	5.5	6.8	4.5	2.2	8.3
Bowater Mersey	NA	NA	NA	NA	4.7	13.9
Spruce Falls P & P	NA	NA	NA	NA	NA	17.7
Ocean Falls	NA	NA	NA	NA	NA	NA
Ontario-Minnesota	NA	NA	NA	NA	NA	NA
Soucy	NA	NA	NA	NA	NA	NA
NSFI	NA	NA	NA	NA	NA	NA
Kruger	NA	NA	NA	NA	7.5	21.2
CIP	NA	NA	NA	NA	NA	NA
Reed	NA	NA	NA	NA	3.2	13.7

Source: Company Annual Reports
 Financial Research Institute's Corporate Data Bank

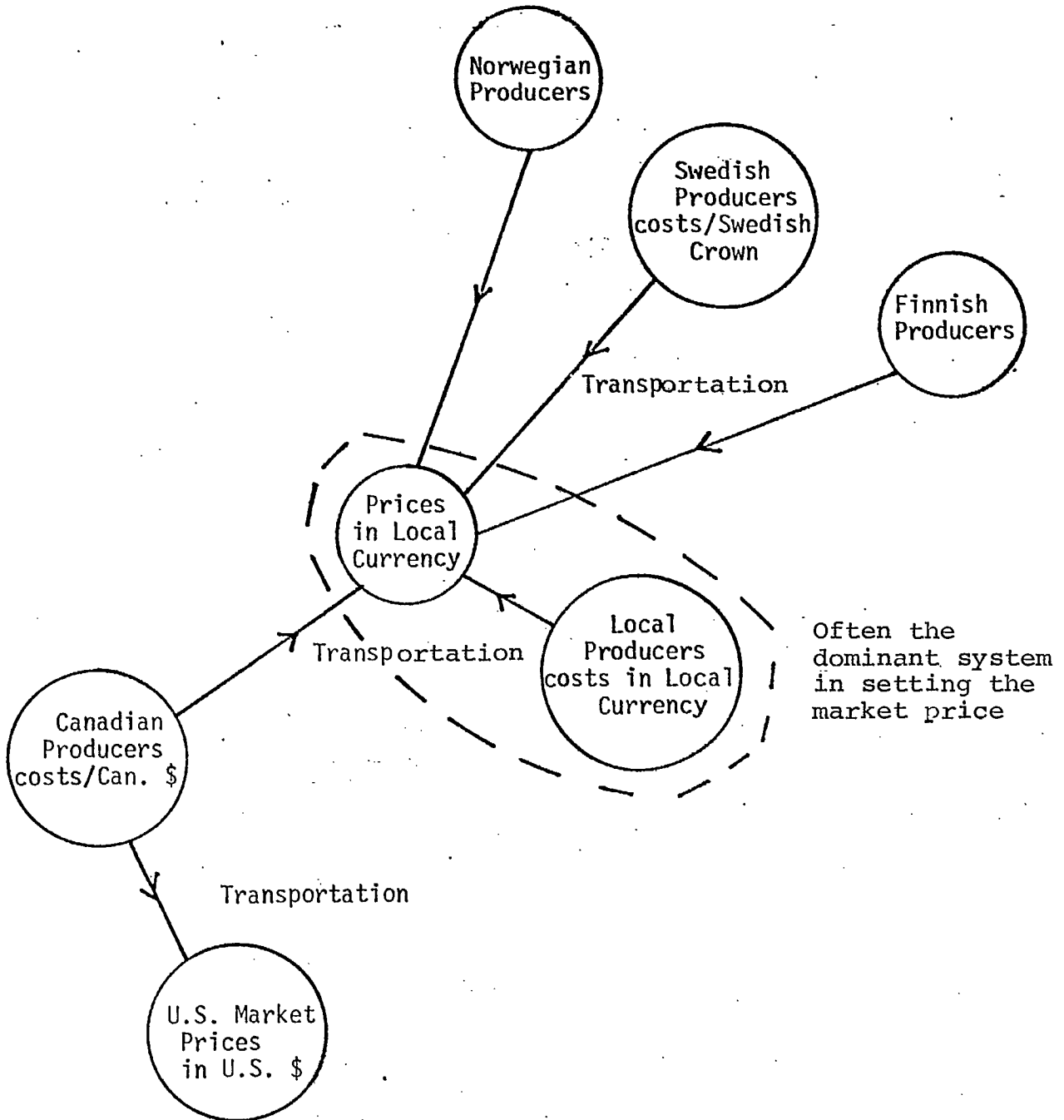
this conclusion should only be regarded as a working hypothesis. Comments made during the interviews conducted appear to lend support to this viewpoint. It appears that in some circumstances larger companies perceive their role as one of "holding the prices" without direct retaliation when smaller companies chip away some market share by discount pricing. In such a situation, the large companies would tend to bear lower-than-average operating rates, with a direct negative effect upon their profits. As well, the managers of some smaller companies stressed their belief in the greater efficiency they derived by being "one mill, quick decision organizations, with direct customer contacts" and thus implied that large multi-mill operations were affected by diseconomies of scale. Finally, since the development of the larger eastern Canadian newsprint companies was sometimes motivated by reasons other than operating efficiency, it is possible that the problems of some of the relatively large producers may be indirectly related to their particular mode of organization.

3.6.3 Eastern Canada versus Scandinavia

As can be seen from Figure 7, the comparison of the relative costs and profits of the various producers involved in the European market is complex. Much of this complexity results from the fact that newsprint prices are usually quoted in national currencies, and consequently profit levels are sensitive to currency fluctuations. This situation contrasts with that of other internationally traded forest products, for which prices are often quoted in a common currency (usually the U.S. dollar). Nevertheless, it appears that:

Figure 7

The European Price/Cost Structure



- sales on the European market are presently more profitable for the Canadian producers than sales on the U.S. market. Using the prices prevailing on the United Kingdom market in May 1977, and the average exchange rates between the Canadian dollar, the U.S. dollar and the pound sterling, it is estimated that the profit differential for the Canadian producers in the United Kingdom as opposed to the U.S. market amounted to approximately Can \$25-30 per ton in 1977 (see Table 57).

- the profitability of the Scandinavian newsprint producers was relatively good, as indicated in most of their annual reports. The profitability of the Swedish producers is likely to have been somewhat higher than that of the other Scandinavian producers during the last few years, because of the greater average efficiency of the Swedish mills, and the greater importance of the Swedish producers' sales to the German market. This relatively good profitability, which sharply contrasts with that of other segments of the Scandinavian pulp and paper industry, appears to be related to the fact that on the average the Scandinavian producers have been able to secure better prices from their customers in Europe than the Canadians have from their U.S. customers, (see Tables 58 and 59 and Figure 3 for an estimate of the average prices enjoyed by the two groups of producers). This state of affairs, which is partly the result of fortuitous circumstances (such as the fluctuations of the various currencies involved), also appears related to the differences in the competition faced by the two groups of producers: relatively inefficient domestic producers for the Scandinavian, and relatively low-cost modern U.S. producers for the Canadian producers. The importance of

Table 57

Estimated Mill Nets for Shipments to the
United Kingdom and to the U.S. Markets (1977)

	<u>United Kingdom</u>	<u>U.S.A.</u>
List Price	£ 235/metric ton (1)	U.S. \$305/short ton
Currency factor	1 £=1.857 Can. \$ (2)	U.S. \$ = 1.0635 Can. \$
List Price in Can. \$	Can. \$436/metric ton	Can. \$324/short ton
List Price in Can. \$/short ton	Can. \$392/short ton	Can. \$324/short ton
Freight and Insurance	Can. \$70/short ton (3)	Can. \$30/short ton (4)
Net Mill/ton	Can. \$322/short ton	Can. \$294/short ton

(1) Price as of May 1977 (Source: Jaako Poyry).

(2) Average exchange rates for 1977; Bank of Canada.

(3) North Atlantic freight conference.

(4) Average transportation costs for mills in Ontario (Sandwell report; this estimate has been chosen to eliminate the influence of more costly overseas shipments).

Table 58

Average Newsprint Market Prices for the
Scandinavian Producers

	Swedish Crown/ metric ton	Swedish Crown/ Can. \$ rate	Canadian \$/ metric ton	Canadian \$/ short ton
1972	780	.2083	\$162	\$147
1973	850	.2301	\$195	\$177
1974	1275	.2206	\$281	\$255
1975	1475	.2456	\$362	\$329
1976	1475	.2265	\$334	\$303
1977	1624 (1)	.2378	\$386	\$347

(1) Skoglig Statistikinformation January-July 1977.

Source: SCA: Annual Report
 Bank of Canada

Table 59

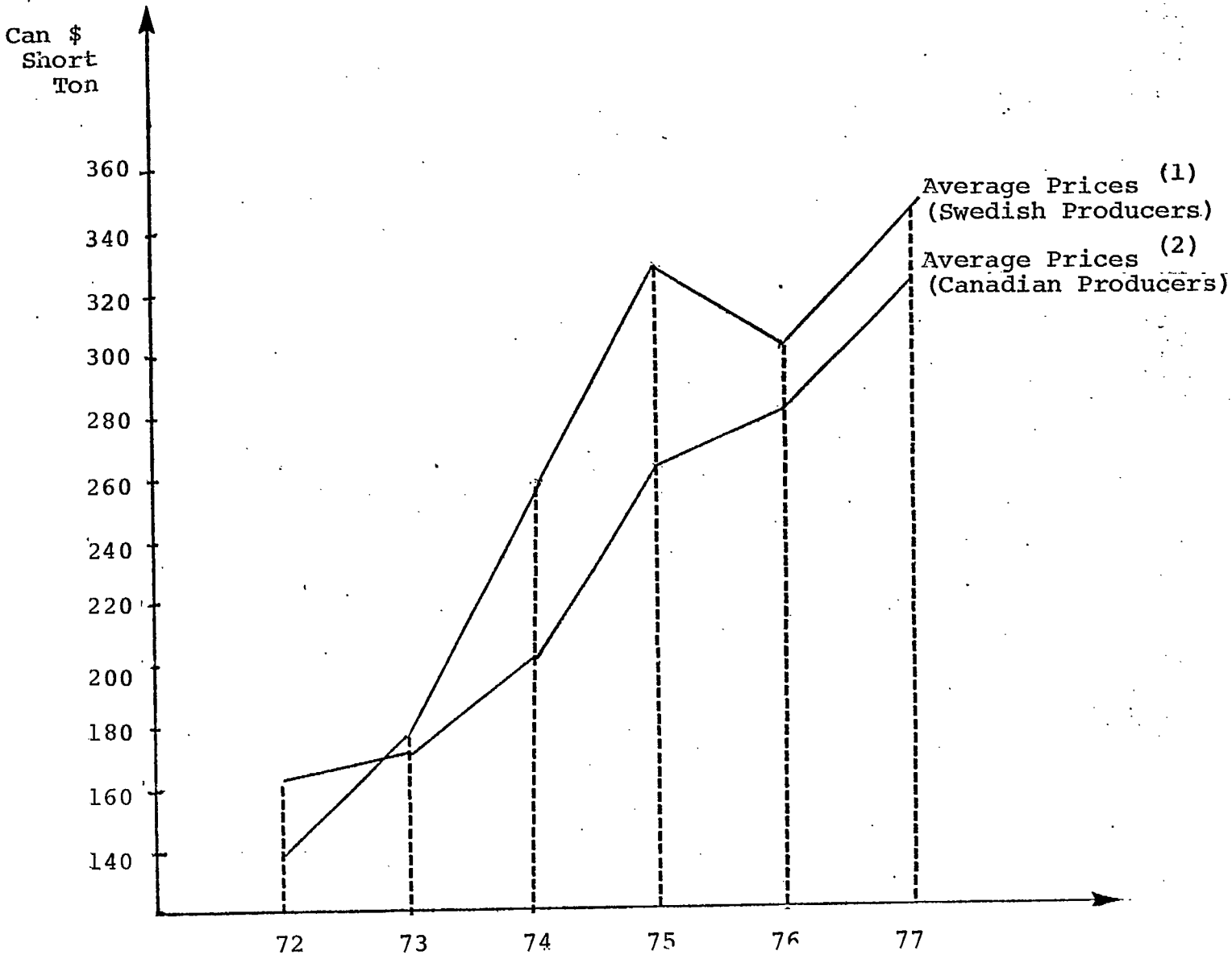
Average Newsprint Market Prices for the
Canadian Producers

	U.S. \$/short ton	U.S. \$ Can. \$ exchange rate	Can. \$/short ton
1972	164	.9905	162
1973	175	1.000	175
1974	210	.978	205
1975	260	1.017	264
1976	282.5	.9861	278.5
1977	305	1.063	324.2

Source: CPPA
 Bank of Canada

Figure 8

Average Prices: Comparison for the
Swedish and Canadian Producers



- (1) Average Swedish prices (Probably FOB Swedish Port).
- (2) List Price New York City

Note: the two measures used here to compare the average prices enjoyed by the Swedish and Canadian producers are not strictly comparable directly, (one is an average price f.o.b. Swedish port, the other one an official list price for one of the key markets served by the Canadian producers). As such they should be considered more as an attempt to assess the direction of a trend, rather than as a precise and "hard" estimate.

this price difference, which appears to have declined slightly since 1975, can be better appreciated by noting that the Scandinavian producers were able to achieve these relatively good results in spite of operating rates which did not exceed 80% during the last few years. This, in turn, probably indicates that a fairly high level of price discipline is likely to exist among Scandinavian producers.

On the cost side, the lack of comprehensive information makes price estimates difficult to assemble. Several elements, however, appear worth noting:

- wood costs: the Canadian producers probably enjoy some wood-related cost advantages. According to data recently circulated by Jaako Poyry, Scandinavian pulp wood costs are in the order of \$37/m³, or \$104 per cunit. On the basis of one cunit of pulpwood per ton of newsprint, this would result in a wood cost estimate of \$104 per ton of finished product. This estimate does not take into account the fact that Scandinavian producers rely more upon TMP, and thus are likely to use slightly less wood per finished ton than Canadian producers. However, using this figure and data gathered by Sandwell it is estimated that Canadian producers are likely to enjoy a cost advantage in the order of \$35 per ton over the Scandinavian producers (Sandwell reported an average wood cost of \$70.8 per short ton for newsprint producers in Northeastern Quebec in 1976).
- transportation costs: the Canadian producers probably suffer from a significant cost disadvantage in this respect. According to the official rates, they have to

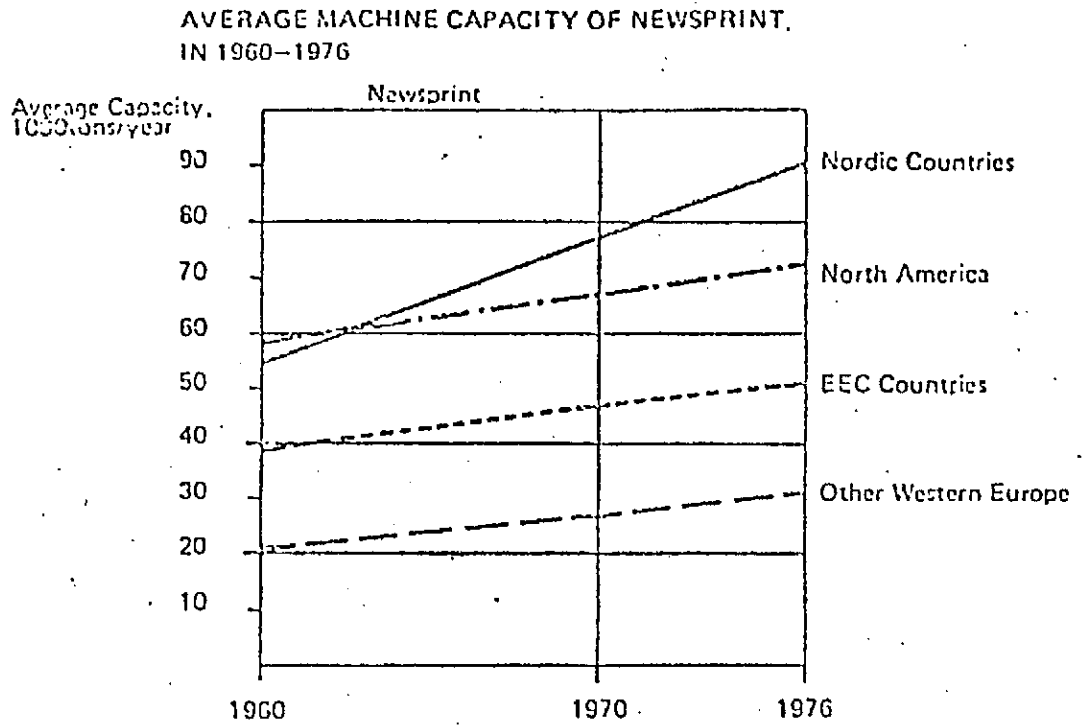
pay on average \$60 per ton to ship their product across the Atlantic. Specific transportation costs for the Scandinavian producers are unknown at this point, but they are probably significantly lower, particularly for markets like Germany and the United Kingdom.

- efficiency of production facilities: because of their relatively modern facilities, the Scandinavian producers, and particularly the Swedish producers, are likely to enjoy some significant cost advantages. As indicated in Figure 9, average newsprint machine sizes are 20% larger in Scandinavia than in North America. These sizes together with age differences are likely to result in higher productivity levels.
- period costs: as a whole, the Scandinavian producers probably have higher period costs than their Canadian competitors. These differences are likely to result from both higher social costs, (for example the fact that they can hardly lay off workers temporarily during slack periods), and investment costs, (reflecting both the recent construction of numerous mills and the extensive anti-pollution investments made lately).
- energy and labour costs: little is known regarding these two cost elements.

Because of the divergence between these estimates, it is difficult to draw an unambiguous conclusion regarding differences in delivered costs between the Scandinavian and the Canadian producers. Because of the double effect of the Canadian dollar devaluation vis-à-vis the U.S. dollar and of the recent slide of the U.S. dollar, it can be "guesstimated" that the Canadian producers may well be profiting at present from some cost advantage on most European markets in comparison to their Scandinavian competitors.

Figure 9

Average Machine Capacity of Newsprint in 1960-1976



Source: Jaako Poyry

4. Stabilizing and Destabilizing Forces

4.1 Future Market Growth

Because of Canada's leading role as a worldwide newsprint producer, any assessment of its future position within the international newsprint system requires an analysis of two main types of trends, those that are going to affect the overall evolution of worldwide newsprint consumption, and those that are going to affect the relative distribution of this growth over the various regional markets.

Since the various regional markets are relatively autonomous, this second type of trend probably represents one of the strongest destabilizing forces. This is so because it obliges the various producers to realign their capacities in relation to the various markets, to compete with each other on slightly different grounds, and to shift the bulk of their competitive efforts towards different "key battlefields".

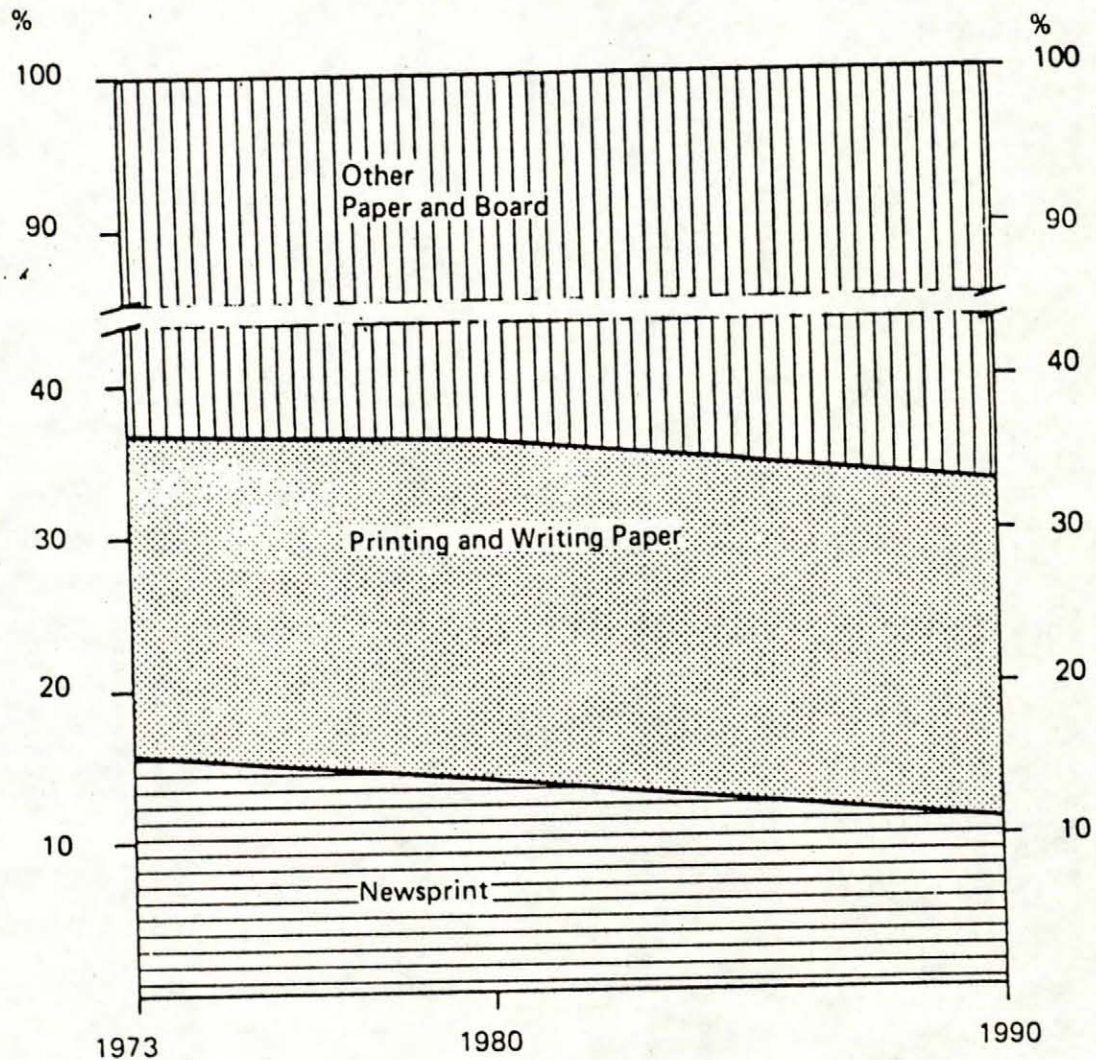
Worldwide Prospects

The most recent analyses and forecasts of worldwide newsprint consumption tend to agree that if newsprint consumption continues to grow over the next decade, its rate of growth will be noticeably lower than the growth rate in consumption of other grades of paper.

Arne Sundelin AB forecasts that while total worldwide paper and paperboard consumption is likely to increase from its 1976 level of 170 million short tons to 290 million tons in 1990, newsprint's share of this total is likely to decline from

Figure 10

Structure of the World Consumption of Paper and Board
Forecasts for 1973-1990



Source: Jaakko Pöyry & Co.
Publication No. 48
Prospects for the Pulp and Paper Industry Worldwide

its present 16% level to 11% by 1990 (see Figure 10). This implies that worldwide newsprint consumption, which was approximately 23.8 million short tons in 1976 (CPPA's figure for worldwide demand), will not grow by more than 8.1 million tons, an increase of only 34% over the next fourteen years. This represents an average annual growth of approximately 2%.

The Canadian Pulp and Paper Association, on the basis of the most recent FAO estimates (July 1977), forecasts that worldwide consumption of paper and paperboard will increase to 280 million tons by 1990. In its comments, however, the Association did not make any reference to a decline of the relative share of newsprint in the total worldwide consumption of paper and paperboard (the reference here being the Association's submission to the Quebec Standing Committee on Natural Resources and Lands and Forests).

Major Market Prospects

The United States

Executives of U.S. newsprint companies usually forecast annual growth rates of between 2% and 4% a year for the U.S. market, with 3% being the most often quoted figure. These executives, however, are the first to underline the "softness" of these estimates, characterizing them as being more the product of the industry's conventional wisdom than of any specific market survey.

As a whole, however, these estimates appear to be slightly more optimistic than the figures provided by other sources:

- Jon Udell, for example, in his latest forecast for the ANPA (January 21, 1976) indicated that

"Assuming approximately 4 percent average annual real economic growth in the next five years, a further utilization of newsprint conservation measures, some substitution of newsprint for other grades of paper and continued vigor of U.S. newspapers in competition with other media, U.S. newsprint consumption is projected to be around 11.2 million tons in 1980".

A year and a half later Udell suggested that U.S. newsprint consumption in 1980 would be between 10.9 and 11.5 million tons, with 11.2 million tons the most likely point estimate.

- In a submission to the present Quebec Committee on Natural Resources, Domtar proposed the following forecasts of U.S. newsprint consumption (they have been transformed into short tons for the sake of comparability)

- 1980: 11.284 million tons
- 1985: 12.095 million tons
- 1990: 12.779 million tons

As these figures indicate, Domtar postulated declining annual growth rates over time (from 1.7% in 1980 to 1.4% in 1985 and to 1.1% by 1990).

- A stock analyst specializing in the publishing industry expressed his belief that "most official forecasts tended to be fairly optimistic" and underlined various factors which were likely to have a detrimental effect on newsprint consumption over the next few years:

- the stagnation of the total number of dailies, particularly because of the elimination of "the second daily" in a certain number of markets; in relation to this specific point, he indicated that approximately 6 million copies could be considered "at risk" (total present daily circulation is about 60 million copies).
- the physical limits bearing on the size of the Wednesday, Thursday and Sunday editions.
- the growing sophistication of newspapers, which have learned to sell more advertising without increasing newsprint consumption (through various "zoning" techniques).
- the progressive growth of the weeklies, which are significantly less newsprint-consuming than the dailies.

As a whole, these comments, which may have been heavily influenced by Jon Udell's predictions, appear to single out the 11.2 million tons figure for 1980 as the most agreed-upon single point forecast available at this point in time. However, it should be noted that these forecasts were made in consumption terms and may slightly under- or over-estimate actual yearly demand for newsprint.

These overall projections, however, should not obscure the fact that on a regional basis slightly differentiated growth rates are likely to be experienced. Most of the executives contacted stressed their belief that the U.S. South as a whole was likely to grow faster than the rest of the U.S. Only two of them risked quantitative forecasts. One mentioned a 5% growth rate for the South compared to a

2% growth rate for the Northeast and the Midwest, whereas the other (a Southern producer) indicated that he had forecast a 3.5% rate of growth for the U.S. South market (compared to an historic rate of 5%).

One potential entrant into the newsprint business suggested the following regional market share figures for 1974 and 1980:

	<u>1974</u>	<u>1980</u>
Northeast	26%	25%
Mid West	27%	26%
South	29%	31%
West	18%	18%

Using the absolute market figures for the two years of reference, the following arithmetic yearly growth rates were then calculated for the four U.S. regional markets:

- Midwest and Northeast .9%
- South 2.9%
- Northwest 1.6%

It should be noted that if another year of reference had been chosen these rates of growth would have probably been slightly higher, since 1974 was the last boom year before the 1975-1976 depression.

Western Europe

For the 1963 to 1973 period, newsprint consumption growth rates appear to have been fairly similar in North America (2.7%) and in Western Europe (2.8%). The most recent data circulated by the FAO ("European Timber Trends and Prospects,

1950-2000") appears to forecast a continuation of this trend, with moderate annual rates of growth in the order of 2% to 3.5% for the European market as a whole, and a slightly faster growth for the southern European markets.

Rest of the World

In the absence of any specific information, forecasts for other markets appear highly speculative. One should note, however, that for the 1963-1973 decade, annual rates of consumption growth were virtually double the rates of North America and Western Europe, as shown in the following table.

1963-73 Annual Rates of Newsprint Consumption Growth

North America	2.7%
Western Europe	2.8%
Asia and Oceania	5.3%
Eastern Europe	4.7%
Africa and Latin America	4.3%

Source: FAO

4.2 Future Capacity Increases

While market forecasts include a certain amount of uncertainty, estimates of capacity increases are even more complex. The various proposed projects reported by CPPA in its

1976 newsprint data issue are listed in Table 60. In the following review of the situation in each country or region this data will be combined with any other data gathered on the status of each specific project.

United States

On the basis of available information at present several projects seem highly likely to proceed. Namely:

1. Bowater's plans to add a new machine with a capacity of 150,000t in the U.S. South at Calhoun, Tennessee by 1980.
2. The Dublin mill of Media General, Knight Ridder and Cox enterprises is expected to be completed by September or October 1979. It was stated during interviews that the three supporting publishers had agreed to absorb 120,000t out of the mill's expected output of 155,000t.
3. Weyerhaeuser has been going ahead with its Longview mill (total capacity 200,000t) and expects to start production by the end of 1979. According to the original plans Weyco would market 50% of the mill's output on the West Coast (the rest being marketed by Jujo Paper in Asia).
4. The Bato Co. of New York (owners of F.F. Soucy) have announced plans to build a newsprint mill at Richmond Virginia with annual capacity of approximately 150,000 tons.
5. In early 1978, Boise Cascade officially announced their decision to install an additional paper machine at De Ridder for operation by 1981, increasing newsprint capacity by 170,000 tons.

Table 60

Reports of Capacity Increases
(short tons)

<u>Expected Start of Production</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>Unspe- cified</u>	<u>Total</u>
Under Construction							
- Canada	-	-	-	-	-	-	-
- U.S.A.							
- Scandinavia	335,000	135,000					335,000
- Europe							-
- South America & Central America	60,000	235,000					295,000
- Asia		345,000					345,000
- Centrally Planned Economies							-
Total							975,000
Construction Plans Announced							
- Canada		-	-	-	-		-
- U.S.A.			210,000				210,000
- Scandinavia			190,000				190,000
- Europe		x	110,000				110,000
- South America & Central America		110,000					110,000
- Asia			180,000				180,000
- Centrally Planned Economies			225,000				225,000
Other							
- Canada	-	-	-	-	-		-
- U.S.A.			570,000				570,000
- Scandinavia			160,000	505,000			665,000
- Europe						425,000	475,000
- South America & Central America			110,000	140,000		290,000	540,000
- Asia						455,000	455,000
- Centrally Planned Economies						910,000t	910,000
- Oceania					200,000		200,000
- Africa				80,000		100,000	180,000
Total	395,000	825,000	1,725,000	725,000	200,000	2,180,000	5,600,000

On the other hand, the Gilman Paper Co. has shelved its St. Mary's newsprint project because of limited market opportunities for a part of the mill's output and more generally because of the sheer magnitude of the risks involved for a company of that size.

In addition to these projects, several other possible capacity expansions or developments were mentioned during interviews. Kimberly-Clark confirmed that they have been approached by publishers to set up a second newsprint mill in the U.S. South, at Beach Island, Georgia. They have deferred any decision on the issue pending further commitments regarding proposed sales contracts and prices. The Southern Publisher's Association have considered the possibility of entering into a cooperative agreement with Mississippi timber owners with the objective of setting up a newsprint mill in the early 1980's. The Times Mirror group (Publishers Paper) was reported to be looking into the development of a newsprint mill in the U.S. South to supply both Newsday and the Dallas Times Herald.

On the basis of this information it is estimated that at least 405,000 tons are likely to be added to U.S. newsprint capacity available for domestic consumption by 1980, and that another 320,000 tons are likely to be added during the 1980-1981 period. In addition, at least three new mills are actively under consideration for start-up in the subsequent two or three years.

Scandinavia

Two of the three mills listed by CPPA as being under construction (i.e. Ahlstrom's and Holmen's) actually began

production in 1977. The situation of the Union mill in Norway is unknown at this point.

Among the 885,000 tons of new capacity reported to be under consideration, the project of Hylte Bruk appears to be in the process of being implemented. The specific situation of the other projects involved is unknown at this point.

South America

There are presently 295,000 tons of capacity under construction in South and Central America (in Mexico, Peru and Argentina). All of these various mills are expected to be in production by the end of 1978.

Another 650,000 tons are reported to be under consideration in various countries, with start-up dates spread over the late seventies and early eighties.

Asia

About 345,000 tons of new capacity are presently reported to be under construction in Asia (mostly Japan and Korea).

Another 290,000 tons are reported to be under active consideration and another 455,000 tons have been reported to be under review (start-up dates unknown).

Europe

Several projects with unspecified start-up dates, representing total capacity additions in the order of 300,000 tons are expected to materialize in Southern Europe (Spain, Portugal, Greece). Two other projects are presently being considered: one in Germany (175,000t) and one in the Netherlands (no increase in capacity expected). According to recent information, implementation of the German project has already begun.

Centrally Planned Economies

The USSR is reported to be considering capacity additions in the order of one million tons, mostly in Siberia. The level of commitment to these projects, however, is unknown.

Australia

It is reported that an increase in newsprint capacity of 200,000 tons is being considered by Australian newsprint mills, with an expected start-up date in 1981.

Africa

Two projects, one in Egypt (100,000t) and one in Nigeria (80,000t) have been reported as being under consideration (start-up dates unknown).

Canada

In one of its latest announcements, the Canadian Pulp and Paper Association indicated that

"newsprint capacity will advance only .9% a year from 1977 to 1979 compared with a 1.2% annual gain in the previous five years and a 2.8% a year in the period 1956-1976 ... The CPPA noted its estimates of capacity increases did not take into account a number of mill closings already announced. The association said capacity of all mills is maintained, in its figures until the machinery has been dismantled. In all 110,000t of newsprint ... will be lost because of mill closing in 1977".(Globe and Mail, Aug. 19, 1977)

On the basis of this information, the following forecast of Canadian newsprint capacity over the 1977-1980 period, has been made:

	<u>Capacity</u> (million tons)	<u>Announced</u> Mill Closures <u>or Conversions</u>	<u>Net Available</u> (million tons)
1976	9.9		
1977	9.989	.110 (Wayagamack)	9.879
1978	10.079	.190 (Kenogami) Sault Ste Marie	9.889
1979	10.169		9.979
1980	10.261		10.072

In summary, it appears that Canadian newsprint capacity is likely to stagnate over the next few years, while at the same time some 1.4 Mt of new capacity will be added in other areas of the world.

4.3 Cost and Location of New Capacity

Mill and machine costs for most pulp and paper product grades have experienced significant increases during the last decade. A recent survey made by International Paper Company showed that the cost of constructing a new mill doubled since 1970 after having doubled in the preceeding fifteen years. These cost increases, which have significantly affected the capacity expansion plans of most producers, can be traced back to a variety of sources. Among these are:

- The rising costs of pulp and paper making equipment:
In a recent interview, Sandwell of Canada quoted the total process equipment costs shown in Table 61 for a 750t/day pulp mill (digester, bleach plant, liquor preparation, pulp drying and finishing).

Table 61
Pulp and Paper Making Equipment Costs

	<u>Million Can. \$</u>	<u>Cost Index</u>
1969	116	100
1970	132	113.8
1971	133	114.6
1972	134	115.5
1973	166	143.1
1974	202	174.1
1975	-	-
1976	265	228

Source: Sandwell of Canada
Interview with PPI (May 1977)

Newsprint manufacturing equipment followed the same cost trend. A Canadian newsprint machine manufacturer

indicated that the per-inch-of-width price of newsprint machines had increased from \$14,000 in 1969 to \$31,000 in 1977 (an increase of 120% over eight years). To a large extent, as shown in Table 62, these cost increases can be related to both the labour and raw material cost increases incurred by the paper equipment industry.

In addition, other factors which have contributed to the rising costs of new mills include:

- The simultaneous escalation of construction wages, which have risen faster than the average rate of inflation, has strongly impacted on the cost of mill site structural and civil works (which on the average represent about one third of total mill costs).
- The changes in regulations regarding pollution abatement, which have significantly increased the total costs of pulp and paper mills in most developed areas of the world.
- The growing technological sophistication of most pulp and paper mills, particularly as far as the incorporation of peripheral equipment is concerned (e.g. computers for production control).
- The lengthening of the construction process, which has occurred in most areas because of the growing complexity of the regulations pertaining to major project expansions.

The main result of this trend of rising costs, in conjunction with the sharp reduction in demand which took place after 1974, has been a drastic slackening of greenfield projects

Table 62

Evolution of Equipment Costs

	General Wholesale Price Index for Iron and non- Feros Metals CANSIM 601014 <u>(1935-1939 - 100)</u>		Average Hourly Earnings Manufacturing Machinery <u>CANSIM 1532</u> (Dollars/hour)		Total Equipment Costs for a Pulp Mill <u>(Million \$)</u>		Estimated Cost per ton of Daily Capacity for a 550t/day Newsprint Mill <u>(dollars)</u>
		1972 = 100		1972 = 100		1972 = 100	
1972	330	100	4.00	100	134	100	200,000
1973	358	108	4.36	108	166	123.8	NA
1974	441	133.8	4.83	120.7	202	150.7	NA
1975	513.5	155.6	5.63	140.7	-	-	NA
June 1976	555.2	168.2	6.24	156.0	265	197.7	360,000
Jan 1977	575.0	174.2	NA				

Source: Sandwell PPI (May 1977)
Black-Clawson (Direct Interview)
Stanford Research Institute

in most areas. In fact, by most accounts present newsprint prices seem inadequate to support the inflated costs of greenfield newsprint mills. In its submission to the Quebec Standing Committee on Natural Resources, Abitibi Price indicated that a newsprint price of \$475 was required to yield an acceptable economic rate of return to prospective investors (see Table 63). The Stanford Research Institute, in a report prepared for the Office of Policy Development and Coordination (U.S. Department of Commerce) indicated that:

"if the hurdle rate for a prospective investor in a new newsprint mill is 15% after taxes and depreciation, with a general inflation rate of 5% a year, a newsprint price of \$500 per ton in 1980 compared with \$285 per ton in mid-1976 will have to be expected to justify the plant and equipment investment in a new mill. This implies an increase in expected price of more than 15% per year over this period".

In its comments regarding the company's decision to invest in a newsprint mill using both TMP and recycled papers, Media General stated that "the joint venture newsprint mill with Cox and Knight Ridder will offer a nice return on capital in the future. There is a certain amount of leverage involved".

These comments and statements indicate agreement that the construction of greenfield newsprint mills can hardly be justified solely on the basis of return on investment criteria at present price levels. Because of these financial considerations, several Canadian producers have stressed the fact that the expansion of an existing mill is likely to be much cheaper on a per ton basis than a similar investment in a greenfield mill. Knowledgeable industry people have indicated that additional capital costs, on a daily ton basis, could vary by as much as \$180,000 between existing and greenfield mills. The Quebec Association of Pulp and Paper Producers quoted a more

Table 63

Economics of New Mills

Mill characteristics: Capacity 160,000 tons per year
Total cost \$125 Million

Assumptions Financing: 50% external (10% interest over 20 years)
 Depreciation: 20 years straight line

Interest payment	3,125,000
Retirement of debt	3,125,000
Depreciation	6,250,000
Mill costs (\$200/ton)	32,000,000
Delivery and selling	6,400,000
10% after tax return	25,000,000
	<hr/>
(20% before tax)	75,900,000

Required Selling Price $\frac{75,900,000}{160,000} = 475/\text{ton}$

Source: Abitibi-Price
Submission to the National
Assembly of Quebec Standing
Committee on Natural Resource
and Lands and Forests.

limited spread of \$100,000 per daily ton. In addition, the same sources also underlined the fact that nearly 2 million tons of new capacity could be potentially "squeezed" out of existing Canadian mills, and that the Canadian newsprint industry could take advantage of this situation to enhance its competitive position.

To further this analysis, we have "pushed a few numbers" (see Table 64) using various assumptions regarding operating and capital cost differences. These representative calculations tend to support the opinion that solely on a financial basis the U.S. South overall advantage is somewhat tenuous in comparison to incremental capacity additions in Eastern Canada. In fact, on the basis of the present operating cost differences (\$30-\$40 per ton), it would only prove advantageous to add greenfield capacity in the U.S. South rather than incremental capacity in eastern Canada if the capital cost difference between the two types of projects were below \$75,000 per daily ton. This cost difference is significantly lower than that quoted by the industry (\$100,000 according to one of the most "pessimistic" estimates). Under these assumptions, an investor attempting to balance the various cost differences would likely favour Eastern Canada over the U.S. South for a capacity expansion project (within the limits set by available incremental capacity).

This approach, however, raises some more complex questions. First, some of these opportunities for incremental expansion may also be available to southern producers. Aside from setting up new greenfield mills, they can potentially speed up their existing machines, replace some of their existing machines, add new machines supported by marginal additions in groundwood or thermo-mechanical pulping facilities. This marginal expansion approach is apparently the one followed by Bowater, which is in the process of adding 150,000 tons of new

capacity at a reported cost significantly below that of a standard greenfield mill (the estimated cost per daily ton for this project is in the order of \$200,000).

Second, the industry and its suppliers can attempt to find ways of reducing the costs of greenfield mills. At least one technical consultant to the industry has indicated that the cost of a standard-sized newsprint mill could be substantially reduced by locating it close to an existing linerboard mill, with which it would share some common facilities and from which it could draw its needed chemical fiber. Since at least four producers (International Paper, Boise, Southwest Forest Industries, and St. Regis) are involved in the production of linerboard in the U.S. South, and since "newsprint-linerboard" mills are already operated by some of these companies (Boise and Southwest Forest) this new approach appears to have potential and should be considered seriously.

Third, some publishers may be tempted to invest in the U.S. South, even in the face of low expected ROI'S, simply for stability of supply reasons or because of the lack of trust that seems to exist toward the Canadian producers. Fourth, whatever the true value of any cost advantage favouring Canadian expansion, no effect is likely to materialize over the short term, since no new capacity appears to be needed in Eastern Canada until the early 1980's (see Appendix I). Finally, it should be noted that maintaining this advantage will depend on the ability of the Canadian producers to keep their operating costs in line with those of their competitors. This appears questionable in light of their record since the early seventies.

4.3.1 Further Expansion of Recycled Newsprint in the U.S. Market

Since the early 1960's approximately 433,000 tons of recycled newsprint capacity have been added in the U.S. These additions have been essentially through the efforts of a single company (Garden State Paper), which pioneered the development of the North American de-inking technology. Given the present level of official interest in energy conservation and waste recycling, it is important to try to assess the future of this particular type of mill in relation to the U.S. market, inasmuch as further developments would be likely to take away some part of the traditional markets of Canadian producers.

In a special report, "Paper Recycling: The Art of the Possible" the Midwest Research Institute concluded recently that

"The technical and economic feasibility of recycling newspapers into newsprint is well established. From an economic point of view recycled news is cost competitive with virgin fiber, providing the waste paper costs do not rise significantly compared to pulpwood costs ...

The practices of the newspaper industry of captive mill ownership, long term contracts and multiple suppliers, work to limit rapid expansion of recycled news. Nonetheless, the recycled fibre will likely expand more rapidly than newsprint as a whole (on a percentage basis)."

These opinions were apparently shared by the FAO in its recent study ("Outlook for 1990"), which indicated that the following developments in the composition of the furnishes used by the U.S. newsprint industry were expected to occur:

	<u>1972-1974</u>	<u>%</u>	<u>1980</u>	<u>%</u>	<u>1990</u>	<u>%</u>
	(000t)					
Mechanical	2283	67.9	2718	67.3	3597	66.6
White Chemical Pulp	780	23.2	836	20.7	918	17.0
Waste Fiber	433	12.9	646	16.0	1102	20.4
Total Furnish	3496	104.	4200	104.	5617	104.

The relative stability of the proportion of groundwood pulp forecast by the FAO appears to indicate that most of the waste fiber used by the industry will be used within conventional mills rather than 100% waste-based mills.

This conclusion is supported by comments received during interviews conducted with the industry. It was reported that even with present market conditions, existing recycling mills had to reach relatively far away to secure their waste paper supplies. Further, only a few sites in the U.S. had sufficient waste paper potential to support a 300 tpd recycled newsprint mill (Northern Florida, the Ohio Valley, the San Francisco Bay area). All known projects involving any of these locations have at least temporarily been shelved (Hudson Pulp and Paper announced it was not going to follow up its Florida Project, Garden State shelved its Ohio Valley project and reached a negative conclusion regarding the feasibility of a mill in the San Francisco area, and MacMillan Bloedel seems to have made a similar decision regarding a mill in the same area). Apparently all these projects faced the same issue, namely that because of the present state of the newsprint market and the difficulties in securing adequate volumes of waste paper over the long term, 100% recycled newsprint mills were not yet attractive investment proposals.

Most interest in the recycling field now seems to be focused on a new type of mill using a new technology (a flexible combination of TMP and waste paper) developed by Garden State. Because this process eliminates the need for chemical furnish and is apparently quite flexible, it is likely to prove

attractive to publishers wishing to backward integrate. As a result, this technology poses an additional threat to Canadian newsprint producers, particularly in the U.S. South.

4.4 Differential Cost Increases Among Key Competitors

For many years, Canadian producers have repeatedly complained about the deterioration of their competitive position, particularly in relation to the southern U.S. newsprint industry. In a recent statement, for example, Abitibi's president indicated that costs at company mills in Canada had risen at a 10.4% compound rate over the past five years compared to a 9.5% rate in the South. This position gathers some support from the available cost data, which is summarized in Table 65. From this data, it appears that between 1969 and 1976 average costs (expressed in national currencies) increased by 84% in the U.S. South versus 81% in Eastern Canada. Depending upon the relative position of the two currencies, the competitive gap between the two regions tends to contract or expand without any direct reference to the real costs involved. This complicating factor tends to make comparative cost assessments relatively time-bound, and historical analysis relatively academic. On the basis of "local" costs (i.e. calculated in local currency) however, it cannot be concluded at this point that the evolution of overall costs in Canada has been out of line with that of the U.S. South over the 1969-1976 period (particularly if it is recognized that market shares and hence transportation costs have changed over the period).

Regarding the immediate future, the Sandwell report indicates that, according to the best information available,

Table 65

Comparative Newsprint Costs

	<u>U.S. South (U.S.Dollars)</u>	<u>Eastern Canada (Canadian Dollars)</u>	
1969	114	134 (Quebec)	(1)
1976	210	243	(2)
Rate of increase:	84%	81%	

Sources:

- (1) Submission presented by six pulp and paper companies to the Quebec government. Total average costs including transportation and depreciation. For the sake of comparisons with the 1976 Sandwell data, 1969 costs in the Canadian dollars for the U.S. South have been converted into U.S. funds, by using an exchange rate of 1 U.S.\$ for 1.0768 Canadian dollars (CPPA's reported exchange rate for 1969).
- (2) Sandwell report, April 1977 (this report assumes a parity between the U.S. and Canadian dollars).

Note: Comparable data could not be obtained for years prior to 1969. A 1968 study, however (Haviland, Takacsy, Cape), reported the following costs for identical mills (transportation and selling costs excluded) in 1964.

Quebec	Alabama Cdn.\$	U.S.\$	
87.52	82.04	76	(1 U.S.\$ = 1.0768 Cdn.)

Another study (Daly, 1969) using the same methodology yielded the following results:

1965	99	88	81 (1 U.S.\$ = 1.0780 Cdn.)
1968	108	99	91.8 (1 U.S.\$ = 1.0775 Cdn.)

by 1981 total manufacturing costs (including transportation) can be expected to reach \$380 in Eastern Canada and only \$320 in the U.S. South. These estimates were based upon the following assumptions (which are direct quotations from the Sandwell report):

1. Labour in Canada will increase over the next year or two at rates permitted by the anti-inflation program and in subsequent years at somewhat greater rates, with the result that the average annual increase over the five-year period might be about 10 percent.
Labour costs in the United States' mills appear to be increasing at about 10 percent per year and may be expected to continue at this rate.
2. Wood, which has a large labour component, will increase at 10 percent per year in both the United States and Canada, although indications are that annual increases in wood costs in the Southeastern States may be considerably less than 10 percent. [emphasis added]
3. Chemicals and other material costs will increase at 8 percent per year. Chemical suppliers and pulp manufacturers suggest increases in the range of 9 to 10 percent.
4. Fuel oil costs in North America will reach a uniform price of \$19.00 per barrel by 1981. Fuel oil costs to British Columbia Coast mills will thus increase at a rate of about 15 percent per year from the present level of \$9.00 per barrel. Oil costs to Ontario and Quebec mills will increase at about 8.5 percent per year from the present level of \$13.00 per barrel, and to United States mills at about 6.5 percent per year from the present level of about \$14.00 per barrel.

5. Announced power rate increases in British Columbia suggest an average annual increase of 17 percent to Coast and Interior mills for purchased power. Indications are that in Ontario power rates will double by 1981, equivalent to an annual increase of 15 percent. Scheduled rate increases to one mill in Quebec are equivalent to 13 percent per year over the next 5 years. It is assumed that in the Southeastern States the cost of power, which is mainly thermal power, will follow the cost of oil and natural gas. Annual increases of 8 percent have been assumed. Power costs in the Northwestern States are expected to increase also at 9 percent per year.
6. Administration and overhead costs will increase by 10 percent per year.
7. Depreciation charged to product costs in this report are based on historical costs. The debatable switch to replacement cost accounting will, if made, considerably increase the depreciation charges. However, for this forecast it is assumed that there will be no change.
8. Transportation costs will increase by 10 percent per year.
9. Productivity, yield, and mill output will not increase sufficiently over the five-year period to have a significant compensating effect on unit costs. It is assumed that increases in these factors would require capital investment in new or improved facilities, which in turn would cause capital charges to increase and at least partially offset the cost advantages achieved.

As underlined in the report itself, these forecasts should be taken more as indications of trends than as specific

estimates of future cost levels. Nevertheless, these trends lend support to the industry's concern that the cost gap is widening between the U.S. South and eastern Canada. The implications of these trends in terms of total newsprint costs are illustrated in the following table.

	<u>Expected Evolution of Newsprint Costs Per Ton</u>		
	<u>U.S. South</u>	<u>Eastern Canada</u>	<u>% difference over U.S. South</u>
1976	210	243	15.7
1981	320	380	18.7

Source: Sandwell Report, April 1977.

4.5 Enforcement of Anti-Pollution Regulations and the Adoption of New Technologies

During the last few years, the Canadian pulp and paper industry has been repeatedly criticized for its lack of compliance with existing anti-pollution regulations. The newsprint industry, because of its reliance upon relatively polluting sulphite mills, has been one of the main targets of these criticisms. The development of new pulping technologies such as TMP or TCMP*, which reduce pollution problems and result in some operating cost savings, has generated high expectations. However, the application of this technology to the industry as a whole involves rather complex trade-offs.

While several companies have introduced TMP (see Table 66), these facilities represent less than 10% of the industry's

* thermochemimechanical pulping

Table 66
Introduction of TMP
In Canadian Newsprint Mills

	<u>Startup Date</u>	<u>Capacity (m tons/y)</u>	<u>No. of Stages</u>	<u>Raw Material</u>	<u>End Product</u>	<u>Supplier</u>
bitibi Beaupré	1974	22,000	2	Spruce-balsam	Newsprint	Bauer
owater Mersey Liverpool	1976	32,000	2	Spruce-balsam	Newsprint	Bauer
owater Newfoundland Corner Brook	1976	64,000	2	Spruce-balsam	Newsprint	Bauer
onsolidated Bathurst Port Alfred	1978	86,000	2	Spruce-balsam	Newsprint	Defibrator
rown Zellerback Elk Falls	1978	125,000	2	W.hemlock, spruce	Newsprint	Defibrator
ontar Newsprint Donnacona	1978	64,000	1	Spruce	Newsprint	Sprout, Waldron
rugier Bromptonville		22,000	2	Spruce-balsam	Newsprint	Bauer
acMillan Bloedel Powell River	1975	50,000	2	Hemlock-balsam	Newsprint	Bauer
acMillan Rothesay St. John	1976	125,000	2	Spruce	Newsprint	Bauer
rice Grand Falls	1977	220,000		Spruce-balsam	Newsprint	Sprout, Waldron
pruce Falls Kapuskasing	1975	66,000	2	Spruce	Newsprint	Defibrator

Source: Pulp & Paper International: June 77

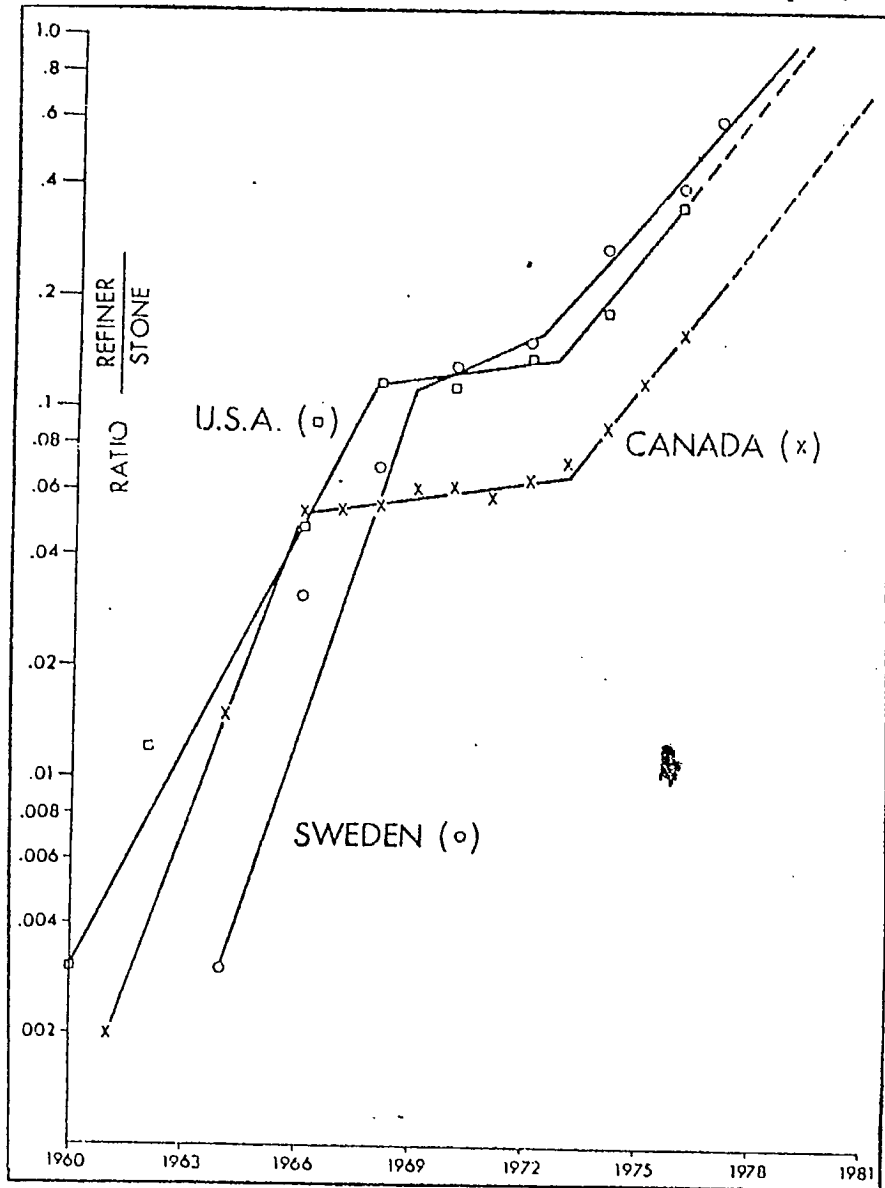
overall capacity. As a consequence, and in the light of the pressures made upon the industry to follow that route, it appears important to document some of the reasons behind the rather slow rate of introduction of this new technology (see Figure 11).

First, it should be noted that on a "replacement basis" investments in TMP facilities, while they largely eliminate pollution problems, do not yield the return on investment most of the companies in the industry demand from their operations (see Table 67). "Replacement basis" means the closing of a mill's groundwood and chemical pulp facilities and their replacement by a thermomechanical pulping facility, with eventually the addition of some purchased chemical pulp. Most of the companies with investments in TMP facilities have proceeded within overall mill expansion programs, or for reasons pertaining to the economics of the specific mill involved. Examples of this latter instance include the Rothesay mill, which had no chemical pulping facilities of its own, and the Grand Falls mill, which had to replace its entire groundwood facilities. Left to their own initiative, most companies would likely choose to make incremental investments in TMP facilities, reduce their chemical fiber consumption (and eventually close their sulphite mills when other sources of cheap chemical fiber became available) and retain their low cost and relatively-energy-efficient groundwood mills.

Even if the return on investment for "replacement basis" projects could be raised to a satisfactory level through various forms of subsidies, some serious problems would still remain. Some resistance can be expected from publishers, who have been somewhat critical of the linting problems associated with TMP-based newsprints in the past. Further, such a large

Figure 11

Growth Rate of Refiner-Mechanical Pulp
1960-1976 with Projection to 1980



Source: G.E. STYAN Exploitation of Technology by the Canadian Pulp and Paper Industry
Pulp and Paper Canada Volume 78/June 76

Table 67

Cost Effectiveness of Various Anti-pollution Devices

	<u>Estimated Cost/mill</u>	<u>Estimated Impact on Operating costs (newsprint)</u>	<u>Expected Pre-tax ROI on a 400 T/D newsprint mill</u>
Installation of recovery boilers with pulp washing and evaporation	29.9 M \$	- 3.60 \$/ton	1.7%
Installation of activated sludge systems for biological treatment	6.0 M \$	+ 5.50 \$/ton	negative
Installation of thermomechanical plant and shutdown of sulfite mills	15.15 M \$	-12.05 \$/ton	11.5%

Source: E.B. Cowan
Report on the Canadian Pulp and Paper Industry

scale conversion would result in an increased consumption of electric power, which may conflict directly with the energy and energy pricing policies of some of the provinces. Another side-effect would be a significant change in the present allocation schemes among the various fiber users (a shift from roundwood to chips), which the present system might not be able to handle. Finally, because most firms try to optimize their pulping and papermaking facilities, massive state-supported investments in pulping facilities could destabilize the present balance between capacity and demand levels. Aside from the obvious equity/allocation problems, such a program could result in depressed market conditions similar to the ones experienced by the industry in the late sixties and early seventies.

On an incremental basis (i.e. the addition of a TMP facility with the view of reducing chemical fiber consumption and pollution problems), which is the approach followed by most firms in the industry, investments in TMP facilities are regulated by a large number of factors. One such factor is the availability of additional markets, which is important because the firms involved will tend to preserve their existing groundwood pulping facilities. Given the overcapacity which has affected the industry during the last few years, this factor has probably constituted one of the controlling elements in the allocation of funds for the purpose of TMP investments. This conclusion is supported by the fact that TMP investments have been undertaken primarily by either capacity-short companies like Kruger and Spruce Falls, by companies implementing "consolidation- expansion" programs like Consolidated-Bathurst at Port Alfred or by companies converting to products other than newsprint (like Price Kenogami or Domtar Donnacona). As in the replacement case, attempts to encourage investments in TMP facilities on an incremental basis, without simultaneous overall

market or capacity adjustments, could result in detrimental effects for the industry as a whole.

It should also be noted that even though investments in TCMP or CMP could alleviate some of the pollution problems by drastically reducing chemical fiber needs while maintaining existing groundwood facilities, most firms in the industry still appear relatively hesitant to consider this new technology.

As a whole then, it appears that there is no "best" solution to the problems created by the present anti-pollution standards. More importantly, it appears that well-intentioned efforts to help the industry overcome this problem could result in some potentially damaging secondary effects which could severely affect the industry's overall situation.

4.6 Industrial Relation Issues

Given the relatively low level of inventories maintained by publishers (the N.Y. Times for example usually maintains a 25 to 30 day newsprint inventory, including 8 days of in-transit inventory), most newspapers are highly vulnerable to newsprint shipment disruptions. Over the last four years, however, the reputation of Canadian sources of newsprint for reliability has been tarnished through a series of long strikes which placed some publishers in quite precarious positions. Comments in this regard were made repeatedly during interviews conducted in the U.S. with newsprint buyers and publishers associations.

The mill and rail strikes that curtailed newsprint deliveries from Canada in 1973 forced some publishers to cut back on their surface (number of pages) and on their advertising. As a result, many now maintain higher inventories and are favourably disposed toward U.S. suppliers and/or backward

integration. Strikes in 1975 closed supply lines again, for as long as seven months, and forced publishers to stockpile newsprint in every warehouse available. The antagonism towards Canadian suppliers has persisted, despite the acknowledgment that Canadian manufacturers have spent considerable sums to make sure that newsprint supplies reach publishers.

This problem was also recognized in a recent memorandum circulated by the Canadian Pulp and Paper Industry Association on the issue of labour management relations in Canada which stated:

"since the 1960's the pulp and paper industry in Canada has suffered deteriorating industrial relations, as measured by the incidence of strikes and work stoppages, culminating in lengthy strikes during 1973 and again in 1975. These latest strikes seriously affected Canada's reputation as a reliable supplier of pulp and paper to the world market".

The outcome of the 1978 labour negotiations will have an influence on a series of decisions of long term consequence to the Canadian newsprint industry. Among the decisions to be made are those concerning the sourcing policies of various publishers who have grown increasingly concerned about the reliability of their Canadian newsprint sources. The newsprint controller of one of the newspapers in a large U.S. chain indicated that during the next round of newsprint contract negotiations in 1978, preference would be given to several smaller contracts, some with non-Canadian firms, and some with firms who had an independent union or their own fleet of trucks.

Also affected will be the capacity expansion decisions of producers having mills both in the U.S. and in Canada. Major investment decisions concerning Canadian mills will be influenced by the outcome of the next round of contract negotiations in 1978.

It is obvious that a continuation of the recent labour negotiation practices in the industry is likely to have a major direct consequence on key strategic decisions and to influence strongly some related decisions (such as the ones pertaining to further reinvestments in the mills for modernization or anti-pollution purposes).

4.7 The Existence of Price Differences Between Markets

While economic theory predicts that price differences between markets tend to "even out" under the pressure of competitive forces, the newsprint market appears to be characterized by the existence of "high price islands" in several regional markets. A good example was described in the review of the United Kingdom market, where Canadian producers were enjoying a \$20 to \$25 price difference in comparison to the U.S. market. Rather than an isolated case, these differences appear more or less representative of general conditions in the European market, as evidenced by the comparison of the average prices enjoyed by the Swedish and the Canadian producers.

It is still uncertain, however, whether or not the Canadian producers are willing and/or able to capitalize on the relative advantage they seem to hold upon the European market by adopting an aggressive pricing policy and attempting to gain market share in the process, thus evening out the differences between the European and the North American markets. From the available body of evidence, the answer to this question appears to be a qualified "no", largely for the following reasons:

First, it should be noted that the Canadian producers apparently did not push such a policy when the price differences between the United States and the European market reached their peak around 1975. Canadian producers were on strike during that period and some had to arrange for deliveries from Scandinavian

suppliers for their established European customers. This probably explains why they did not choose to adopt such policies at that time. Since the end of the strikes, however, no changes in the Canadian producers' pricing policies appear to have been implemented. This observation supports the view that the industry itself does not find this policy to be in its own best interest and is more anxious to raise the U.S. prices to European levels than to depress the European prices to the U.S. level.

Second, it should be noted that a variety of other factors, in addition to prices, contribute to the present division of market shares among the various producers. Product differentiation (particularly differences in basic weights), institutional relationships, and sourcing and procurement strategies all appear to have an influence on supplier selection. To a large extent these factors appear to be relatively immune to the effects of direct price competition, and as such are likely to make market shares relatively "sticky". Long term supply considerations will probably also dictate a somewhat cautious attitude towards the Canadian suppliers, whose past record of supply stability is far from spotless. In turn, this factor is reinforced by the fact that the European publishers have not normally maintained high inventories and would likely be cautious about increasing their dependency upon suppliers whose lead time is in the order of six to ten weeks.

Third, it must be noted that an aggressive price policy is likely to have some "unanticipated" consequences particularly as far as European domestic producers are concerned. Only in France do the domestic and international prices appear to be unrelated. Consequently an aggressive price policy would probably result in some damaging effects to the domestic producers in most European countries. If so, these could lead to various retaliatory measures, ranging from the

establishment of more or less official "dual" systems to an eventual revision of the duty-free quota system.

Fourth, it should be noted that an aggressive price policy would likely result in some counter-attack by the existing Scandinavian producers, either directly on the European market or indirectly in other third markets (for example the resumption of shipments to the U.S. market by the Finnish producers). A long enough war could also result in the demise of some Finnish producers, who appear to be among the most vulnerable in Scandinavia. However, this would probably take some time, given the "buffer" role played by Finnpap (i.e., the fact that it seems to allocate markets on the basis of existing capacities). In addition, a price war would cause difficulties in the United Kingdom market, which is the main "meeting ground" of Finnish and Canadian suppliers. For these reasons the feasibility of this strategy appears to be relatively uncertain; nevertheless, these impacts probably constitute the most important strategic advantage the Canadian producers could gain from an aggressive pricing strategy.

Fifth, it should be noted that a devaluation of the Scandinavian currencies and a revaluation of the U.S. dollar in relation to the major European currencies would likely result in a significant change in the competitive equation, and pose a major threat to the long term success of such a pricing strategy.

Sixth, it should be observed that the benefits accruing to most of the individual Canadian firms would be rather small in relation to their total capacity. Given the present level of imports into Europe, a 10% increase in market share, would only result in a volume increase of about 250-300,000 tons, which, if divided among four or five firms, would represent tonnages in the order of 50-60,000 tons per firm.

As a result the present industry organization in Canada does not appear to be really supportive of an increased penetration of the European market; the payoffs for relatively small firms, however, may prove quite different. Consequently the likelihood of the Canadian producers engaging spontaneously in such policies appears relatively small. Incremental growth, rather than a drastic market reorganization, appears more likely over the next few years.

4.8 The Existence of "Poorly Served" Markets

In general, the existence of "poorly served" markets (in terms of prices, quality or availability), appears to be one of the prime sources of changes in the development of most commodity-type products. This situation was experienced by the Canadian producers in the early and mid fifties, when the U.S. South publishers, dissatisfied with the performance of their regular suppliers, contributed to an unprecedented wave of capacity expansion in the U.S. South. Because of the situation of the various suppliers involved, at least three "poorly served" areas presently appear to exist among world markets and as such are likely to be fertile for new developments. These are:

- in the United States, the zone represented by the Virginias is poorly served by both the U.S. South and the Canadian suppliers, for whom it constitutes some kind of a "no man's land", characterized by high delivered costs. This situation leads to higher newsprint costs for the publishers involved in this area, and is likely to act as an incentive for the development of some local newsprint capacity. Because of the optimal size of a newsprint mill, such a development is likely to result in some market loss for both the Canadian and the U.S. South producers involved in the area.

- in Europe, both Spain and France appear to be "poorly served" largely because of the past policies of the Finnish producers, who have tended to neglect these markets. In both cases, increases in domestic capacity and a more favourable attitude toward the Canadian producers are likely to result (in fact in the case of Spain these factors appear to have had an influence in the Simex decision to acquire an interest in the Rothesay mill).

As a whole, however, these three known cases do not appear likely to have a major impact upon the position of the Canadian producers. A more exhaustive analysis, however, might reveal the existence of other unstable local markets, particularly in the U.S. South and at the juncture of the regions served by the Western and the Eastern producers. A more detailed analysis could also give some indications of where such areas could emerge in the future.

4.9 Qualitative Changes in the Demand for Newsprint

Three main factors appear likely to have some impact on the qualitative nature of the demand for newsprint during the next decade.

Changes in printing technology: In its brief to the Parliamentary Commission on Natural Resources and Lands and Forests, Consolidated-Bathurst argued that

"During the last two decades, population movements favouring suburban areas at the expense of major North American population centers, have led to rapid growth of the suburban publishing industry. This growth has been primarily caused by the development of small and medium sized newspapers. Most of these newspapers use the offset printing technique, which offers them both lower operating costs

and added flexibility. This technique, however, requires a quality of newsprint noticeably different from that used in conjunction with the letterpress process. In 1976, sales of offset newsprint, manufactured by Consolidated-Bathurst, constituted about one fifth of the company's total newsprint sales. In the future, we expect this specific newsprint grade to take a larger share of the total market, as new technological developments will enable larger newspapers to use this technology".*

This argument was partly supported by CIP, which indicated in its brief that

"... weekly newspaper publishers account for 5% of newsprint production and represent a fast growing market: five years ago, this market accounted for only 4% of the production. Although only 26 new weeklies have come out, bringing their total to 7,579, circulation has grown from 32 to 38 million a 19% increase. Annual growth rate is 3.5%."**

At this point the full implications of this trend are unknown. In its brief Consolidated-Bathurst indicated that "twin wire machines are the best means to manufacture offset newsprint". Increased demand for offset grade paper, which is estimated to represent about 15% of U.S. newsprint consumption, will likely result in increased requirements for this type of equipment which is a relatively recent development in paper-making machinery.***

* Consolidated Bathurst, Submission p. 23, DREE translation.

** CIP Brief to the Parliamentary Commission on Natural Resources and Lands and Forests p. 87.

*** A recent article in Pulp and Paper indicated that offset's market share could go as high as 50% by the early 1980's.

Changes in Roll Widths: A recent analysis made by ANPA in its Bulletin No. 18, reveals a fairly dramatic change in the widths of rolls required by daily newspapers, as shown in Table 68 below:

Table 68
Roll widths required by daily newspapers

	1967	1973	1976
55"	NA	NA	46
58"	1	45	126
59"	1	93	60
60"	311	186	119
62"	107	11	6

As evidenced by the above data, over the last decade there has been a significant reduction in the width of the rolls used by daily newspapers. This trend, if it continues, will further upset the economics of numerous paper machines, whose widths were conceived with other requirements in mind. Setting aside the specifics of each manufacturer's equipment, increased trim losses are likely to affect the producers who have concentrated their production on a few machines more than those that are able to draw upon a larger variety of machine widths, since the latter can presumably better "juggle" their incoming orders.

The importance of this trend should not be minimized, since in the past

- a Northeastern American producer had to shift its production of newsprint to groundwood papers, mainly because changes in width requirements had made its existing equipment "unfit" for the standard newsprint market.

- the fate of an Ontario mill changed noticeably when modifications in roll widths significantly curtailed its trim losses.

Expected growth of the Rotogravure Market - In its submission to the Quebec Parliamentary Commission on Natural Resources and Land and Forests, Consolidated-Bathurst mentioned that:

"Rotogravure, which is a process mainly used for high quality colour printing, requires a better quality of newsprint. Most Sunday supplements are printed using this process. There has been a tendency to demand better quality printing and an increasing use of colour will develop, in relation to the development of the rotogravure process in U.S. newspapers printing plants."*

Since this gravure grade newsprint tends to be produced on comparatively slow, narrow width machines, one could expect Canadian producers to try to seize a growing share of this worldwide market, and of other groundwood-based paper markets.

4.10 Stability of Currencies

The presently favourable exchange between the Canadian dollar and the U.S. dollar and other strong currencies should be considered a rather precarious advantage of limited duration.

During the late sixties, the Canadian producers suffered severely from the progressive reversal of the parity

* Page 27, our translation.

between the U.S. and the Canadian dollar (see Table 69). In numerous instances during interviews it was claimed that Canadian producers mistakenly took for a 'bona fide' price increase what was only a favourable exchange rate.

Among the comments generated during the sessions of the Quebec Parliamentary Commission on Natural Resources and Lands and Forests, several were made about the advantages enjoyed by Eastern Canada over the U.S. South in terms of the operating costs of prospective greenfield mills. The use of deflated Canadian dollars in these discussions may not be considered appropriate for the purpose of deciding on investments whose useful life often extends beyond twenty years. Rather, this advantage should be considered as a one-shot source of cash with which Canadian firms can support their existing investment plans, and consequently can correct some of the deficiencies that were generated by the low profitability of the industry in the late sixties and early seventies.

Table 69

Evolution of Key Currencies in Relation to the Canadian Dollar
(in Canadian dollars)

Can \$	1970	1971	1972	1973	1974	1975	1976	1977
U.S. Dollar	1.0440	1.0098	.9905	1.	.9780	1.0173	.9861	1.0635
Swedish Krona	.2014	.1979	.2083	.2301	.2206	.2456	.2265	.2378
British Pound	2.5016	2.4687	2.4797	2.4533	2.2884	2.2594	1.7811	1.8571
German Mark	.2863	.2904	.3108	.3782	.3785	.4144	.3920	.4586

5. Likely Developments

Likely Developments

From the analysis developed in Chapter II (see particularly Figure 1), it is clear that the Canadian newsprint industry consists in fact of two relatively independent sub-systems (Western and Eastern Canada). These industry segments operate with very few direct contacts. In the United States, the "border" between their separate markets appears to be the Rockies. Rarely do Eastern Canadian producers ship to the U.S. West, and rarely do Western producers ship to the Eastern U.S. The only recorded exception, during the Depression, was regarded as a major sign of deterioration in the organization of the industry. In overseas markets, a similar division of labour appears to exist. A possible exception is Australia, which has reportedly been supplied by both Eastern and Western Canadian producers. To a large extent, this dual structure is also reflected by the fact that only one newsprint producer (MacMillan Bloedel) operates mills within both sub-systems. As a result, a short to medium term analysis focusing on the likely future developments of the industry has to distinguish between the separate environment facing each segment of the industry.

To a large extent, the short term prospects for the Western Canadian newsprint industry appear to be relatively favourable. First, its delivered cost difference in comparison to its relevant competitors is relatively limited (\$16 per short ton on the basis of equivalent dollars). Furthermore, the recent decline of the Canadian dollar is likely to have created a de facto cost advantage in favour of the Western Canadian producers. Second, its overall structure, with the exception of

the Ocean Falls newsprint mill, is relatively sound, and as such can be expected to place the industry in a favourable competitive position in the medium term. Third, with both a small number of producers and a fairly high degree of concentration (MacMillan Bloedel alone represents 62% of total Western Canadian and 40% of the total West Coast newsprint capacity), the Western Canadian newsprint industry appears to be a stable one, and as such appears to be in a good position to confront its U.S. competition.

Some difficulties, however, are likely to emerge in the early 1980's, from two main sources:

- the entrance of Weyerhaeuser into the newsprint business in 1979. Their first machine at Longview will have a domestic capacity of approximately 100,000 tons, which represents the expected incremental consumption of the western market for the subsequent two years. These difficulties could be further compounded if Weyerhaeuser, largely for security of delivery reasons, goes forward with its plans to add a second newsprint machine in Longview. This second machine could potentially absorb the expected consumption increase for another four or five years. However, given the relatively high capital cost of this project (\$265,000 per daily ton), it is unlikely to constitute a major threat on a pure cost basis for the Canadian producers involved (on the basis of a 20 year straight line method, the new Weyerhaeuser mill would have to charge \$37.50 per ton for depreciation, compared to an estimated \$15-\$25 for the other U.S. West Coast producers and an estimated \$8-\$13 for other Canadian producers). On the other hand, since the first machine's output is to be sold on the U.S. market,

where it represents approximately 5% of the relevant market demand, the coming on line of this mill is likely to result in some amount of price competition, or at least in some slowing down of expected price increases until the market finally absorbs the increased production.

- the development of domestic capacity in some of the markets presently served by the Canadian producers. Mills presently under construction in Japan and Korea are expected to add 345,000 tons to domestic capacity in Asia by 1980. Since the output of these mills is primarily devoted to domestic consumption or to exports to other Asian countries, Western Canadian producers are likely to experience a "flat" export market or even some slight market decline within the next few years, even if domestic consumption in this market increases at a comparatively high level.

As a whole then, the prognosis for the Western Canadian newsprint producers appears to be relatively straightforward. While they are unlikely to significantly increase their capacity over the next five or six years, they are also unlikely to face any major competitive threat which could seriously endanger their present capacity levels (with the possible exception of Ocean Falls, which could be affected by the developments taking place on the various overseas markets). As a result, the future profitability of operations in the industry will depend primarily on their ability to keep cost increases (particularly labour and wood) in line with those of their Western U.S. competitors.

In comparison, the situation of the Eastern and Central Canadian producers, who represent approximately 85% of

the total Canadian newsprint capacity, seems to be more complex. Figure 12 attempts to capture the dynamics of the major issues confronting these producers. By and large, their problem, which emerged nearly a decade ago, has been one of overcapacity in relation to the existing markets. With the exception of the 1973-1974 period, the Eastern Canadian industry has regularly operated below 90% capacity over the last ten years. This chronic overcapacity, in turn, appears to have been the result of several factors. After World War II the industry found itself in an over-extended position, because it had to serve markets such as the U.S. South, which it was never designed to serve. When the Canadian newsprint industry emerged, most of its markets were located nearby. In attempting to serve more distant markets after the war, the Canadian industry became vulnerable to the development of local competition in these distant markets. This growth of local competition was fuelled by the policies of the southern publishers, the existence of available forest resources, and the natural growth of the U.S. South market. However, rather than adjust its capacity to the changing conditions, the Eastern and Central Canadian newsprint industry undertook continuous expansion of newsprint capacity, particularly during the late sixties. The resultant imbalance between capacity and demand placed severe pressures on the profitability of the Canadian producers.

The persistence of this imbalance appears to be the result of several structural factors characterizing the Eastern Canadian industry. First, by pursuing uncoordinated development policies, the various provinces involved appear to have encouraged the expansion of newsprint capacity without appreciating that all these projects would ultimately have to compete for the same available markets. Second, by backward integrating and shifting their commitments among the producers, on occasion some

large U.S. publishers have contributed to capacity increases when there were no corresponding increases in "real" demand levels. Third, the existence of a significant foreign-owned segment has probably increased the difficulty of developing concerted expansion policies to regulate overall supply-demand balances. Finally, the relatively large number of producers involved, and the differences in their strategies and commitments toward their newsprint businesses, have also increased the difficulty of evolving harmonious capacity policies for the whole industry.

To a large extent, the natural corrections, which would have occurred had some producers decided to withdraw from the newsprint business, did not take place. In this respect several factors appear to have been at play. First, in at least one case there were direct local pressures made to prevent the closing of a marginal mill. Second, by operating their mills on a cash flow basis, several companies have artificially extended the economic life of some mills. To a large extent these firms were aided indirectly by local authorities who lowered their standards or economic demands with the view of preserving sources of employment. Finally, this lack of natural corrections was amplified by the relatively poor record of most companies in finding new product markets that could be served profitably by these existing mills. However, recent developments such as Abitibi-Price's efforts to convert its Kenogami and Sault Ste. Marie mills appear to be first steps in this direction.

The 1973-1974 boom temporarily removed the supply-demand imbalance by fuelling a large amount of speculative demand. As the market cooled down in 1975 and 1976 and as newsprint consumption-saving measures were implemented, the

Eastern Canadian newsprint industry returned to the low levels of capacity utilization it had experienced during the late sixties and early seventies.

In addition to the effects of overcapacity, since the mid-sixties the Eastern Canadian industry has experienced significant cost increases, which have further depressed its profitability. These cost increases have affected the industry's main inputs, labour and wood, and their impact has been amplified by the industry's relative lack of technical efficiency, which in most cases has resulted in an inability to counterbalance cost increases through productivity gains. These cost increases have resulted partly from factors outside the industry's control, such as the high inflation rate throughout Canada and wage settlements in other economic sectors. However, some responsibility also rests with the industry, which has occasionally indulged in short term solutions, such as first harvesting wood sites proximate to mills without ensuring regeneration and subsequently harvesting increasingly distant sites.

The joint pressures of overcapacity and high delivered costs, by causing a serious strain on the profitability of most Eastern producers, have fuelled various industry efforts to raise the price of newsprint. Except during the boom years of 1973 and 1974, however, these efforts have been largely frustrated because of the joint effects of several factors. First, in spite of the existence of some price leadership, the previously-noted low level of coordination among the Canadian producers has resulted in a relatively lax price discipline. Some Canadian producers have accepted price discounts in order to compensate for their low average profits through better

operating rates. By and large, this practice appears to have been amplified by the significant cost differences existing between the various producers, as well as by the fact that even at the prices that prevailed in 1977 (\$305 ton) some producers or some mills were reported to be only marginally profitable.

Second, in addition to this "lack of discipline" (which seems to have been avoided by other producers like the Scandinavians, who have operated profitably for the last few years in spite of their extremely low operating rates), the attempts of Eastern Canadian producers to raise newsprint prices have been frustrated by the enormous buyer power enjoyed by the U.S. publishers. It has been estimated that more than half of the U.S. newsprint consumption is controlled by twenty-two publisher groups, who wield considerable economic and political power. In the presence of a significant amount of overcapacity, these publishers are apparently able to exert a noticeable effect on prices through their requests for discounts (it was reported in at least one case, that one publisher group requested discounts in the order of 6% to 7%, or about \$20 per ton).

Finally, the existence of some reserve capacity in the U.S. South has traditionally acted as another limiting factor in the attempts of the Canadian producers to obtain better prices, particularly since the withdrawal of the Finnish producers from the U.S. market.

Except during the 1974-1975 period, the Canadian producers have not been able to secure price increases beyond those needed to cover their cost increases. In fact, it is not even certain that price increases during the last few years (excluding the effect of the Canadian dollar devaluation) have been sufficient to keep up with the cost increases experienced

by Canadian producers. In U.S. dollars, the average New York delivered price increased by only 8.4% between 1975 and 1976, 7.4% between 1976 and 1977 and by only 4.9% between the first quarter of 1977 and the first quarter of 1978. The profits of most producers, after soaring in 1973 and 1974, again began to show some signs of erosion in 1975 and 1976. Were it not for the devaluation of the dollar, 1977 profitability levels would have probably declined below those of 1976 (all other things, including the effects of the strike, being equal).

As a result of these various factors, and also because several producers have been unable to make up for their lower newsprint profits with profits from other sources (despite their attempts to diversify into other non-related product grades) most producers, particularly some of the larger ones, have been experiencing both low and relatively unstable profits.

To compensate for these difficulties, since the mid-sixties several producers have sharply curtailed reinvestments in their production facilities (in order to maximize their returns on investments) or have been increasingly selective in their allocation of funds (by concentrating them on their most promising mills, for example). This process, which has been largely dictated by short to medium term financial considerations, also appears to have been encouraged by the relatively limited strategic potential and growth opportunities available in the newsprint business in comparison to the ones expected from other related lines of business. As a consequence most producers have tended to reinvest in those lines that presented the best growth and profit prospects.

The overall process that has been described has led ultimately to a decline in the efficiency of the system,

particularly as new competitors continue to develop. The limited amount of reinvestment leads to a stagnant productivity, thence to higher vulnerability to input cost increases, to a higher delivered cost, and eventually to further attempts to obtain compensatory price increases, and so on. By and large, this self-reinforcing process locks the industry into a vicious circle from which it is increasingly difficult to escape.

Since the end of 1977, however, the situation of the Eastern Canadian producers has improved. First, the devaluation of the Canadian dollar significantly increased revenues and profits relative to those of previous years. Second a noticeable surge in newsprint demand, due to both circumstantial and structural factors (such as the rapid growth of pre-printed inserts) has led to a strong improvement in the Eastern Canadian producers' operating rates, with subsequent effects upon the profitability of mills.

However, these developments, whose general direction was expected (simply from the fact that there had been practically no capacity additions in the U.S. between 1975 and 1978), should not be misinterpreted. Even though the supply demand balance confronting the Eastern Canadian producers is expected to tighten in the short to medium term, enabling them to secure some "demand related" price adjustments, the capacity increases which are scheduled to take place in the U.S. between 1979 and 1981 are likely to exert a moderating effect upon these adjustments. In fact, most attempts to forecast the evolution of the supply/demand balance appear to indicate that present capacity levels in Eastern Canada are sufficient to absorb the expected net increase in demand until 1980-1981 (see for example Appendix I), with most of the catching up taking place in 1978-1979.

This likely development in turn has several implications. First, although it will undoubtedly allow Canadian producers to raise their profit levels, it does not appear to open up much room for immediate expansion, at least until 1980 or 1981 according to the above calculations, and as such does not provide much of an outlet for large non-incremental capacity expansions.

Second, the higher prices secured by Canadian producers to restore their profit levels also make capacity expansion investments in the U.S. South more attractive. Thus this process entails the risks of some additional capacity expansion in that area after 1980-1981. Investment decisions of this type appear to have occurred already, as evidenced by Boise Cascade's recently announced decision to expand the capacity of its De Ridder mill at a fairly substantial capital cost per daily ton of capacity (estimated to be in the order of \$230,000).

Third, by raising revenues uniformly for the whole Eastern Canadian industry, this process is likely to preserve the relative profitability differences existing between the various mills, and as such may not even bring the poorest performing mills to "normal" profit levels.

These implications in turn, appear to indicate that the net demand, which is expected to materialize after 1980-1981, is likely to be satisfied by both:

- Canadian mills increasing their capacity on an incremental basis (and particularly in all likelihood by those that are already the most efficient), and
- U.S. South mill expansions and greenfield additions, as evidenced by the fact that between 1974 and 1976,

(i.e. at a time when the overall economics appeared to strongly favour incremental expansions in Canada), at least two companies, Bato and the group of publishers investing in the Dublin mill, chose to set up complete greenfield mills in the U.S. South.

The specific balance attained between these two sources will be influenced by two main forces:

- the evolution of the Canadian dollar in relation to the U.S. dollar, which by influencing the level of the price increases requested by the Canadian producers, will have a direct bearing upon the attractiveness of new capacity investments in the U.S. South.
- the ability of the Eastern Canadian producers to, keep their costs (particularly their labour costs) in line with those of their U.S. competitors, which by influencing the evolution of the cost gap existing between the two areas, will have a direct bearing upon the attractiveness of capacity increments in Canada.

As a consequence, the future development of the Eastern Canadian industry over the next five years does not appear to lend itself to drastic developments. More realistically, its future appears to hinge on two relatively limited, but related issues

1. the ability of some marginal mills to survive, which is a function of both the price increases secured and the control maintained by these mills over production costs, (including that of essential rejections), and
2. the ability of some mills to expand their capacity, which is a function of available markets (including

those vacated by marginal mills) and of the control exerted by those mills over the cost of their production factors.

As a result it does not appear that attempts to modernize "en bloc" the Eastern Canadian industry, as have been advocated by some groups, are likely to be extremely cost effective.

First, these efforts would hardly affect the fundamental causes behind the Eastern Canadian industry's lack of competitiveness (its high wood costs, its high labour costs, its high transportation costs and its distant location from the growing southern market).

Second, given the structure of the industry and its poor record at smoothing capacity increases, such efforts would entail a significant risk of destabilization of the existing supplies/demand balance, with very few benefits accruing to the collectivity.

Third they would not eliminate the fact that newsprint is forecast to remain a slow growth commodity, with limited attractiveness for most companies in the long term. This constraint, the effect of which was already felt in terms of "strategic neglect" throughout the sixties, and the consequences of which some firms in the industry are now experiencing, will not disappear as the result of such efforts.

Fourth, an overall modernization program for the Eastern Canadian industry would not eliminate the fact that as newsprint prices continue to increase, the natural advantages of the South, which are not likely to disappear in the medium term,

will reassert themselves as they did in the fifties and the sixties with the same attendant consequences.

Fifth, such a program would further lock Eastern Canada into the manufacture of a low-value-added slow-growth commodity, with limited long term profit prospects; whereas the same resources and some of the same mills could potentially be converted to higher value added products or usages.

Sixth, it would entail a certain misallocation of funds, by artificially sustaining marginal mills, depriving the most efficient mills of the growth they can legitimately expect and by favouring a particular group of firms in the industry whose present difficulties are to some extent the result of their own past decisions.

Rather than artificially "freezing" the industry into its positions through a massive injection of funds, the issue appears much more one of facilitating the further evolution of the industry and helping it overcome some of its present blockages. Throughout this review of the development of the worldwide newsprint industry, examples of such evolutions have been encountered. In fact, this is exactly what International Paper did when it converted its newsprint facilities in the North East following the move of its production facilities to Canada in the early 1920's. In the same way, this is what the Finnish producers did when the competitiveness of their newsprint facilities started diminishing in the mid-sixties. As indicated previously, in Eastern Canada some attempts have already been made in this direction. In opening non-traditional markets, such a process would permit the reorientation of some of the less efficient mills, and their withdrawal from the newsprint market would then open up some expansion possibilities

for the most efficient mills, in spite of the limited overall growth prospects, while at the same time enabling the industry as a whole to better control its average production costs.

By and large, this natural process of revitalization, if accompanied by measures aimed at reducing major input costs, appears much more adapted to both the constraints of the market and to the variety of situations existing in the Eastern Canadian industry than single minded attempts to increase the efficiency of the industry in the face of changing markets and costs of production. As such, it can provide the beginning of an option for the solution of the industry's structural difficulties.

APPENDIX I

The Next Five Years

A tentative estimate of the market potential available
to Eastern and Central Canadian producers

On the basis of presently available market information, the capacity which now exists in the Eastern and Central Canadian newsprint industry appears to be sufficient to supply the expected growth in markets until 1980 or 1981 at least. This conclusion is supported by the following analysis of the likely development of the markets supplied by the Eastern and Central Canadian producers:

- in the U.S. South, newsprint consumption is expected to grow at an average rate of 4.7% during the next five years. On the basis of the 1976 demand level, this rate of growth translates into an estimated 740,000t increase in demand between 1976 and 1981. Two capacity expansion projects presently under construction (Bowaters and Cox-Knight-Ridder Media General) will absorb approximately 300,000 tons of that expected growth. A third project, Bato, is expected to supply another 160,000 tons before 1981. As a result, the maximum incremental demand which could be met by the Eastern Canadian producers is likely to be in the order of 280,000 tons. To a large extent, this estimate is rather optimistic since it assumes (1) that no new capacity will emerge from marginal increments in existing mills, (2) that the Canadian producers will be able to "spread" their shipments all over the U.S. South market (which is unlikely since high rail transportation costs have largely restricted Canadian shipments to U.S. South shoreline markets), and (3) that no publisher will decide to backward integrate for security of supply reasons. Even if these assumptions hold true, however, the Canadian producers share of supplies to the U.S. South would still remain only at the 36% level of 1976.

- in the U.S. Midwest, newsprint consumption is expected to grow at an average rate of 2.3% per year, resulting in an

expected total increment in demand of 330,000 tons between 1976 and 1981. Since no regional capacity increases have been announced, this growth is likely to accrue to Canadian producers. Their share of supply would consequently increase from the present 83% level to 85% by 1981. While increased U.S. South supplies would eventually find their way into the U.S. Midwest market, changing some of these figures, this would not modify the overall analysis since these tonnages would presumably have to be withdrawn from the U.S. South market.

- in the U.S. Northeast, consumption is expected to grow at an average rate of 1.9% per year, which would result in an expected increment in demand of 240,000 tons by 1981. As in the Midwest, since no domestic capacity increases are forecast, virtually all of this amount could be claimed by the Canadian producers, whose market share would then increase from 80% to 82% by 1981.

Summarizing these estimates, the U.S. market might absorb an additional 850,000 tons of Canadian newsprint by 1981. However, since U.S. mills had 287,000 tons of reserve capacity at the end of 1976, this initial estimate should be revised downward. U.S. mills are likely to increase their operating rates before allowing Canadian mills to increase their market shares significantly. It should be noted in this regard that even with the present exchange rate, Eastern Canadian mills are still less cost effective than most mills in the U.S. South. If an average operating rate of 98% is achieved by the U.S. mills, the Southern and Eastern mills could increase production by 200,000 tons. Such a scenario would leave an incremental U.S. market of only 650,000 tons for the Eastern Canadian producers.

With an expected 4.1% yearly growth rate, the Eastern and Central Canadian newsprint market is expected to provide an incremental demand of 170,000 tons by 1981. This will likely be supplied entirely by domestic producers.

Overseas Markets

- Latin and Central America: Planned capacity additions in the order of 295,000 tons between 1976 and 1981 (Mexico, Peru and Argentina) are expected to absorb most of the growth forecast for the Latin and Central American markets (285,000 tons on the basis of a 5% annual growth rate). To a large extent this demand estimate is relatively optimistic since newsprint consumption in this part of the world has been virtually stagnant since the early 1970's (around 1.1 Mt). In fact, if this stagnation were to persist, the forecast increase in local capacity would likely result in a net market loss for external suppliers. This would particularly affect Canadian producers, who supplied approximately 68% of all imports to this area in 1975.

- Africa, with an extremely modest level of consumption (325,000 tons in 1976), is not expected to increase its demand by more than 90,000 tons (i.e. a 5% growth rate) between 1976 and 1981. In the past the Canadian producers' share of this market has fluctuated widely from year to year. Therefore, it is difficult to make any clear-cut forecast of future market shares. On the basis of the Canadian share of imports between 1970 and 1974, however, it has been estimated that one third of this growth in demand will be supplied by Canadian producers. This is a very "soft" estimate, which could easily be upset by events such as the development of local capacity.

in Nigeria (80,000 tons are reported to be under consideration for 1980) or by increased efforts by the Canadian producers on these markets.

- With a larger consumption base (650,000 tons in 1976) and a relatively mature rate of growth (approximately 3% a year for Australia between 1970 and 1975), Oceania's increased annual newsprint demand by 1981 is estimated to be approximately 100,000 tons. Given the fact that during the last five years the Canadian producers have contributed approximately 50% of all Australian imports, which represent the bulk of imports for the whole area, 50% of the future estimated growth of this market can be expected to go to the Canadian producers. Once again, this is a rather soft estimate, which could be upset by several factors including a better utilization of existing domestic capacity (in 1976 reserve local capacity amounted to 118,000 tons).

- The European Economic Community, with a large consumption base (4,488 Mt) and a forecast rate of growth of 3% a year, can be expected to increase its level of demand by approximately 520,000 tons between 1976 and 1981. In the absence of a price war, which the Canadian producers do not seem amenable to initiating, only marginal improvements in the Canadian producers' position can be expected during the next five years. Tentatively, assuming a stabilization of both consumption and market shares in the United Kingdom, and some increase in the market shares held by Canadian producers in the continental markets (France and to a lesser extent Belgium and the Netherlands), it has been estimated that Canadian producers could secure approximately 20% of the EEC demand growth over the next five years (versus their present 5% average market share on the continental EEC markets). On

the basis of these broad estimates, 105,000 tons of the expected increase in demand could go to the Canadian producers.

- Assuming a 5% rate of growth, newsprint consumption in other Western European markets (Spain, Portugal, Turkey, Greece, Switzerland) can be expected to grow by an additional 85,000 tons between 1976 and 1981. Assuming that 25% of that growth would accrue to the Canadian producers (in comparison to their present 5% market share), their shipments to these markets could increase by 20,000 tons during the next five year period. This estimate, which tries to take into account Canada's relatively favoured position in Western Europe, is probably somewhat optimistic since Turkey, Portugal and Spain are all in the process of increasing their domestic capacities. If the three mills proposed were to materialize, local capacities would increase by approximately 360,000 tons, which is much more than the expected growth in demand for the whole region.

In total, these tentative estimates for the various markets presently served by the Canadian producers indicate that an incremental market window of about 1.025 million tons could materialize between 1976 and 1981 for the Eastern and Central Canadian producers. On the basis of 1976 shipments, this would represent a yearly increase in shipments of about 2.5% per year. As indicated in the course of this short analysis, these estimates are quite tentative and in most instances are likely to lie on the "optimistic" side. However, as a whole they appear to be relatively congruent with other assessments made by industry sources. CIP, for example, has forecast a 1.4 million ton growth in consumption for the "East of the Rockies" market (including the U.S. South and Eastern Canada) between 1977 and 1982, and a growth in Canadian overseas exports by 500,000 tons between 1977 and 1987. On

the other hand, Domtar, using FAO predictions, forecast only a 1.1 million tons increase in total Canadian shipments between 1976 and 1990.

Before closing this section, however, two elements should be noted. First, these are consumption-based estimates and do not reflect the year-to-year variations which are caused by the ups and downs of the normal business cycle experienced in most developed economies. Second, these estimates are based on the assumed continuation of past strategies of Canadian producers, and as such they do not allow for possible effects of aggressive price wars which could develop in any of the main markets (particularly in Europe) with the object of increasing market share.

As a whole then, the forecast additional demand which is likely to accrue to the Eastern and Central Canadian producers (1.025 Mt) between 1976 and 1981, does not appear to require the development of any significant amount of newsprint capacity, except for security of supply reasons. In 1976, out of a total capacity of about 8.4 million tons, Eastern and Central Canadian manufacturers produced approximately 7.5 Mt of newsprint, of which only 7.34 Mt were shipped. Adding to these shipments the 1.025 Mt increase forecast between 1976 and 1981, the 8.36 Mt total is nearly equivalent to the present level of capacity. Since the forecast mill conversions to other products (Kenogami, Sault Ste Marie) are likely to be balanced by marginal increases in newsprint capacity at other mills, these forecasts appear to imply that present capacity levels will be physically adequate to supply the expected newsprint demand accruing to the Eastern and Central Canadian producers until at least 1980.

Table A-1
Market Potential Estimates

	1976 Newsprint consumption (million tons)	Expected growth rate	Expected five year increment (000t)	Expected capacity additions 1976-1981	Net available (000t)	Net Avail- able to Eastern Canadian producers (000t)
Eastern & Central Canada	.750	4.1%	170	0	170	170
U.S.A. - South	2.874	4.7%	740	510	230	} 650
- Northeast	2.445	1.9%	240	0	240	
- Midwest	2.749	2.3%	330	0	330	
E.E.C.	4.488	3%	520	0	520 (20%)	105
Other Western Europe (Scandinavia excluded)	.682	5%	85	0	85	20
Latin and Central America	1.036	5%	285	295	-10	0
Africa	.325	5%	90	0	+90	30
Oceania	.652	3%	100	0	+100	50
						<u>1025</u>

Sources: CPPA, CIP, FAO

