

QUEEN  
HD  
9839  
.N43  
C2  
F8  
1994  
v.1

IC

THE FUTURE OF NEWSPRINT  
MANUFACTURING IN CANADA

-----  
Report No. 1

NORTH AMERICAN NEWSPRINT DEMAND

(1993 - 2010)

Competitiveness Analysis  
Corporate and Industrial Analysis Branch

in collaboration with

Forest Industries  
Resource Processing Industries Branch

INDUSTRY CANADA

May 31, 1994

Queen  
HD  
9839  
N43  
C2  
F8  
1994  
v.1

# Table of Contents

Executive Summary ..... i

1. Introduction ..... 1

2. Domestic Newsprint Demand Based on Historical Trends ..... 2

    2.1 Constituents of Demand for North American Newsprint ..... 2

    2.2 Daily Newspapers ..... 3

        2.2.1 Circulation ..... 4

        2.2.2 Advertising ..... 6

        2.2.3 Basis Weight ..... 7

        2.2.4 Daily Newspapers Summary ..... 8

    2.3 Other End Uses ..... 9

        2.3.1 Free Standing Inserts ..... 10

        2.3.2 All Other End Uses ..... 12

    2.4 Summary of Domestic Demand for Newsprint ..... 13

3. Offshore Newsprint Demand Based on Historical Trends ..... 17

    3.1 Major Offshore Markets ..... 17

        3.1.1 Western Europe ..... 18

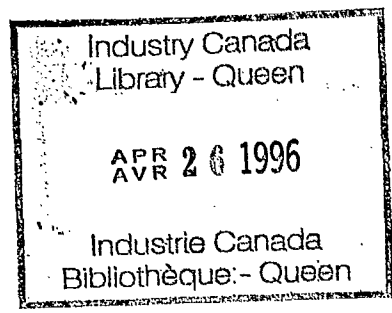
        3.1.2 Oceania and Japan ..... 19

        3.1.3 Latin America ..... 20

        3.1.4 Asia and Africa ..... 21

    3.2 Total Export Demand for North American Newsprint ..... 22

    3.3 Summary of Total Demand for North American Newsprint ..... 26



<b>4. The Impact of Technological Changes</b> .....	29
4.1 Threats to Newsprint Demand .....	29
4.1.1 Portable Electronic Newspaper .....	29
4.1.2 Interactive Television .....	30
4.2 Impact of This Threat on Newsprint Demand .....	33
4.2.1 Impact on Circulation .....	34
4.2.2 Impact on Newspaper Advertising .....	34
4.2.3 Impact on Free Standing Inserts .....	37
4.2.4 Assumptions for Estimating A Worse Case Impact .....	38
4.2.5 Results of Our Worse Case .....	39
4.2.6 Most Likely Case .....	41
4.3 Summary .....	42
<b>5. Estimated Demand by Region</b> .....	43
5.1 Canada's Historical Share of the U.S. Market .....	43
5.2 Regional U.S. Newsprint Markets .....	45
5.3 Projections of Demand in U.S. Regional Markets .....	50
5.3.1 Population Growth As Indicator of Demand Growth .....	50
5.3.2 Newsprint Consumption Per Capita .....	50
5.3.3 Regional Newsprint Demand Projections .....	51
<b>6. Summary and Conclusions</b> .....	53
<b>Bibliography</b> .....	54

## Executive Summary

With the recent frenzy regarding electronic super-highways, multi-media and interactive television, there are prospects that our lives will experience significant changes in the near future: the way we interact, socially and politically, how we do our work, even how we shop could all undergo a dramatic evolution. Discussions of these issues, although increasingly necessary, are subject to wild imagination and speculation.

Our present purpose is to project the demand for newsprint over the long term. Given that the new electronic information technologies that are being developed represent threats to the traditional form of newspaper, it becomes incumbent upon us to venture into this domain of future social and technological uncertainty. We have no special crystal ball at our disposal. We aim only at a balanced assessment of prospects as they appear at this point in time.

Section 2 of the report examines domestic newsprint demand solely from the perspective of historical trends. Already, since the early days of radio and television, newsprint, as a medium of advertising and of news information, has been losing share to newer forms of communication. However, although newsprint demand has been growing more slowly than the general economy, there has been growth as populations increase and new households are formed. An important first step in our analysis is to determine the magnitude of this growth in the absence of any abnormal impact from the new technologies that are on the horizon.

Section 3 of the report expands the analysis to include offshore sources of demand for North American newsprint. Once again, we take history as our guide: we assume that North American newsprint mills will continue to hold the same share of foreign markets that they had during the 1980s.

On the basis of our analysis in sections 2 and 3, we find that the demand for North American newsprint could have a long run growth rate of about 1.6 per cent per year. This estimate assumes a long run economic (real GDP) growth rate of 2.5 per cent per year, and a population growth rate of close to 1 per cent per year. Meanwhile, offshore markets, in aggregate, could experience growth of close to 3 per cent per year. As such, they should continue to be attractive to North American producers, especially during periods of weak domestic demand. In summary, and based on historical trends, total demand for North American newsprint could grow from 15+ million metric tonnes today to almost 21 million metric tonnes by the year 2010. This exceeds current newsprint capacity by 4 million tonnes, and points towards a new round of capacity additions by the turn of the century.

In section 4, the report addresses the nebulous issue of the magnitude of the threat represented by the new electronic information technologies. Although it is somewhat

## North American Newsprint Demand (1993-2010)

### Executive Summary

---

premature to be confident about conjectures in this realm at the current point in time, we make our best estimates as to where the major threat lies, how it will unfold, the timing of the threat, our estimate of the most likely case based on current indications, and the worse case scenario regarding the threat's potential impact on newsprint demand

In our estimation, the development of portable electronic newspapers (which ultimately may represent the greatest threat to newsprint) will not reach a commercially viable form before the year 2005. Since it always takes time for consumer acceptance to develop, the portable electronic newspaper, even if successful, would have a negligible impact on newsprint demand within our time horizon.

The more likely threat within our period could come from interactive television. With recent technological advancements in digital compression and switching, it is already clear that early versions of the hardware will be available in very short order. And with popular applications such as video-on-demand to stimulate consumer acceptance, a significant proportion of the North American population may purchase early versions of the service before the turn of the century.

What is less clear is how long it will take for software applications and programming to develop to take advantage of this hardware platform. These kinds of developments always take much longer than first expected. Moreover, the eventual impact is also difficult to forecast. In particular, and related to newsprint demand, it is unclear how long will it take to develop interactive news retrieval and advertising/shopping programs which provide consumers with significant advantages beyond what is currently available. Thus, although it is clear that interactive television could threaten newsprint demand, both in terms of traditional newspaper readership, and, when coupled with indexed product databases, in terms of demand for classified advertising, it is entirely unclear when, and to what extent, these threats will be realized. Ultimately, these new electronic products, lacking the portability and accessibility of traditional newspapers, may merely complement rather than replace newsprint.

These questions regarding the nature and eventual impact of interactive television on newsprint demand will likely not be answerable for several years, if not until the next century. For it is extremely unlikely that newsprint demand will suffer any abnormal erosion before this time. Accordingly, the most reasonable projection of newsprint demand, based on current evidence, is that it will continue to follow historical patterns for the foreseeable future.

Although it is too early to make predictions on these matters, we can piece together what we consider to be a worse case scenario. On the assumption that both new readers and classified advertising will be lost to new media technologies, we estimate that more than 25 per cent of newsprint demand could be lost over a fifteen year time period. However, we are unable to predict when this erosion in newsprint demand will occur, if at all. Much less can we predict how quickly it might unfold, or whether it will have the magnitude of our worse case.

**North American Newsprint Demand (1993-2010)**  
**Executive Summary**

---

Indeed, the ultimate nature and timing of the impact of the new technologies will not be ascertainable for several years to come, and possibly not before the turn of the century. The risk is very small that newsprint will suffer any abnormal loss of demand in this decade. And there is also not yet any reason to believe that significant erosion in demand will take place in the 2000 to 2010 period. In the absence of clear indications regarding the development and timing of viable alternatives to traditional newspapers, we believe it is best to plan on the basis of historical trends. Accordingly, it is most reasonable to assume that newsprint demand will continue to grow at the rate of 1.6 per cent per year, as estimated from historical data. Nevertheless, the situation will need to be revisited, perhaps in another five years, to see if there are any clearer indications that there is an impending sea-change in newsprint demand.

In section 5, the report looks at the domestic U.S. market from a uniquely Canadian point of view. Canada's declining share of the U.S. market is examined, both in aggregate and in the four major U.S. regions: Northeast, Midwest, West and South. Most of Canada's newsprint exports to the U.S. have been to markets in the Northeast and Midwest which have been flat or declining in the recent past, rather than to the growing markets in the South and the West. Further, on the basis of projections of a continued demographic shift towards the South and the West, these latter regions are projected to continue to have the highest newsprint demand growth in the decades ahead. As a result, Canadian producers will be challenged to maintain their market share in the U.S. To do so, their cost competitiveness position would have to improve as they would be obliged to direct more of their U.S. shipments greater distances to reach the fastest growing markets.

## 1. Introduction

The purpose of this report is to estimate long run demand for the newsprint manufactured by North American suppliers. There are four parts to this analysis:

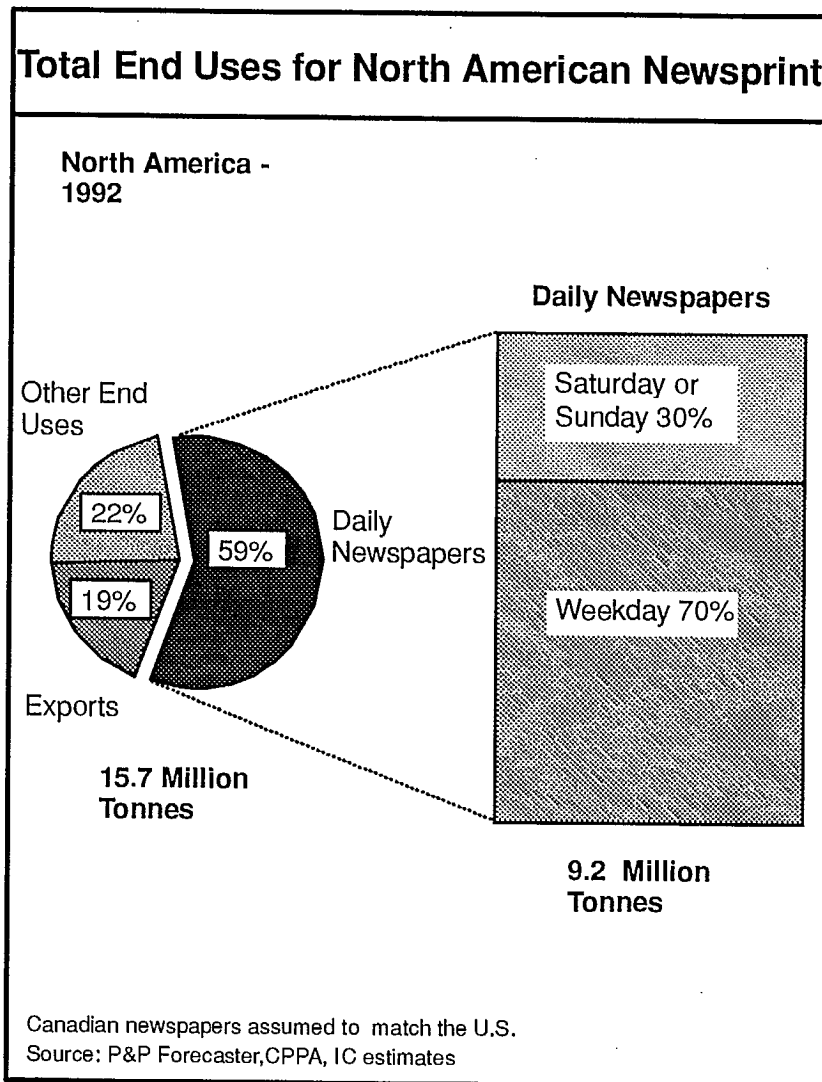
- The first part (section 2) estimates future domestic demand for newsprint. The analysis is largely based on historical U.S. data. From this data we project long run growth rates for GDP, household formation, daily and Sunday newspaper circulation, newspaper advertising expenditures and newspapers' share of total media advertising, free standing inserts and other uses of newsprint (weeklies, magazines etc).
- The second part (section 3) estimates demand for North American newsprint in offshore markets. Once again; we take history as our guide: we assume that North American newsprint mills will continue to hold the same share of foreign markets that they had during the 1980s. As far as the growth of those markets themselves are concerned, we make use of the projections of the Pulp and Paper Forecaster (1993): Restructuring of the North American Newsprint Industry - Outlook for 1993-2005.
- The third part of the analysis (section 4) examines the potential impact of emerging electronic information technologies on newsprint demand. At the current point in time, there are no good grounds for changing our historically based projection of newsprint demand. But if and when the threats do become more concrete, we identify the areas of vulnerability, and the potential size of the impact over a fifteen year period. This matter will need to be monitored from time to time for signs of change that will affect newspaper readership and advertising.
- The fourth part of the analysis (section 5) examines U.S. regional growth in demand from the perspective of opportunities for Canadian newsprint exports into the U.S. The U.S. is divided into four regions: Northeast, Midwest, West and South. Projections of growth in newsprint demand is based on population forecasts, current per capita newsprint consumption in the four regions, and projections of overall U.S. per capita consumption growth from section 2 of this report.

North American Newsprint Demand (1993-2010)  
Domestic Newsprint Demand Based on Historical Trends

2. Domestic Newsprint Demand Based on Historical Trends

2.1 Constituents of Demand for North American Newsprint

¶ Dailies (including weekend) newspapers account for almost 60 per cent of total demand for North American newsprint. The remaining demand from domestic sources comes from "other end uses" such as free standing inserts, weekly papers, magazines, etc. Almost 20 per cent of the total demand for North American newsprint originates from offshore (examined in section 3).



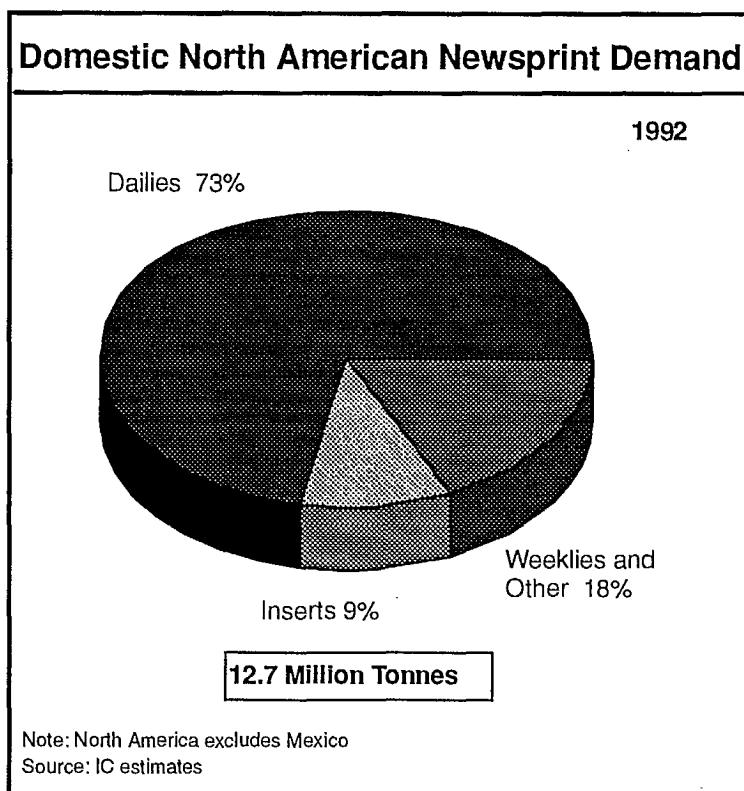


## North American Newsprint Demand (1993-2010) Domestic Newsprint Demand Based on Historical Trends

---

### 2.2 Daily Newspapers

- ¶ Daily newspapers constitute almost three-quarters of domestic North American demand.



- ¶ Newsprint demand from dailies is made up of three constituents:

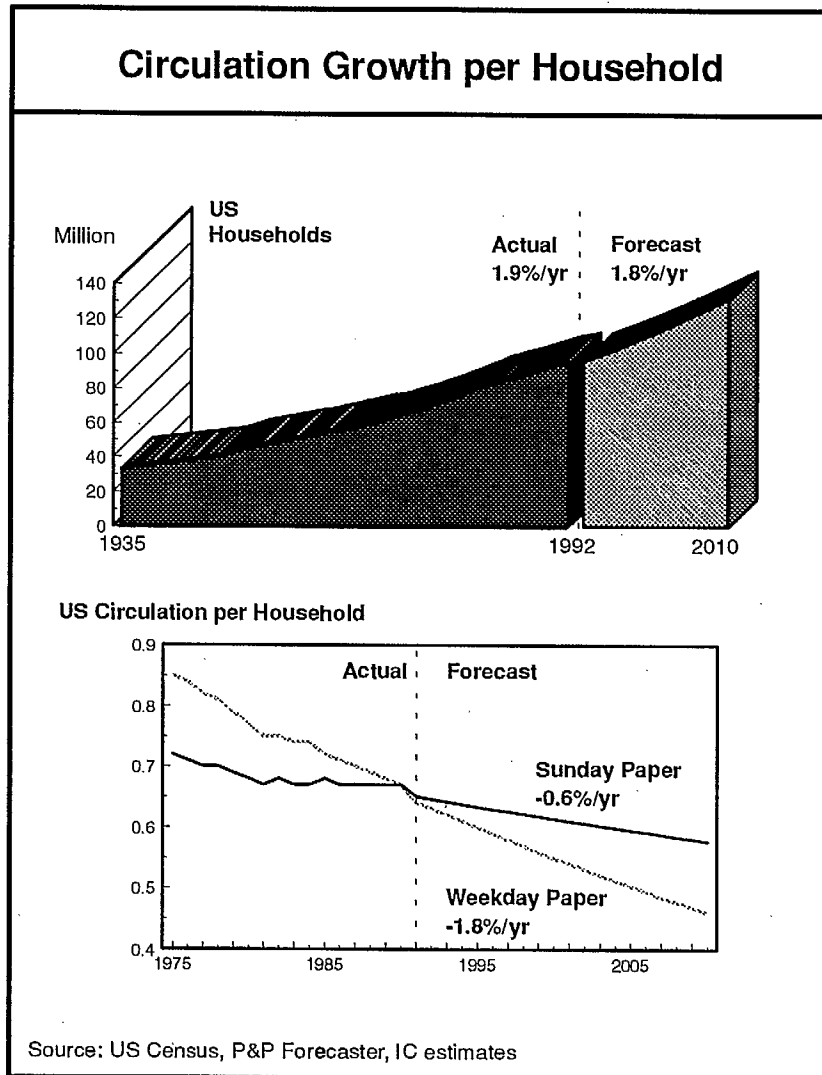
- Circulation (number of newspapers)
- Advertising (size of newspapers; i.e. number of pages)
- Basis Weight (weight per page)

# North American Newsprint Demand (1993-2010)

## Domestic Newsprint Demand Based on Historical Trends

### 2.2.1 Circulation

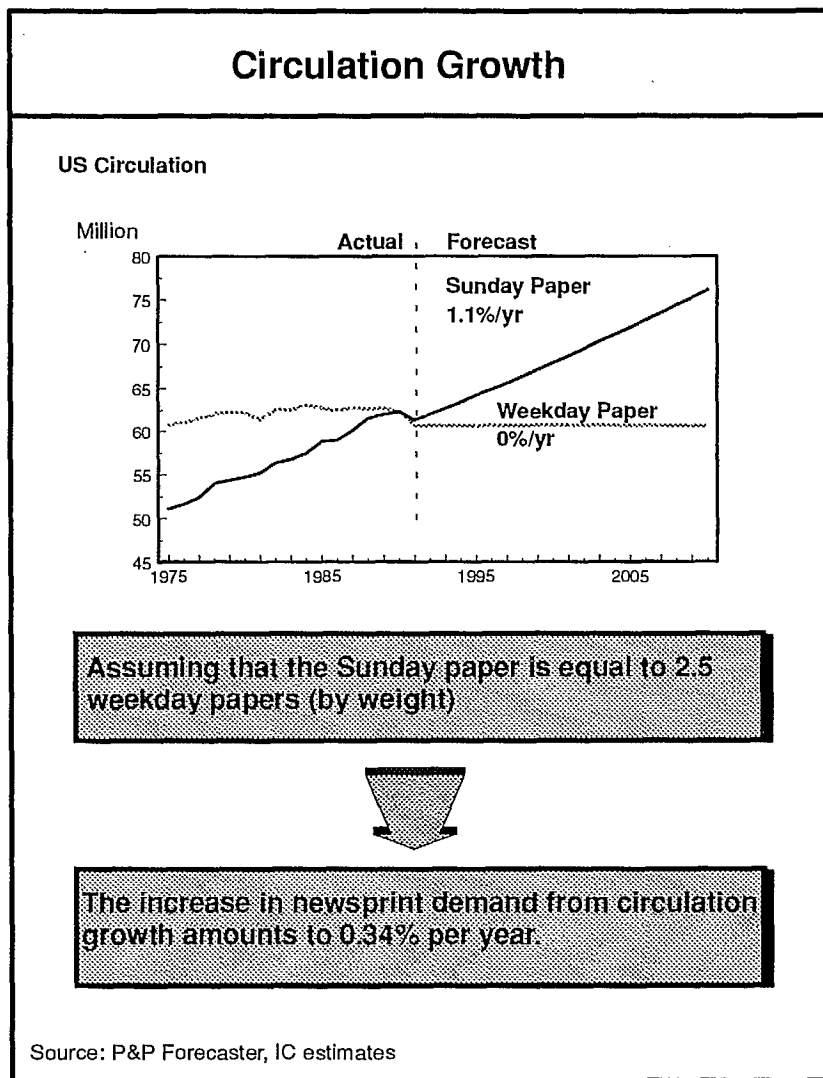
- ¶ Household growth continues to outpace population growth: the average size of households continues to decrease. And the more relevant determinant of circulation growth is household growth.
- ¶ Circulation of both Sunday papers (Saturday in Canada) and weekday papers per household continues to decline. This decline is less marked for Sunday papers.



# North American Newsprint Demand (1993-2010)

## Domestic Newsprint Demand Based on Historical Trends

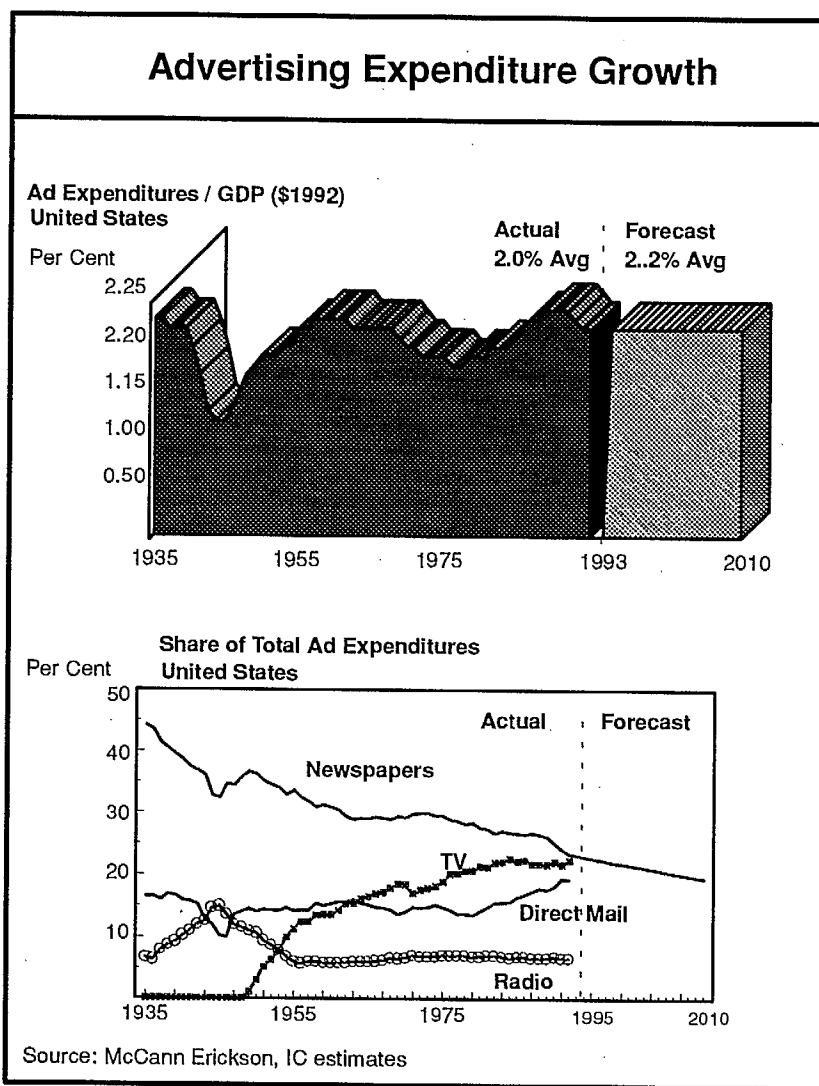
¶ In absolute terms (rather than per household), growth in weekday circulation is flat, and growth in Sunday papers is a modest 1.1 per cent. Combined (and abstracting from the impact of advertising growth) this circulation growth would yield a modest increase in newsprint demand of 0.34 per cent per year.



## North American Newsprint Demand (1993-2010) Domestic Newsprint Demand Based on Historical Trends

### 2.2.2 Advertising

- ¶ Newspapers' share of media advertising revenue will continue to decline. Television has been the main competition; however, there has been significant growth in direct mail in recent years.

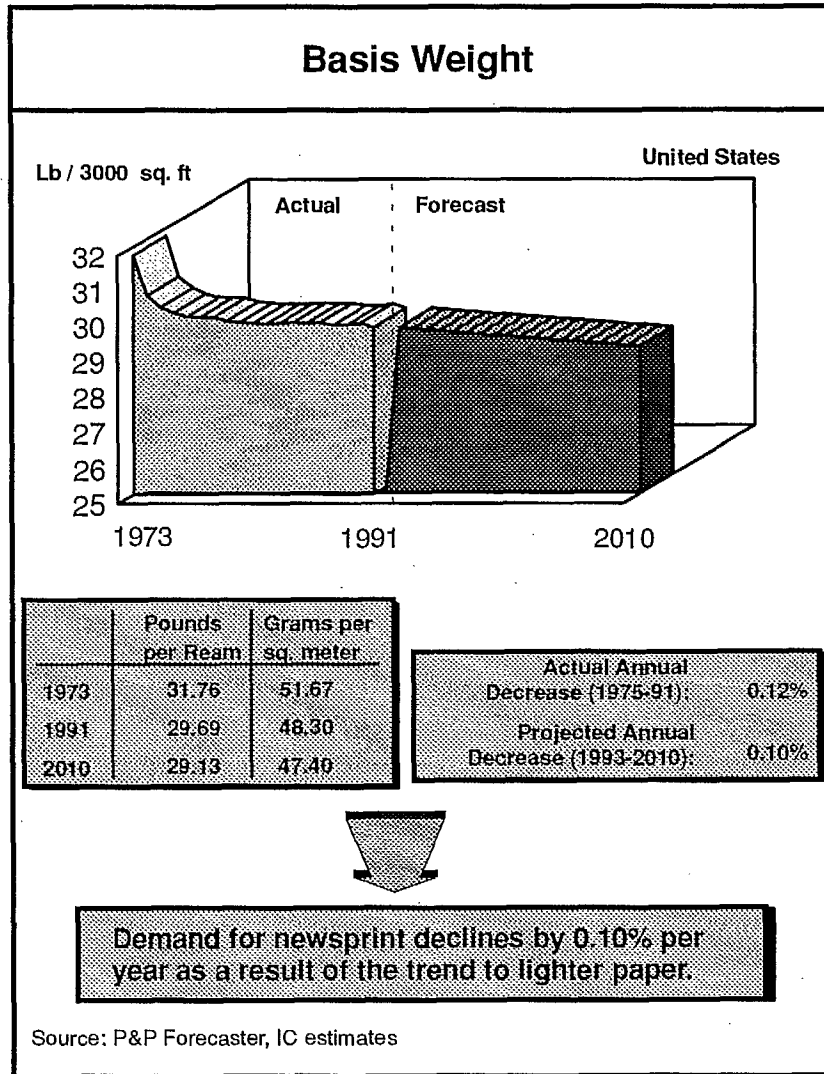


*Newsprint demand growth from advertising should amount to about 1 per cent per year.*

**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

**2.2.3 Basis Weight**

¶ Newsprint used by newspaper publishers is very gradually getting lighter (on average) over time.

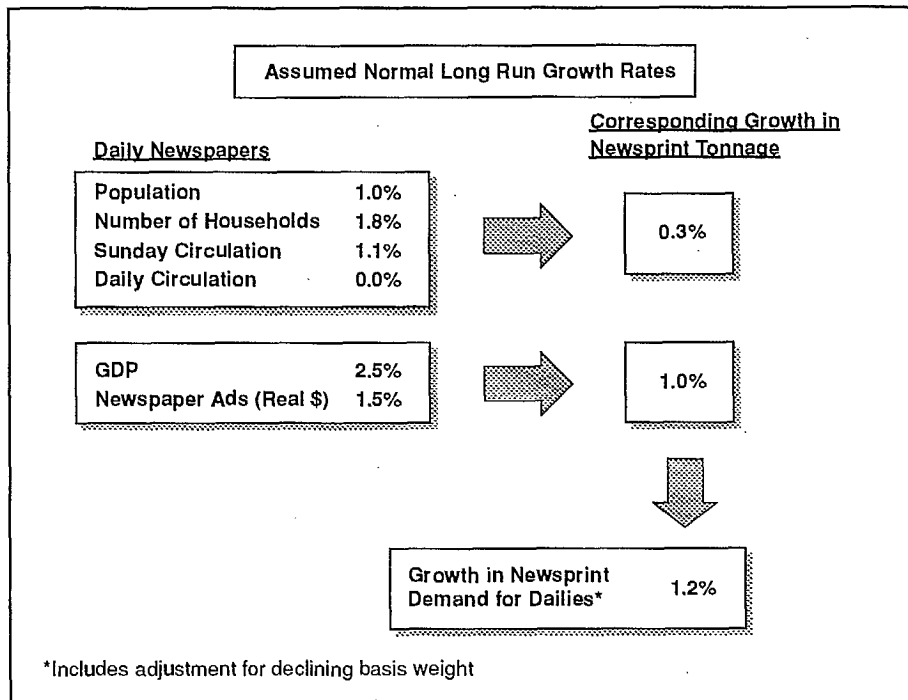


**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

---

**2.2.4 Daily Newspapers Summary**

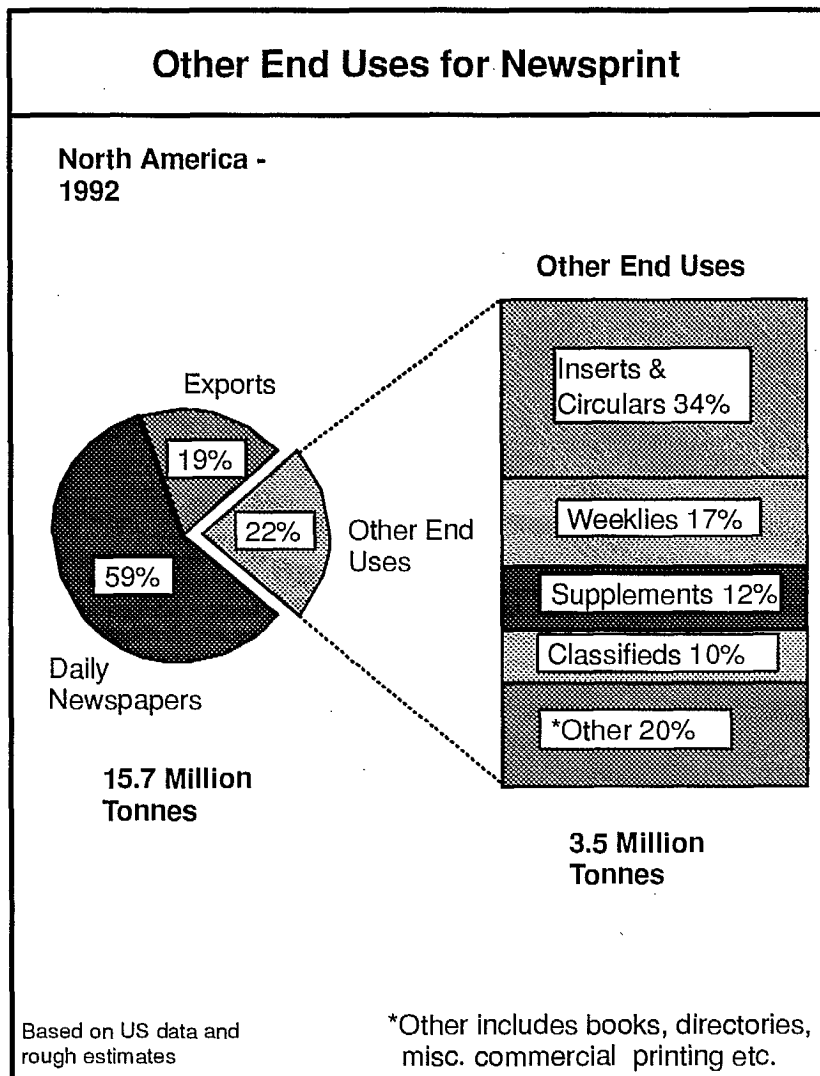
¶ Based on historical trends in circulation, advertising and basis weight in the U.S., we expect demand for newsprint for daily (and Sunday) newspapers to grow by 1.2 per cent per year over the long run.



**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

**2.3 Other End Uses**

¶ Free standing inserts and advertising circulars constitute the largest source of domestic demand among other end uses for newsprint.

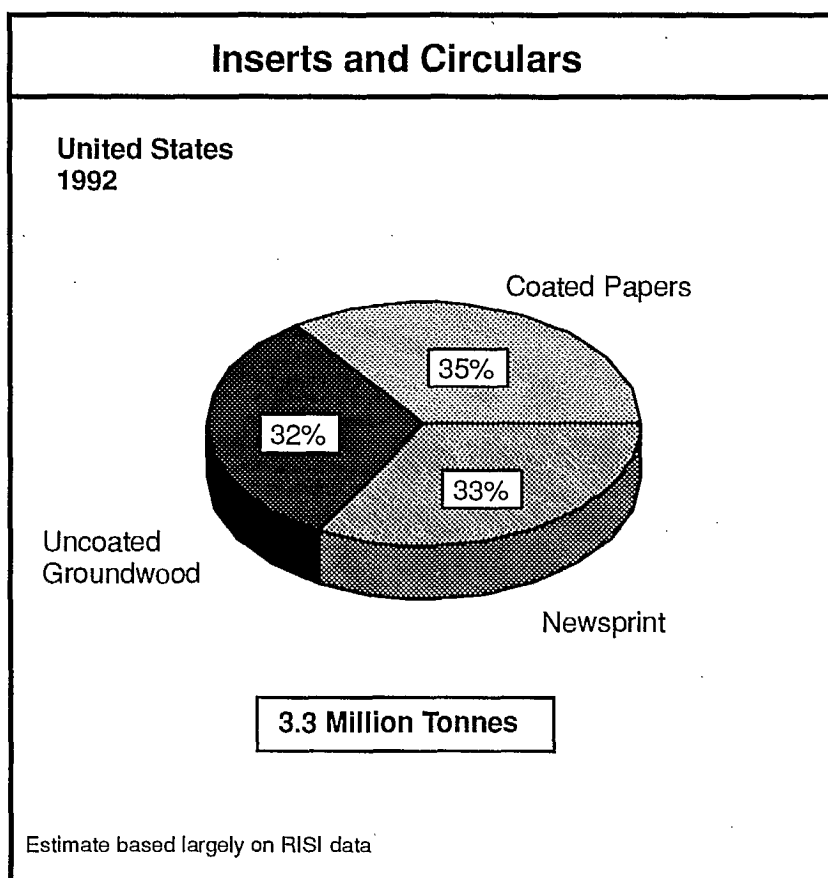


## North American Newsprint Demand (1993-2010) Domestic Newsprint Demand Based on Historical Trends

---

### 2.3.1 Free Standing Inserts

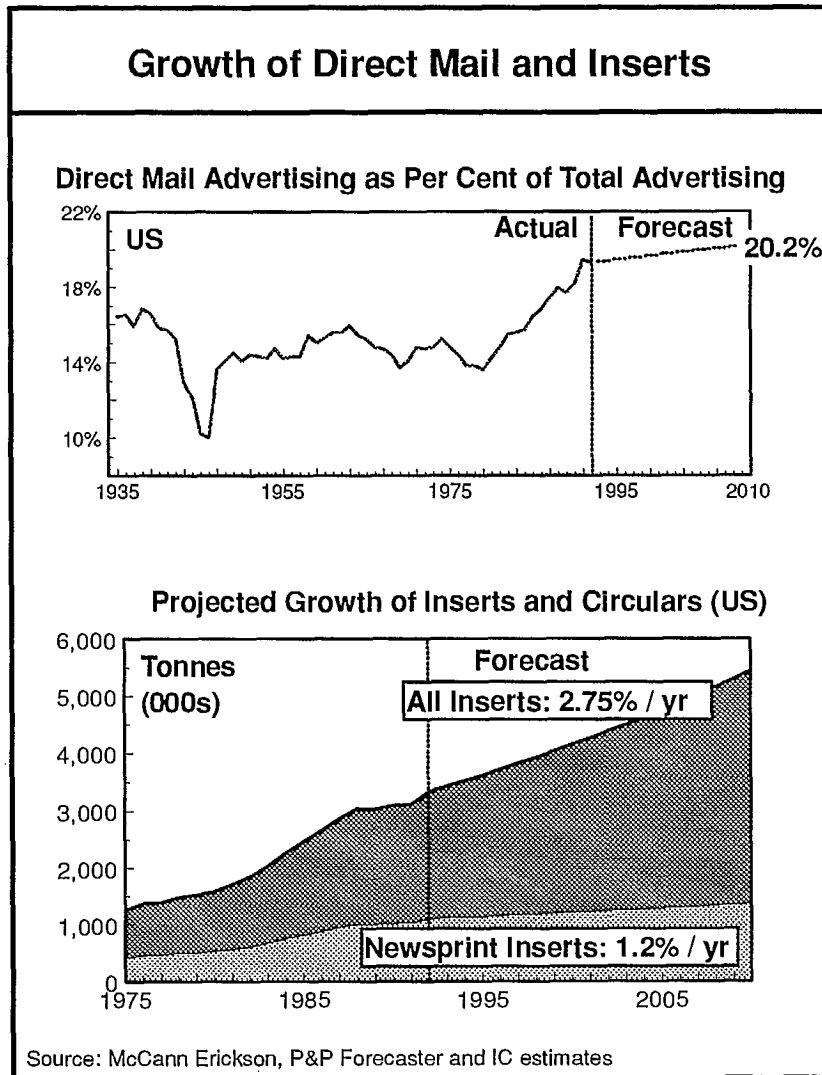
- ¶ Newsprint is the type of paper used for about one-third of free standing inserts. The rest is made from other kinds of uncoated groundwood papers and from coated papers.





**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

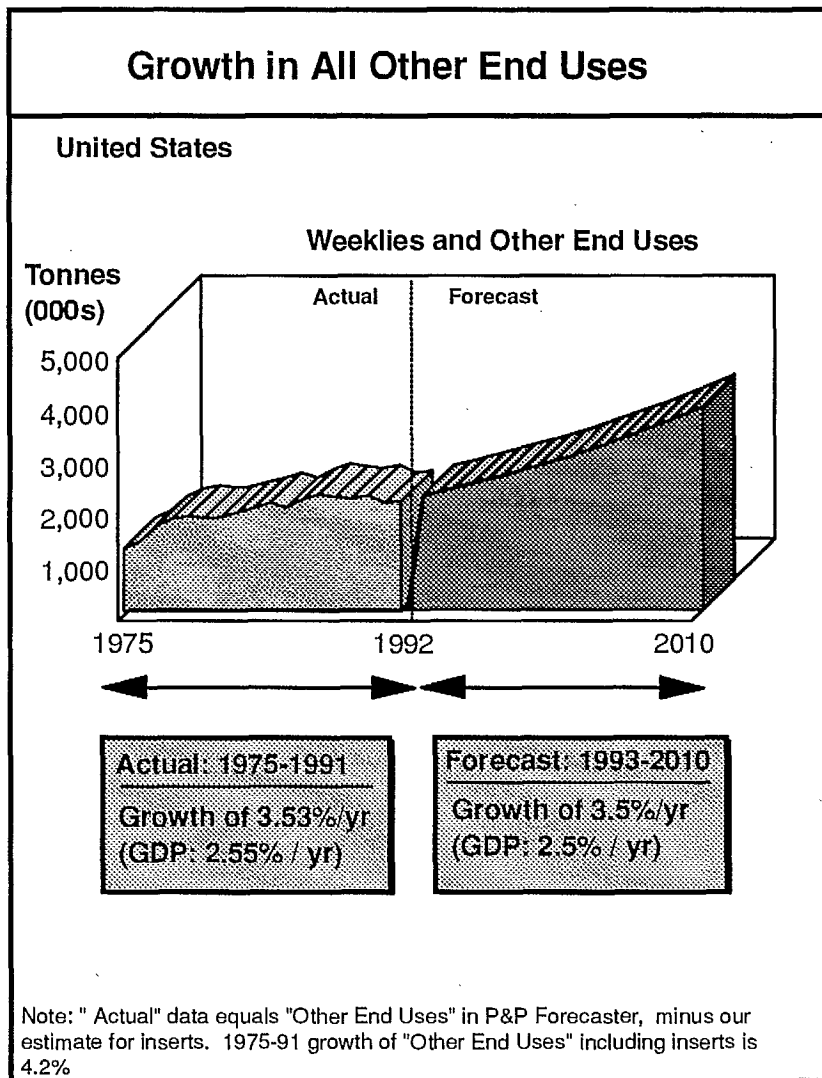
Direct mail advertising revenues should continue to gain share among other forms of advertising, though not as rapidly as in recent years. This will help circulars and free standing inserts (all types of paper) achieve a long run growth rate of 2.75 per cent per year. However, the newsprint proportion of this form of advertising will grow by only 1.2 per cent a year.



**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

**2.3.2 All Other End Uses**

¶ We project that all other end uses (besides free standing inserts) will continue to grow at 3.5 per cent per year as they did in 1975 - 1991.

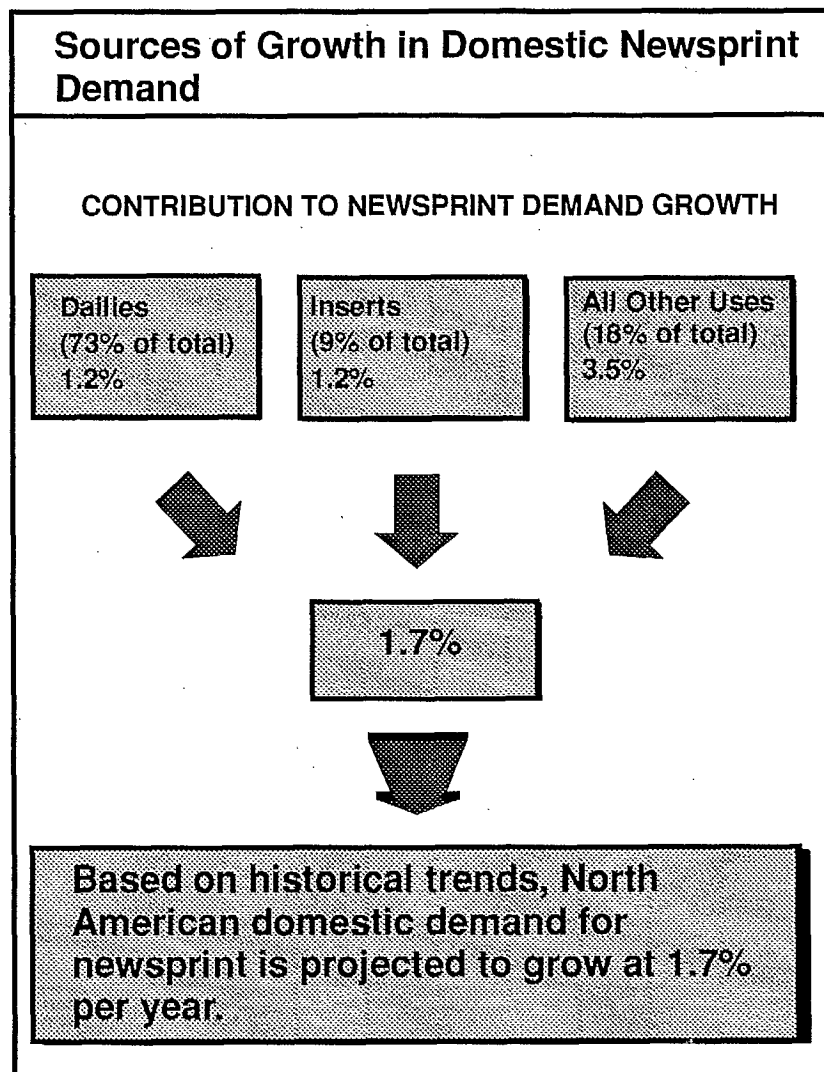


**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

---

**2.4 Summary of Domestic Demand for Newsprint**

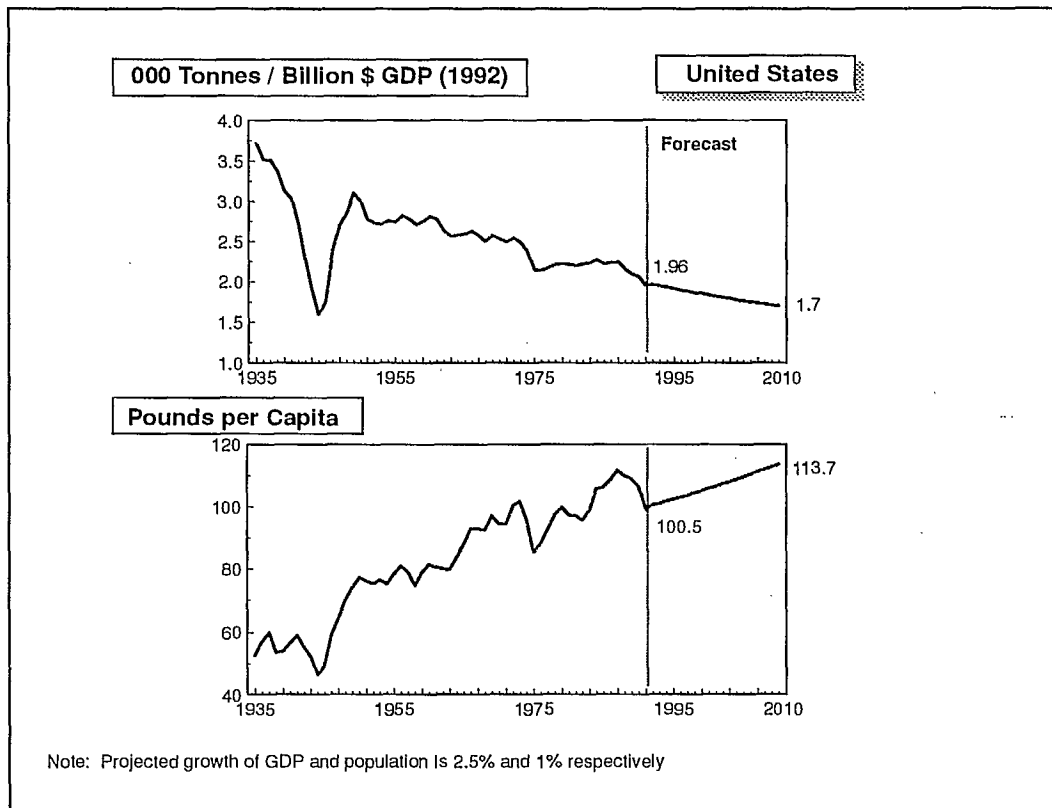
¶ If historical trends were to continue, then domestic newsprint demand ought to grow at a rate of about 1.7 per cent per year. Free standing inserts would grow at about the same rate as newsprint demand for dailies. Meanwhile, end uses other than newsprint inserts would continue to grow the most rapidly.



**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

---

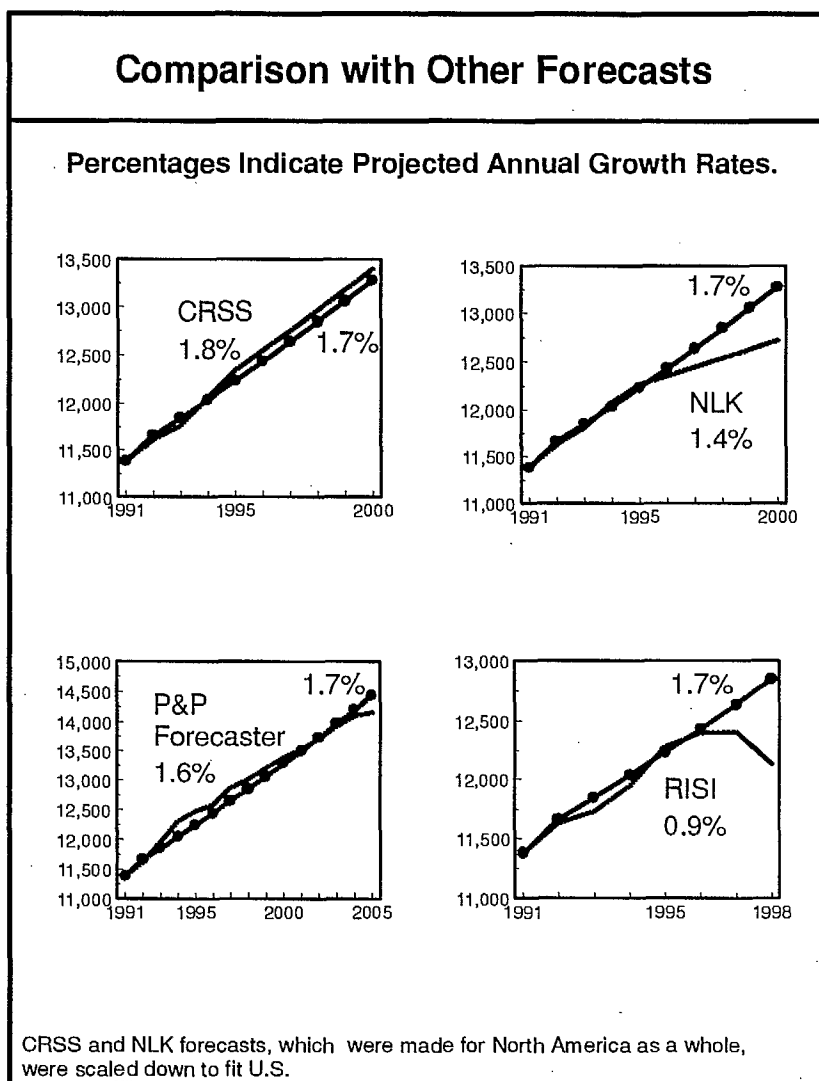
¶ As the following charts illustrate, our newsprint demand projections fit the historical trend.



**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

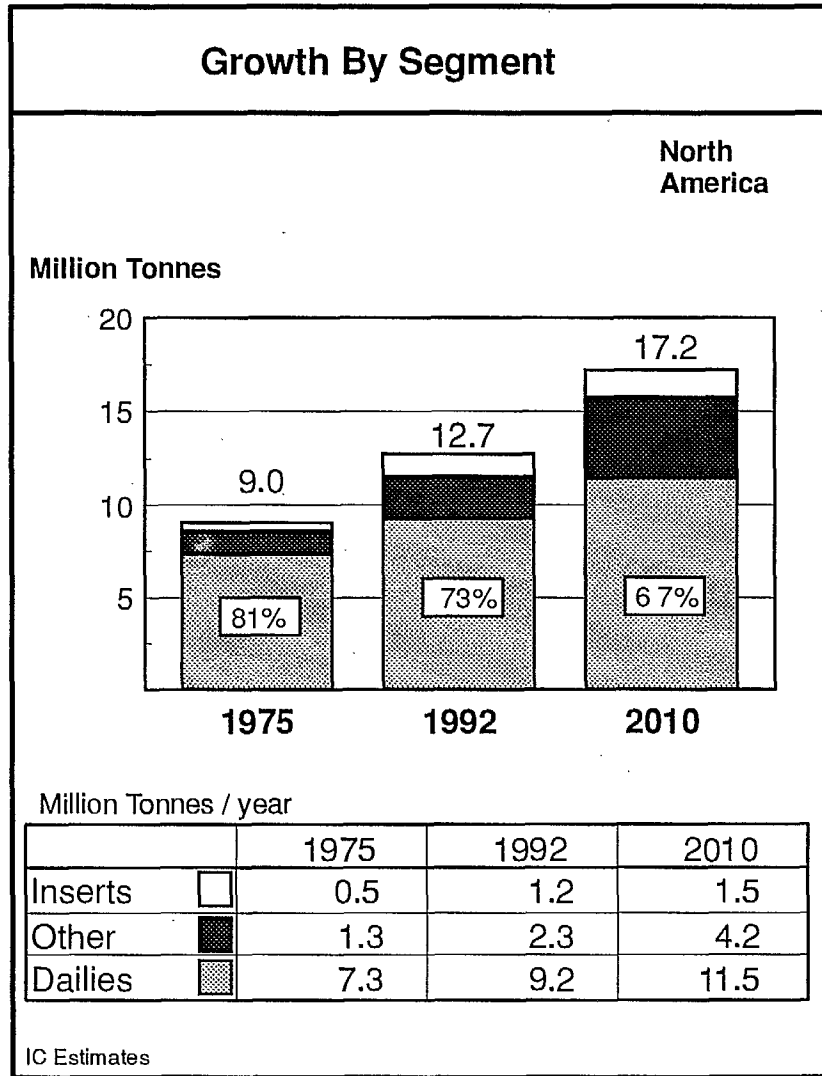
¶ Other forecasts of annual growth rates of domestic newsprint demand are close to our historically based estimation:

CRSS	1.8%
P&P Forecaster	1.6%
NLK	1.4%
RISI	0.9%



**North American Newsprint Demand (1993-2010)**  
**Domestic Newsprint Demand Based on Historical Trends**

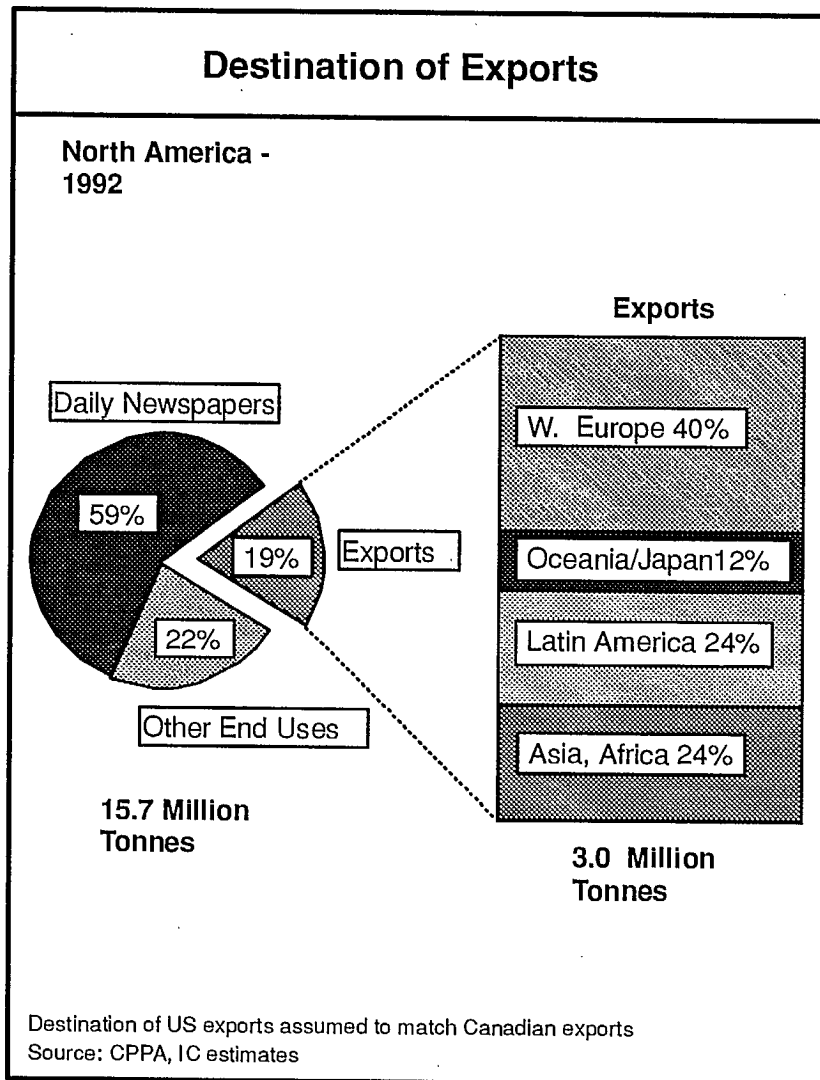
If domestic demand trends continue, the relative importance of daily newspapers will continue to decline from 81 per cent in 1975 to 67 per cent in the year 2010. Meanwhile, total domestic newsprint demand would grow to 17.2 million tonnes.



### 3. Offshore Newsprint Demand Based on Historical Trends

#### 3.1 Major Offshore Markets

¶ Western Europe constitutes the major export market for Canadian newsprint (40 per cent). Other market segments include Oceania - Japan, Latin America and Asia - Africa.

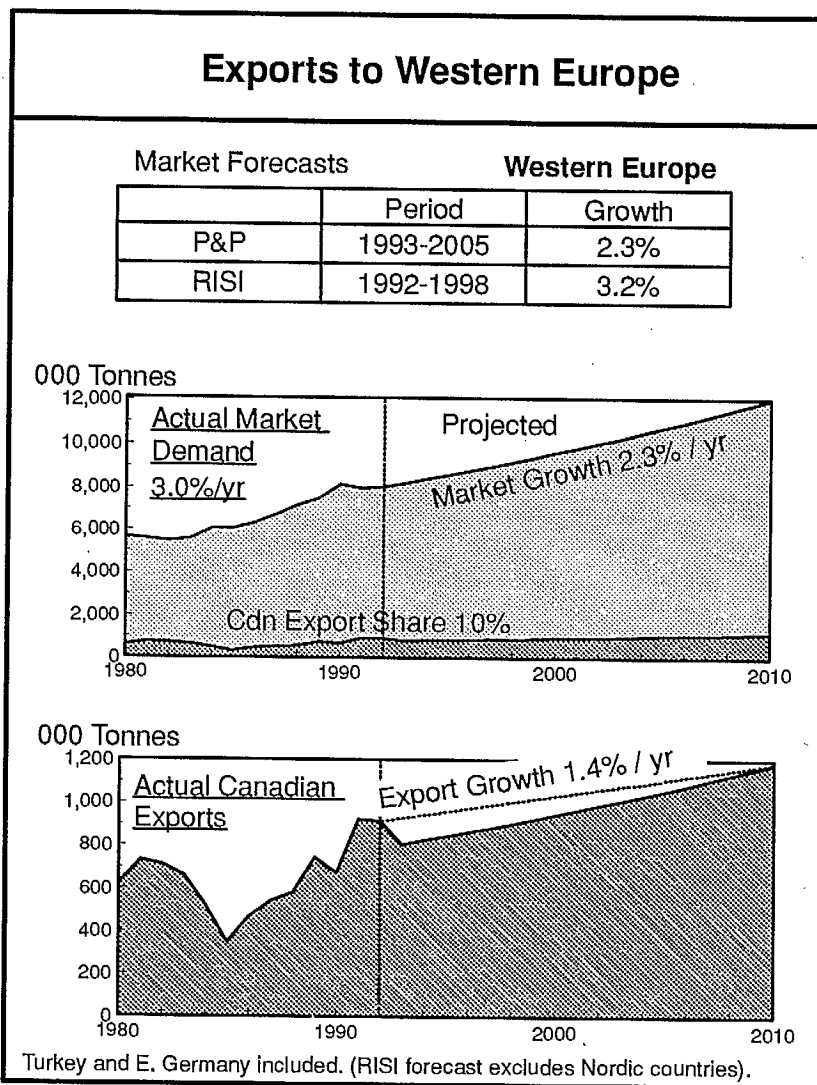


**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

¶ In projecting exports into these market segments, we assume Canada and the U.S. will retain their historical market shares (based on 1980 to 1992). Projections of growth in the offshore market itself are largely taken from Pulp and Paper Forecaster (RISI projections are included for comparison purposes).

**3.1.1 Western Europe**

¶ Newsprint demand in Western Europe should grow by about 2.3% per year. If Canada's share of this market returns to the historical level of 10%, then export growth will be 1.4 per cent per year.

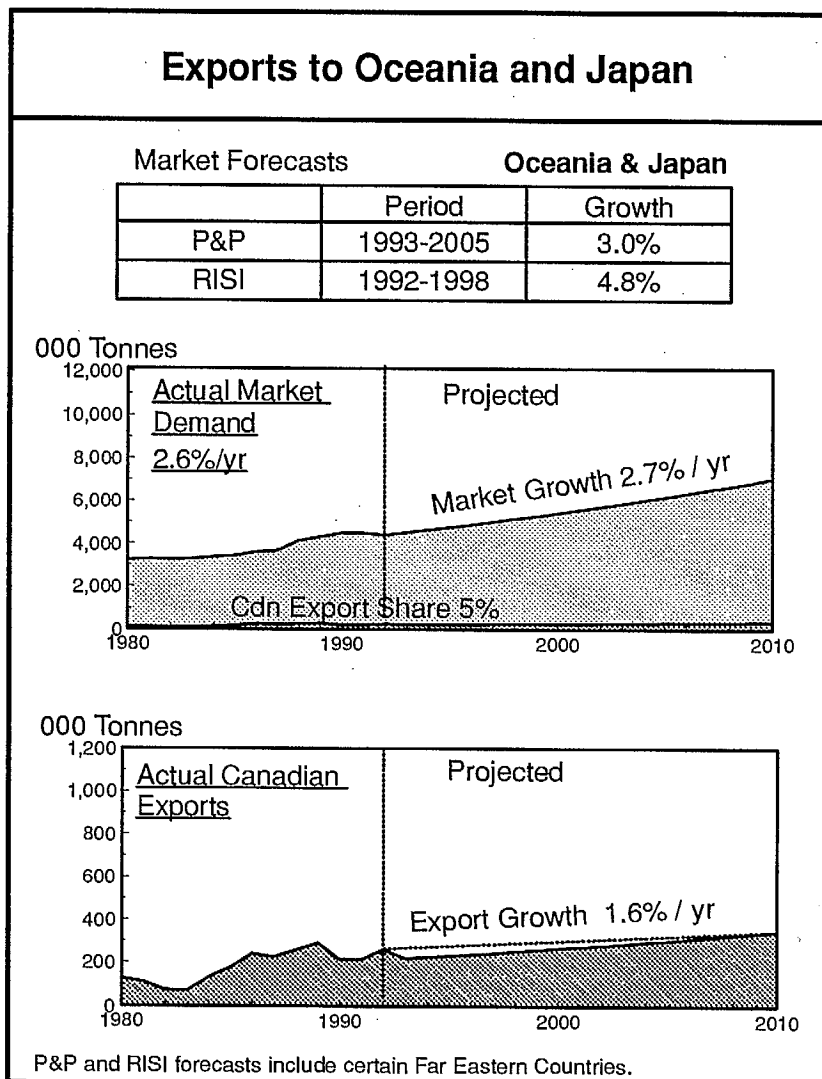




**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

**3.1.2 Oceania and Japan**

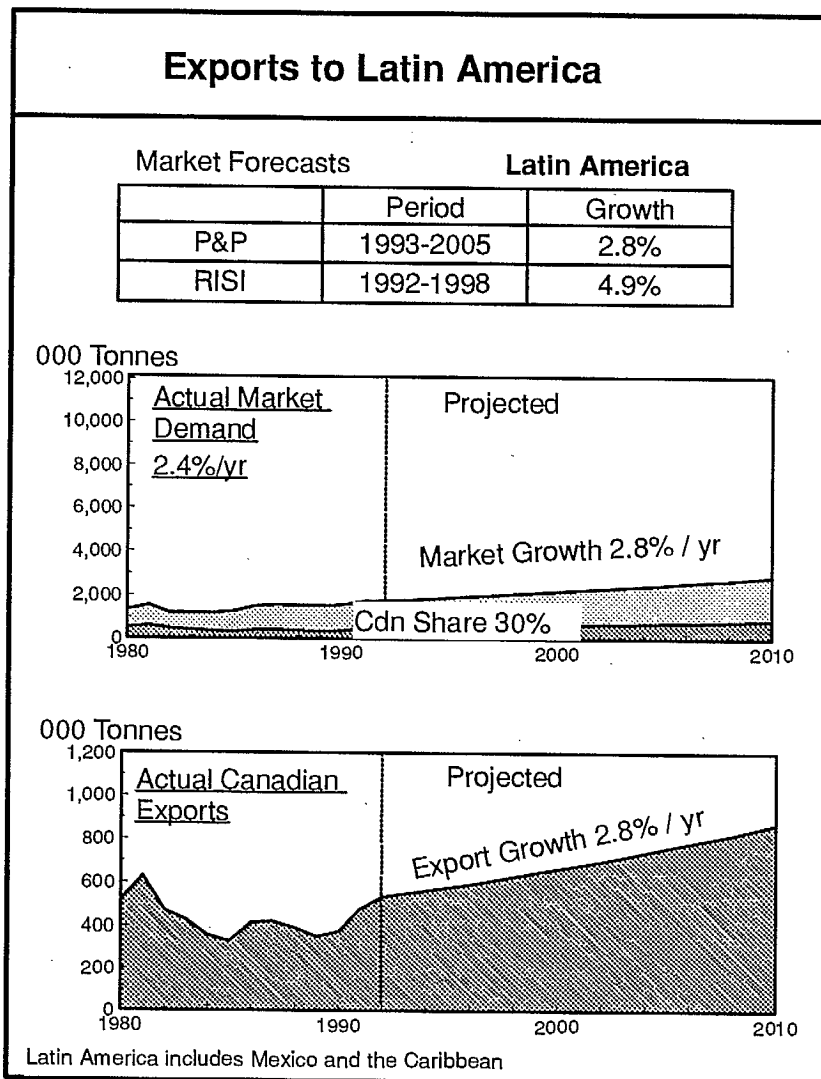
¶ Canadian exports have had a 5% share of markets in Japan, Australia and New Zealand (1980-92). These markets will grow by 2.7% per year. Canadian exports will return to their historical market share with a growth rate of 1.6% per year.



**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

**3.1.3 Latin America**

¶ Latin American represents the smallest of our market segments. Nevertheless, almost a quarter of Canada's exports are destined for Latin America. Canada currently holds a 30% share of this market. Since this matches Canada's historical share, the growth of Canadian exports must match the 2.8% growth projected for the Latin American market, if Canada is not to lose ground.

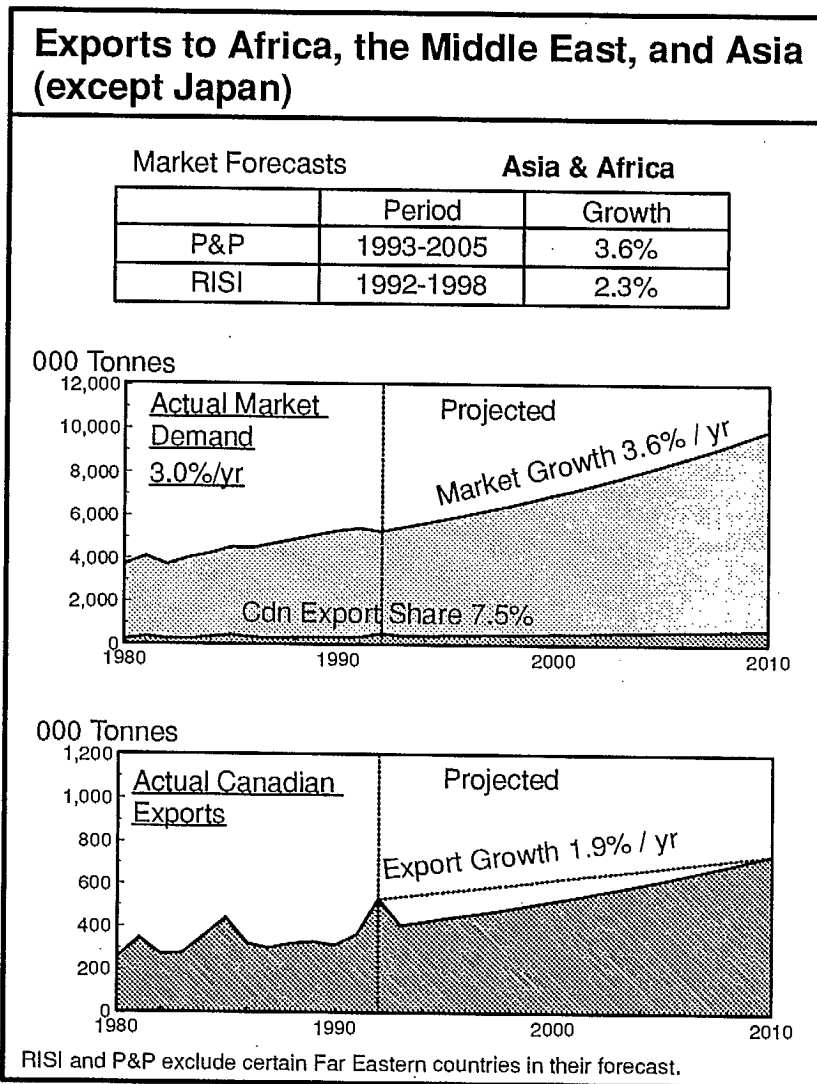


**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

**3.1.4 Asia and Africa**

Included in this market segment is Africa, the Middle East and all of Asia other than Japan. In the view of Pulp & Paper Forecaster, this segment is the fastest growing of all of our export market segments, with a growth rate of 3.6% per year. And this market segment is second only to Western Europe in size, with demand reaching close to 10 million tonnes by the year 2010, compared with 12 million tonnes in Western Europe.

Canada's historical share of this market is 7.5%, and will remain at this level if Canadian exports grow at the rate of 1.9% per year.

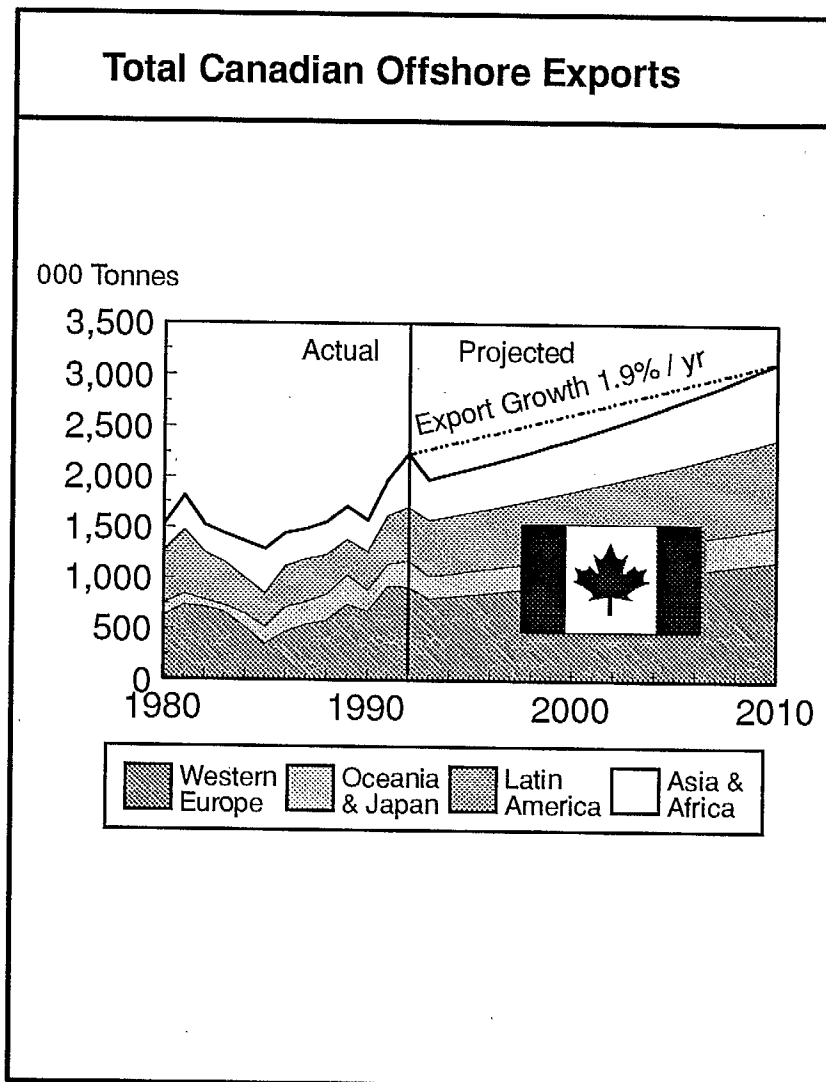


North American Newsprint Demand (1993-2010)  
Offshore Newsprint Demand Based on Historical Trends

3.2 Total Export Demand for North American Newsprint

¶ Taken as a whole, Canadian exports have had a 10 per cent share of all offshore markets. Offshore markets, as a whole, are expected to grow by 2.8 per cent per year.

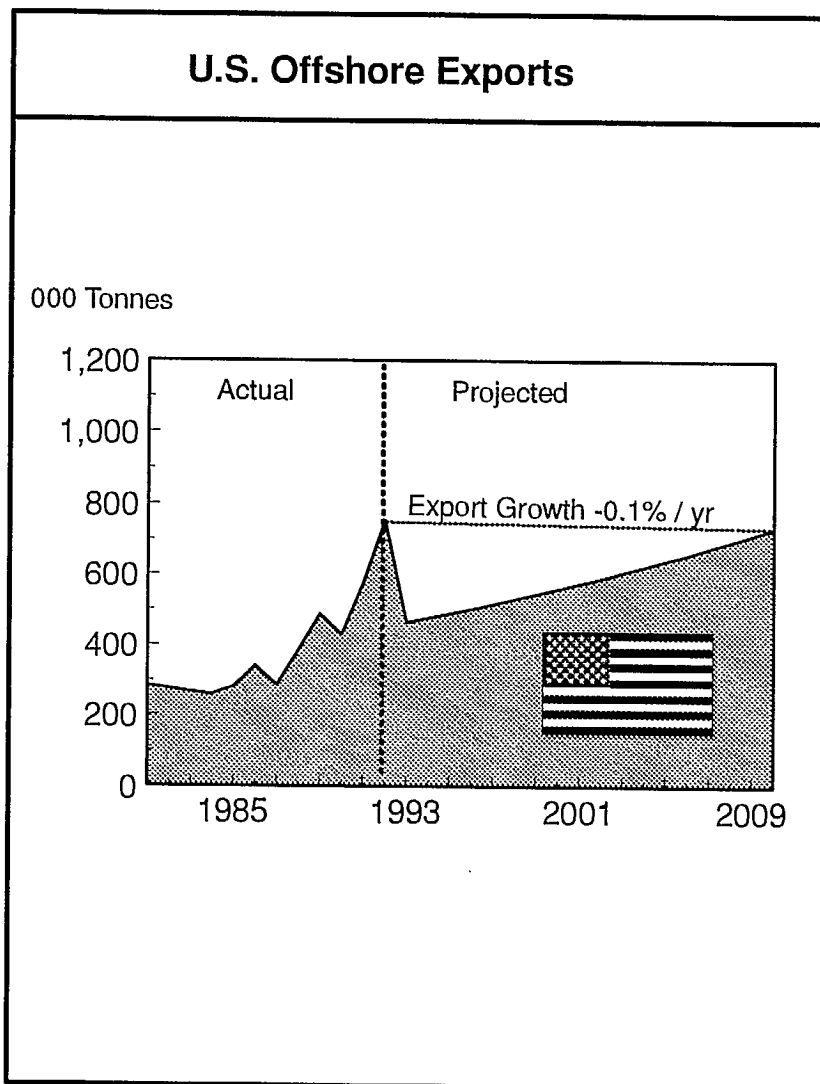
As is the case in all market segments other than Latin America, Canada's current share is uncharacteristically high. In order to return to, and retain its historical share, Canadian offshore exports need to grow by 1.9 per cent per year.



**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

---

¶ The historical U.S. share of offshore markets has been 2.3 per cent. Exports in 1992 were unusually high. In our methodology, we assume they will return to historical levels. This means that U.S. exports will drop dramatically, and then gradually return to a level close to that reached in 1992 by the year 2010.

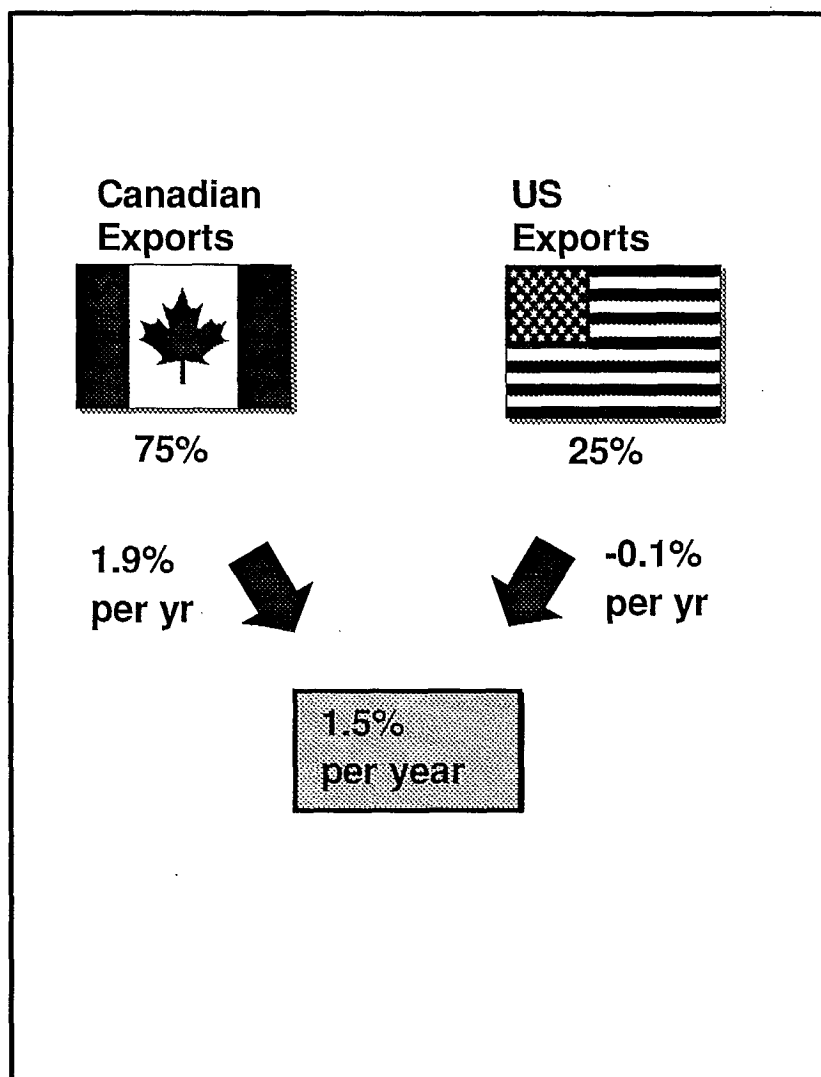


**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

---

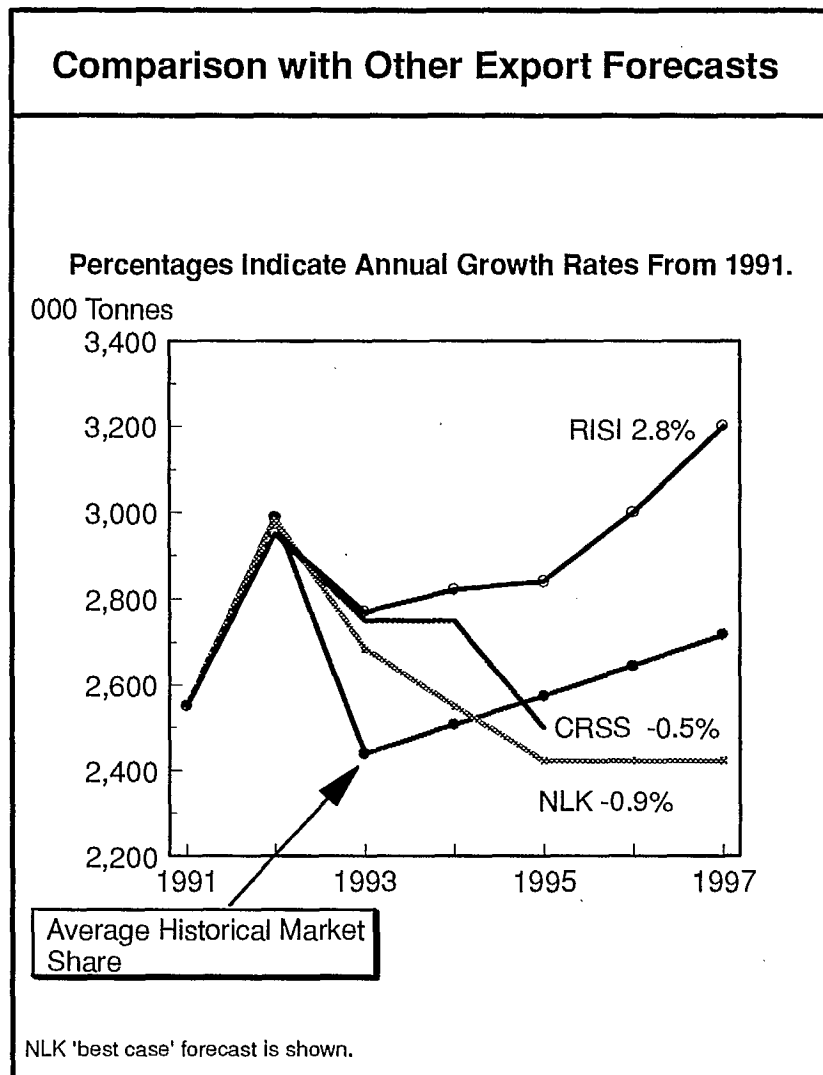
¶ Canadian offshore exports constitute 75 per cent of total North American exports; U.S. exports constitute 25 per cent. (Mexico is considered part of the Latin America offshore market)

Combining Canadian and U.S. export prospects, we get an overall growth rate of offshore demand for North American newsprint of 1.5 per cent per year.



**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

¶ Two other forecasters of North American exports, CRSS and NLK, project the export share of world markets to return to, and even below historical levels by 1995. RISI, by contrast, expects exports to drop only slightly, and to ultimately retain the higher share of offshore markets that they have recently acquired (at least until 1997).



**North American Newsprint Demand (1993-2010)  
Offshore Newsprint Demand Based on Historical Trends**

---

**3.3 Summary of Total Demand for North American Newsprint**

¶ From our historically based projections, demand for North American newsprint will come close to 21 million tonnes by the year 2010. The overall rate of growth of this demand, when we consider both domestic and offshore markets, is about 1.6 per cent.

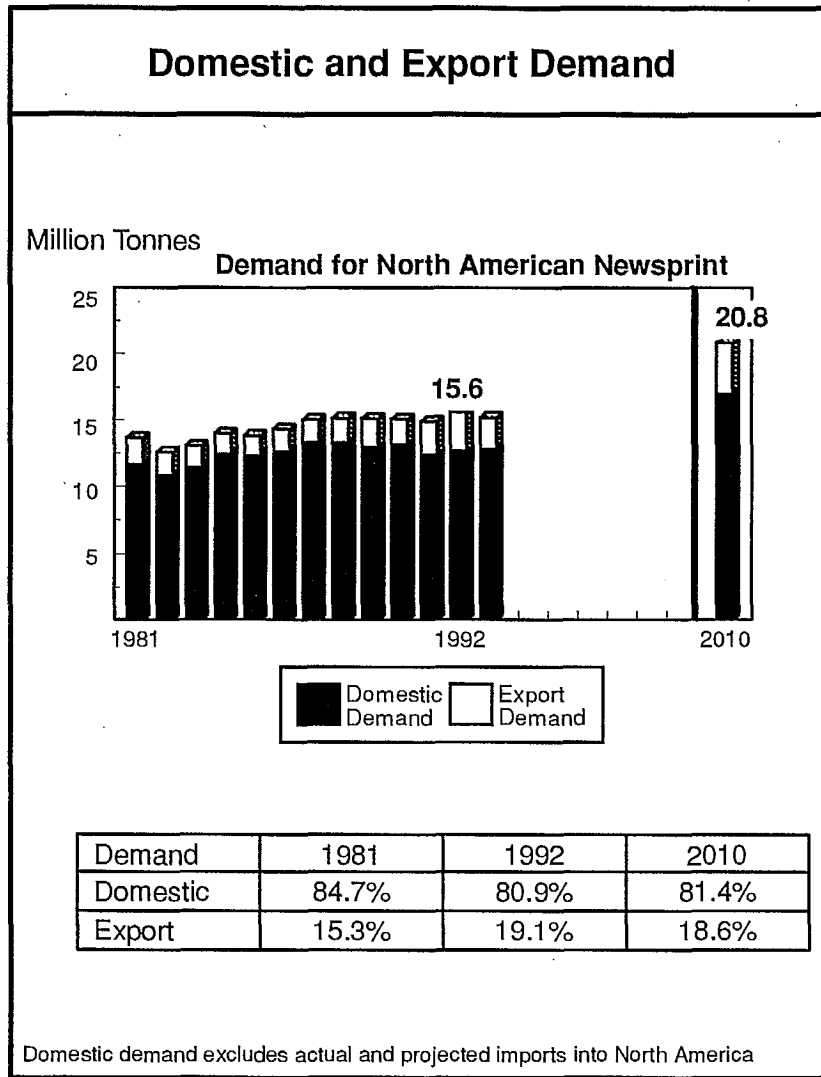
**North American Newsprint Demand**

<b>Metric Tonnes (000s)</b>	<b>1992</b>	<b>2010</b>	<b>CAGR</b>
Dailies	9,233	11,449	1.2%
Inserts	1,202	1,493	1.2%
Weeklies, Shoppers, other	2,299	4,242	3.5%
Canadian offshore exports	2,235	3,137	1.9%
U.S. offshore exports	753	737	0%
<b>TOTAL</b>	<b>15,722</b>	<b>21,058</b>	<b>1.6%</b>
Imports from offshore	(114)	(243)	4.3%
<b>Net Demand on North American Mills</b>	<b>15,608</b>	<b>20,815</b>	<b>1.6%</b>



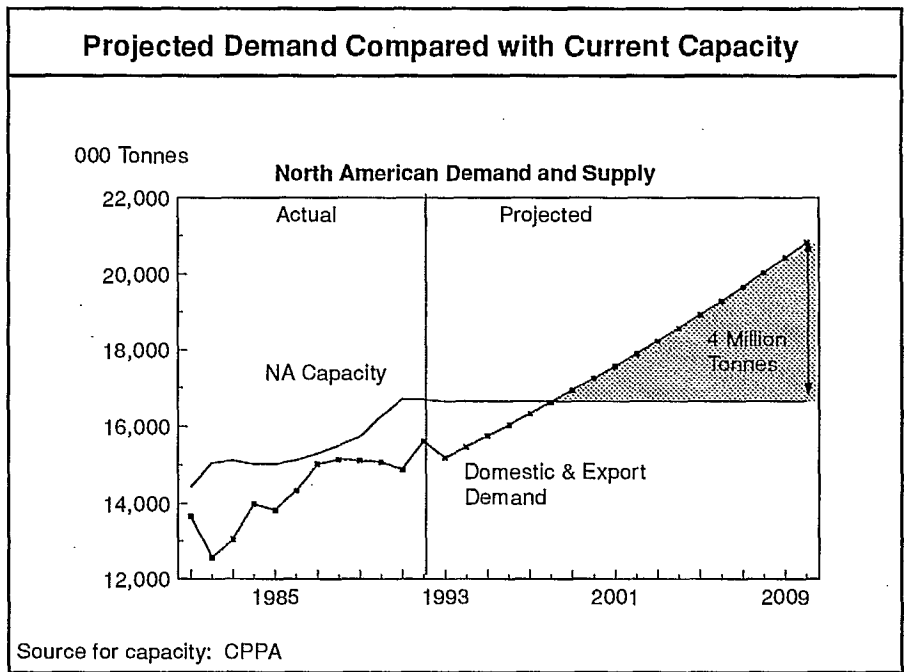
**North American Newsprint Demand (1993-2010)  
Offshore Newsprint Demand Based on Historical Trends**

¶ Exports, which constituted 15 per cent of total demand in 1981, and 19 per cent in the 1992 peak year, will continue to account for almost 20 per cent of total demand for North American newsprint in the year 2010.



**North American Newsprint Demand (1993-2010)**  
**Offshore Newsprint Demand Based on Historical Trends**

If we begin with 1992 CPPA newsprint capacity data, and assume no capacity additions or closures, then newsprint demand catches up with capacity around the year 1998. And by the year 2010, there is a requirement for 4 million tonnes of new capacity.



*On the basis of historical trends, a new round of capacity additions could be required by the turn of the century.*

## 4. The Impact of Technological Changes

### 4.1 Threats to Newsprint Demand

¶ Significant developments have been taking place in the information industry. These developments are encapsulated in a number of phrases that appear frequently in the news media: electronic information super-highway, multi-media, interactive television. What is the nature of the threats represented by these new technologies? How and in what time frame will these threats unfold? What impact will they have on newsprint demand? These are issues we wish to examine.

There are two areas of technological development which could have an impact on newsprint demand:

■ Portable Electronic Newspapers ("E-Papers")

■ Interactive Television

#### 4.1.1 Portable Electronic Newspaper

¶ Portable electronic newspapers will make use of 8.5 by 11 inch flat panel displays (one or two inches thick) with ample battery power, low weight (two pounds) and easy video reading. The device will ultimately provide audio and video, and permit interactive reading patterned after the way one uses a newspaper. Users will download a customized newspaper, tailored to their interests, into the device. This newspaper will come complete with advertising and with layers of background information behind topical stories. The device will be portable and easy to use.

¶ Once the E-paper becomes commercially viable, it could become a formidable competitor to newsprint. However, it will take considerable time for the hardware and software to be developed. A lot of research is being done on flat panel displays for a multitude of consumer and commercial applications. And the software user interface is under development (Knight-Ridder). However, the E-paper is not expected to become a commercially viable product until the twenty-first century. And it will not likely develop to the point where it has a significant number of users within our forecast period (i.e. before the year 2010).

#### 4.1.2 Interactive Television

¶ The more immediate challenge that may face traditional newspapers could come from interactive television. We are currently in the midst of a technological frenzy which involves the overlapping of computer and telecommunications technologies, of copper wire and cable, and of television and computer. The exact manner in which this will continue to unfold, whether in the regulatory context or the technological context, is extremely difficult to estimate. However, certain suppositions on this matter can be made:

- 1) Fact: U.S. federal deregulation of the communications industry is part of the Clinton Administration's overall policy designed to increase the nation's competitiveness.

Supposition based on Fact: A consensus is emerging regarding deregulation in the telecommunications industry, permitting greater competition among cable television and telephone service providers.

Our Conclusion: Regulatory and legal restraints will be overcome in order to reflect the market realities that are being made possible by advancements in technology.

- 2) Fact: The average consumer is far from a "computer hacker". For example, most consumers have problems programming their VCR.

Supposition based on this fact: The entry of this new technology into the average home will not be through the computer, but through the television.

Our Conclusion: Projecting the growth of the number of computers and modems in households is not the appropriate methodology for determining the speed with which these new technologies will have an impact. It is not "information surfers" using "PDAs" (personal digital assistants) or home computers, and accessing Internet, Prodigy, America Online or the like, who will lead this trend into the new information age (contrary to opinions expressed by Bill Gates). Rather, the plain ordinary television set will be the "trojan horse" for the entry of these new technologies into our homes. Accordingly, these technologies could begin to have an impact much sooner than we would otherwise expect.

North American Newsprint Demand (1993-2010)  
The Impact of Technological Changes

---

- 3) Fact: In recent years, transmission and switching technologies (ATM) and data compression technologies have advanced to the point where large volumes of data can be transmitted to consumers without the installation of fibre optic cable to every home.

Supposition based on this fact: Interim versions of these new technologies will be available in the short term using copper wire and cable.

Our Conclusion: It may be possible that the majority of households in U.S. and Canada will have access to at least an interim form of interactive television by 1998: e.g. television with a black box. Longer term, integrated TV-computers and curb-side fibre optic cabling will be the norm.

- 4) Fact: Experiments with "video-text" in the past have been unsuccessful. Consumers have been disappointed with the product and unwilling to pay for the needed equipment.

Supposition based on this fact: The product available to consumers must be cost-effective, and must fulfill a need.

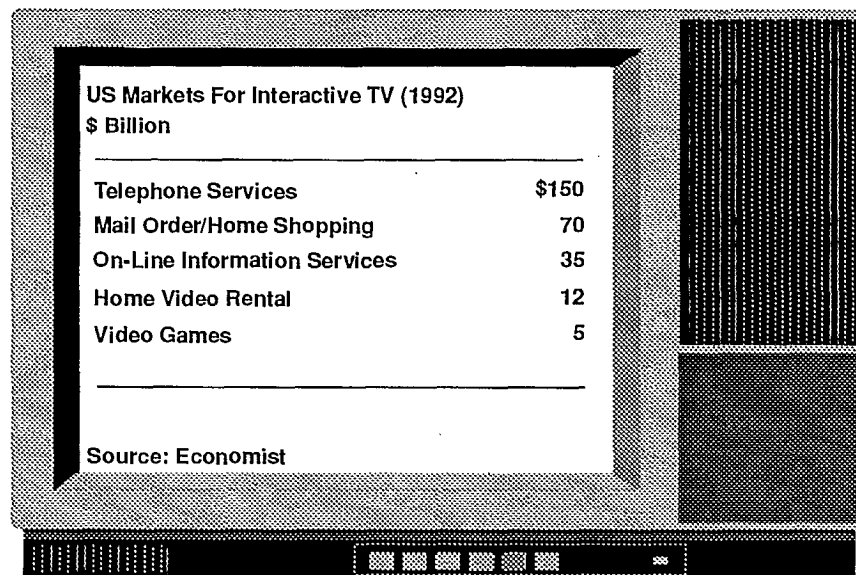
Our Conclusion: Video-on-demand is a natural product that could get this technology off the ground. It is natural to expect consumers to pay \$3 to download a movie to their home instead of paying the same sum of money renting the movie from Blockbuster Video. A similar comment applies to video games.

*On the basis of these facts and suppositions, we can draw a picture of some of the features of the new technology: it will take the form of interactive TV, primarily driven by video-on-demand, and could be available to over half of U.S. households by as early as 1998.*

## North American Newsprint Demand (1993-2010) The Impact of Technological Changes

---

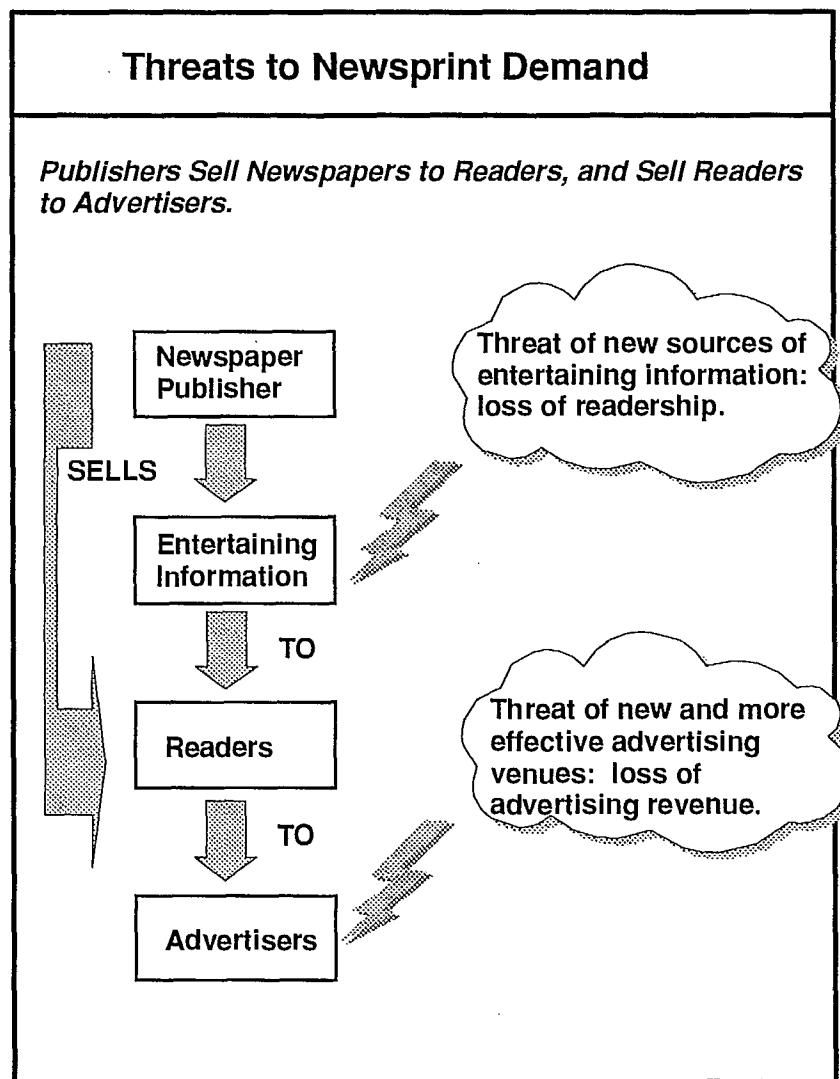
- ¶ Video-on-demand and video games is only the tip of the iceberg. With the establishment of interactive television and the capability of downloading large quantities of data to the home, the possibility will exist for many consumers to download personalized "newspapers" and other forms of information programming in addition to video-on-demand.



#### 4.2 Impact of This Threat on Newsprint Demand

There are two, inter-related areas of newsprint demand threatened by this emerging electronic information age technology:

- 1) Newsprint-based newspaper circulation could lose share to electronic competition).
- 2) Demand for newsprint for advertising could fall, both as a result of lower circulation and as a result of competition from new venues of advertising.



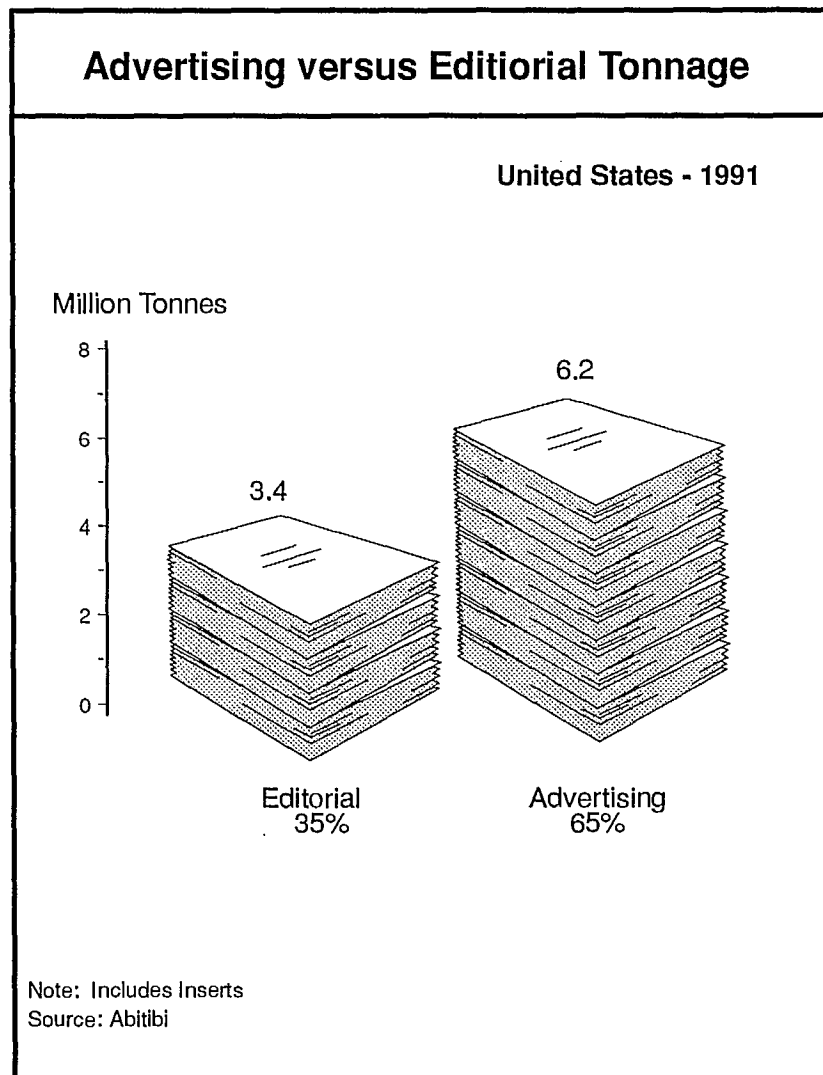
# North American Newsprint Demand (1993-2010) The Impact of Technological Changes

## 4.2.1 Impact on Circulation

¶ Newer generations, weaned on video games and television, may adapt readily to electronic newspapers on their television or computer screen. Unfortunately, it is very difficult to estimate the reaction of these newer generations until the product actually exists. In the end, personalized and interactive electronic news retrieval may not have any greater impact on newsprint demand than current versions of all-news, all-weather and all-sports-news cable television.

## 4.2.2 Impact on Newspaper Advertising

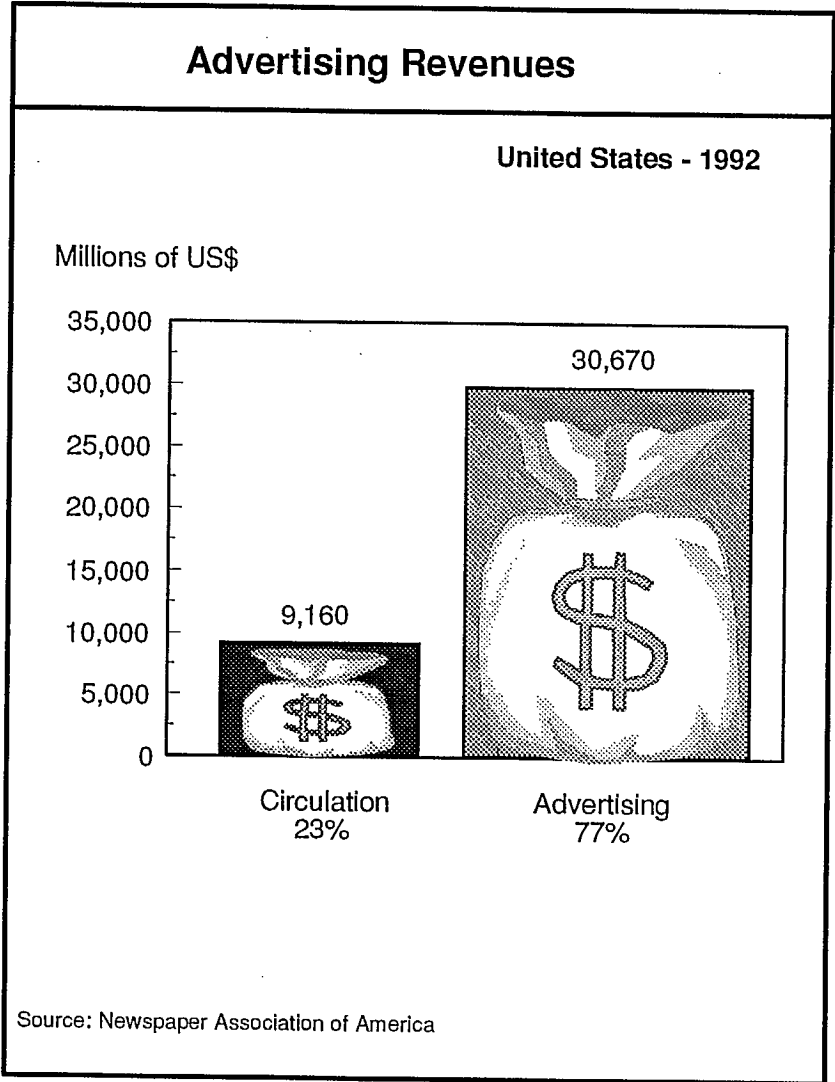
¶ In terms of tonnage, advertising accounts for almost two-thirds of newsprint usage in newspapers and newspaper inserts.





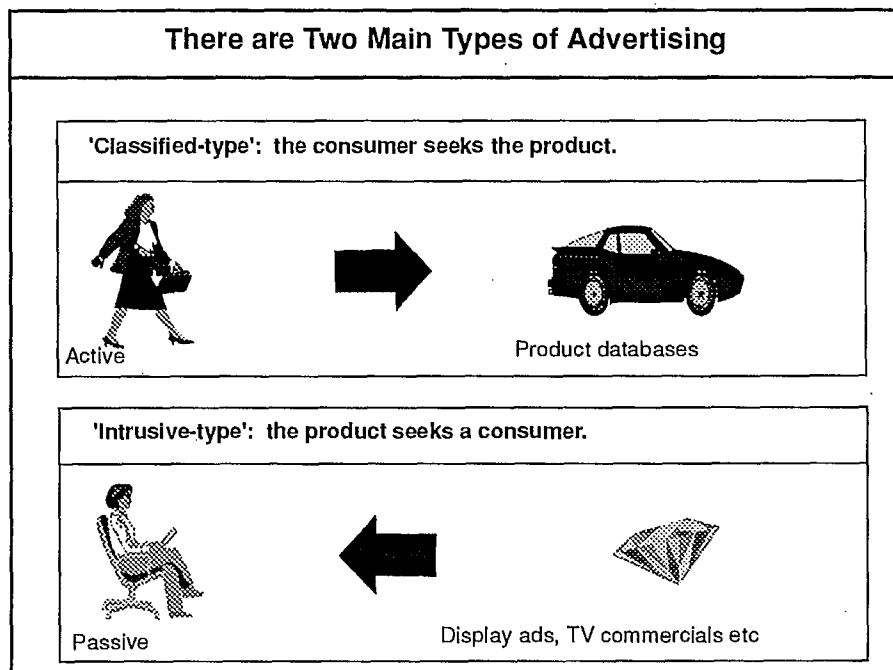
**North American Newsprint Demand (1993-2010)**  
**The Impact of Technological Changes**

¶ Equally important is the fact that the traditional newspaper business in North America is heavily reliant on advertising revenue. If publishers are forced to increase newspaper prices in order to compensate for lost advertising revenues, a further loss of readership could result.



## North American Newsprint Demand (1993-2010) The Impact of Technological Changes

- ¶ For our purposes, there are two types of newspaper advertising: the "classified type" where the consumer seeks the product; and the "intrusive type" where the advertiser seeks to attract the attention of the consumer. (This latter form, when it appears in newspapers, is also called "display advertising").



*Interactive television is believed to be well suited to provide classified-type advertising: Users would be able to selectively and interactively search product databases, with quick access to lists of products which meet their criteria.*

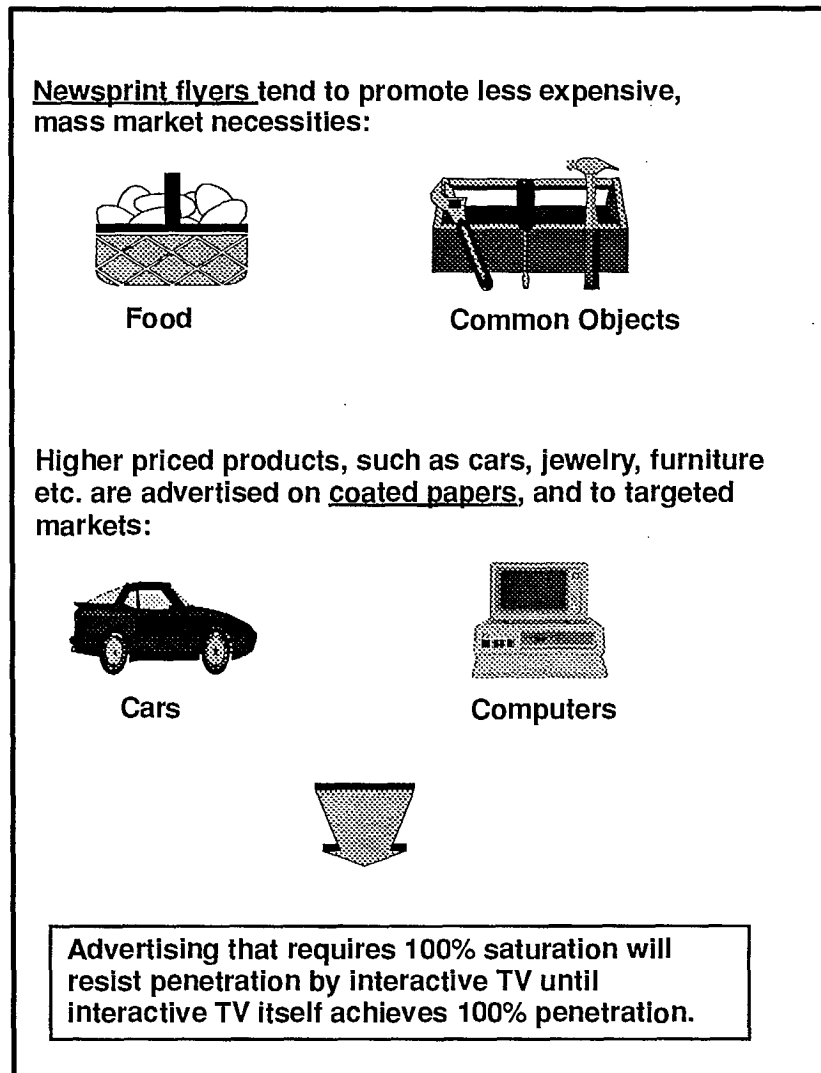
*Intrusive advertising, by contrast, would not appear to be abnormally affected by interactive television. However, if circulation were to decline, then the benefit of advertising in traditional newspapers would decrease. And this would result in a decline in all types of daily newspaper advertising.*

**North American Newsprint Demand (1993-2010)  
The Impact of Technological Changes**

---

**4.2.3 Impact on Free Standing Inserts**

- ¶ Another issue regarding newsprint advertising is the impact of interactive television on hard copy junk mail, and in particular, free standing inserts made of newsprint.
- ¶ Inserts and flyers made of newsprint tend to promote inexpensive products for the mass market. As such, they will be less affected by the new technologies. Coated paper inserts, by contrast, may be more vulnerable to electronic junk mail delivered through interactive television.



#### 4.2.4 Assumptions for Estimating A Worse Case Impact

- ¶ Although it is reasonably clear, at the present time, that the hardware requirements for a provisional form of interactive television will be in place in the near term, it is entirely unclear how long it will take to implement the types of interactive programming that are currently being envisioned. And until we see these products in place, we cannot make a reasonable estimate of the timing and magnitude of their impact.
- ¶ Nevertheless, we can put together a ball-park estimate of a worse case scenario of the amount of newsprint tonnage that could be impacted by interactive electronic news services. To do this, we perform the following simple experiment:

##### Our Worse Case Scenario

*We assume that habits will play a significant role, and that all readers of newspapers who are 35 years or older in 1996 will never be able to "kick the habit" in their lifetime. Meanwhile, all successive generations will satisfy their daily newspaper information requirements electronically. The question is, based on birth projections and readership trends, how much newsprint demand would be lost.*

*Secondly, we assume that all classified advertising disappears by the year 2010. Classified advertising accounts for 21% of newsprint used in daily newspapers. There are also some newsprint publications made up of classified ads: auto trader, penny-saver, real estate listings etc. If all of this tonnage were replaced by electronic classified advertising, then how much tonnage would be lost.*

- ¶ In order to perform our experiment, we make use of the data from our historically based demand projections. (Section 2 above)

**North American Newsprint Demand (1993-2010)**  
**The Impact of Technological Changes**

---

**4.2.5 Results of Our Worse Case**

¶ Our experiment assumes that people under 35 years old in 1996, and all generations thereafter, will no longer purchase traditional newspapers by the year 2010. If this were to happen, 3.4 million tonnes of newsprint demand would be lost, or 16% of the 20.8 million tonnes of newsprint that would otherwise be required from North American mills.

¶ If all classified advertising disappeared from newsprint, the North American industry would lose an additional 2.3 million tonnes of demand by the year 2010. (Total classified advertising tonnage adds up to 3.0 million tonnes in our historically based projection for the year 2010, but 0.7 million of this amount is already lost due to the loss of circulation demand).

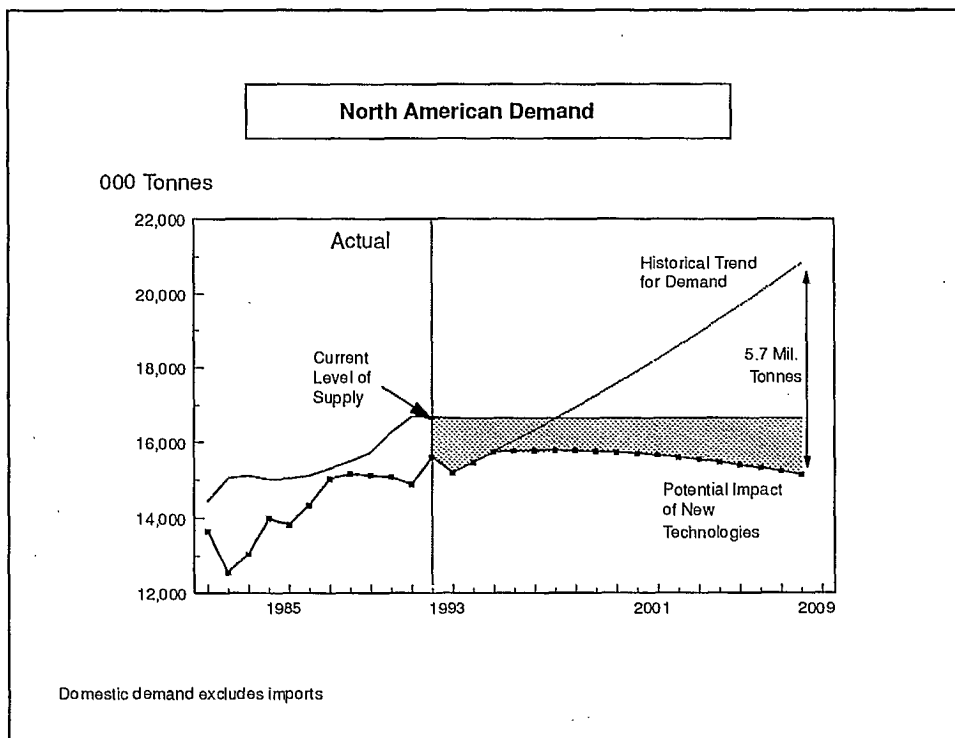
¶ The following table displays the results of our experiment:

**Loss of Newsprint Demand (Million Tonnes)**

	1996	2000	2010
Classified Ads in Dailies	.14	.72	2.42
Other Classified Ads	.03	.15	.57
Display Ads	.00	.00	.00
Inserts and Flyers	.00	.00	.00
Total Loss from Advertising	.16	.86	2.99
Dailies (lost circulation)	0.10	0.67	3.40
Less classified ads already lost	-0.00	-0.05	-0.72
Net Loss from dailies	0.10	0.62	2.68
Loss from Weeklies	?	?	?
Loss from other end uses	?	?	?
Loss from Export Markets	?	?	?
Total Tonnage Lost	0.26	1.48	5.67

## North American Newsprint Demand (1993-2010) The Impact of Technological Changes

The resulting impact of this reduced demand, compared with our historically based projection, and with current supply levels, is shown in the following chart:



*In our worse case scenario, the entire increase in demand that we projected from historical data is wiped out.*

#### 4.2.6 Most Likely Case

¶ It is most likely that broadcast television will become a thing of the past, if not in all homes by the turn of the century, then at least in some homes by the year 2010. Implicit here is that broadcast news will be replaced by news-on-demand for some segments of the population within a fifteen year time horizon.

Also likely within our time horizon is the development of electronic classified advertising.

¶ News-on-demand, in a primitive form, already exists: e.g. online information systems, America Online, Prodigy etc. These services have not yet led to an abnormal decline in the demand for traditional newspapers and newsprint.

Forms of electronic advertising-on-demand also already exist: e.g. talking yellow pages, and other services accessible by telephone. To date, these services have not been embraced by advertisers, and have fallen far short of initial expectations.

¶ In our historically based projections, we already include an erosion in newsprint demand relative to other media. With the projected expansion of news-on-demand and classified advertising in our time horizon, we may merely witness a continuation of this erosion, with no dramatic sea-change in the way consumers absorb information.

¶ Thus from the perspective of this point in time, we must say that North American newsprint demand will continue to follow historical trends for the foreseeable future.

¶ Our confidence in this projection is very high, at least until the turn of the century.

¶ Moreover, compelling evidence does not yet exist for projecting an abnormal erosion of newsprint demand in the 2000 to 2010 period.

¶ Meanwhile, as the new technologies continue to unfold, we will get a clearer picture of their nature and their potential impact. And we will be better able to gauge the extent to which electronic information will actually replace, or merely complement information on newsprint.

¶ Until then, we must continue to state that the most likely outcome of newsprint demand within our time frame will be one which follows historical trends.

#### 4.3 Summary

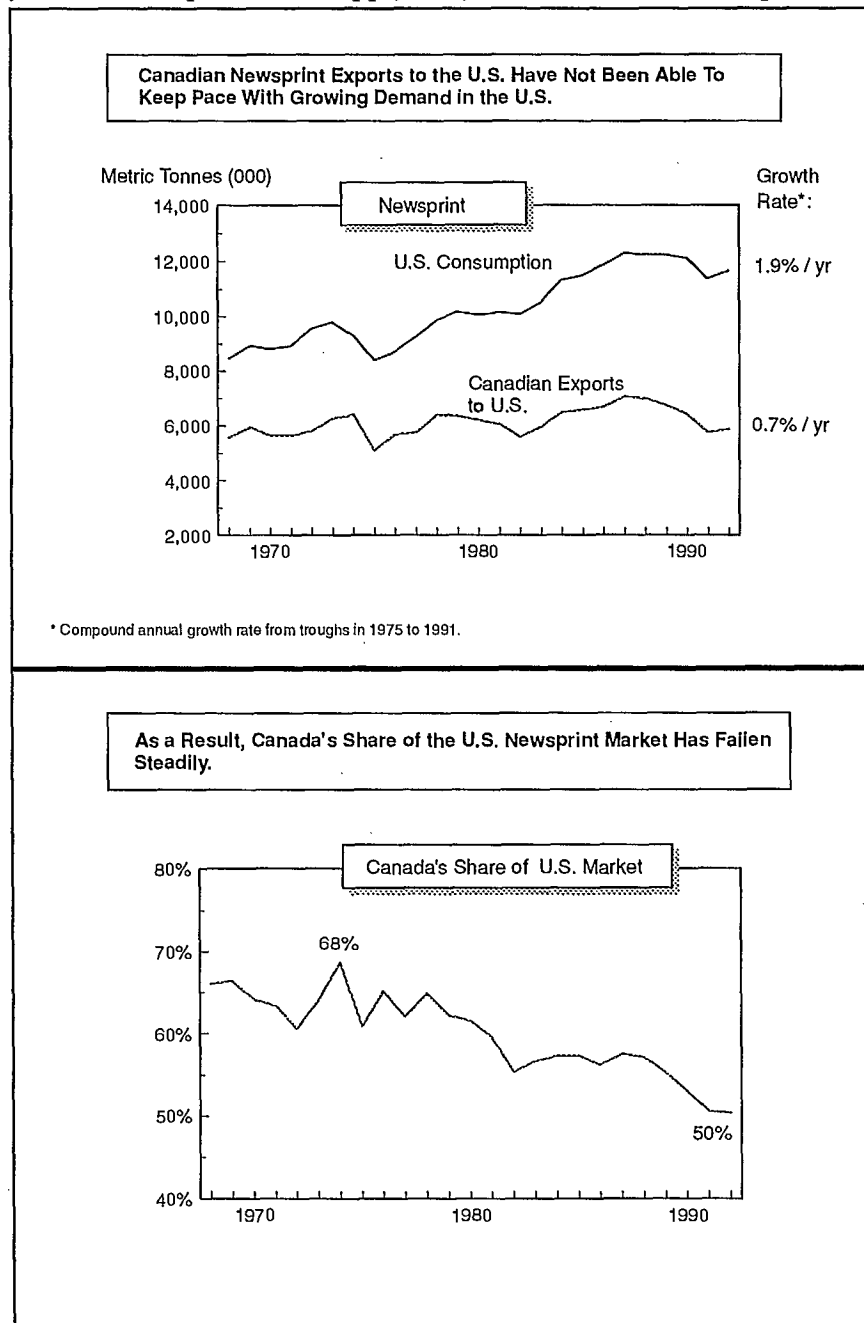
- Portable electronic newspapers are not a threat to newsprint demand in our time period.
- However, interactive television could have an impact, both on traditional newspaper circulation and on newsprint advertising:
  - interactive personalized news-on-demand.
  - interactive classified advertising with indexed product databases.
- It is clear that rudimentary hardware will be in place for interactive television to be delivered to a majority of homes before the turn of the century. Consumer acceptance could be initially driven by video-on-demand and it is very possible that many North American consumers will subscribe to the service
- It is much less clear how long it will take for interactive news services and shopping services to develop and gain consumer acceptance. Further, the extent to which they may eventually replace newsprint, rather than merely complement it, is entirely undeterminable at present.
- Consequently, until we get clear indications to the contrary, we believe it is most reasonable to project newsprint demand in terms of the historical trends that were examined in sections 2 and 3.
- Nevertheless, we can develop a worse case scenario which assumes a progressive erosion in both newsprint classified advertising and traditional newspaper readership. In this scenario, over one-quarter of the demand for North American newsprint would be lost to interactive television by the year 2010. This effectively wipes out all the growth that was projected in sections 2 and 3.
- However, it is premature to make such a prediction at this time. It is quite true that at some point, newsprint demand could begin to suffer in a big way. But it may not be before the turn of the century, or much later, that we see any clear indication of this.



## 5. Estimated Demand By U.S. Region

### 5.1 Canada's Historical Share of the U.S. Market

Canada's share of the U.S. newsprint market has gradually eroded over several decades. Two-thirds of newsprint consumed in the U.S. in the mid 1970s originated from Canada. Today, Canadian producers supply only one half of the newsprint used in the U.S.



**North American Newsprint Demand (1993-2010)**  
**The Impact of Technological Changes**

---

Several factors have contributed to this decline in Canada's share of the U.S. market:

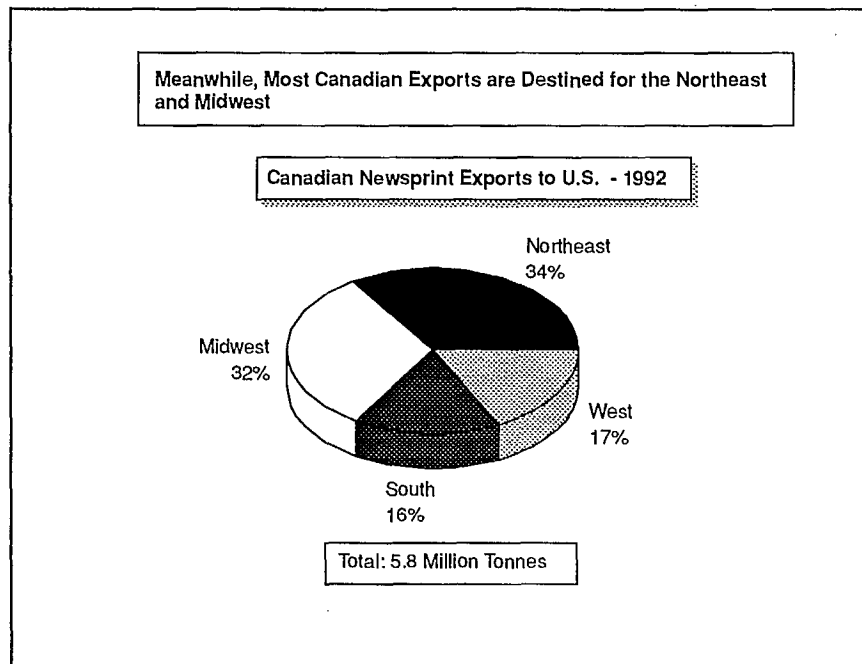
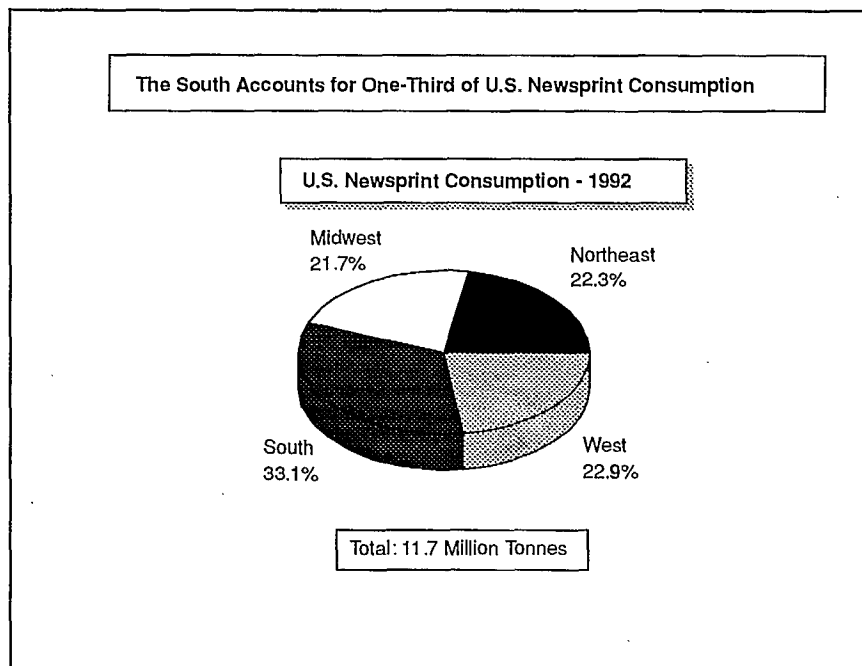
- Traditional Canadian cost advantages of cheap fibre and low cost power have deteriorated relative to those U.S. suppliers who make use of inexpensive Southern pine and/or use lower cost hydro electric power through cogeneration.
- The unreliability of Canadian labour (strikes) in certain time periods has contributed to publishers switching to U.S. sources of supply when they became available.
- Some of the recent loss in market share may be attributed to the greater availability of U.S. supplied recycled newsprint in certain regions of the U.S.
- The fastest growing regions of the U.S. (namely the South and the West) are furthest removed from Canadian sources of supply.

Let us examine this latter point, the regional dimension of U.S. newsprint demand, in greater detail.

# North American Newsprint Demand (1993-2010) The Impact of Technological Changes

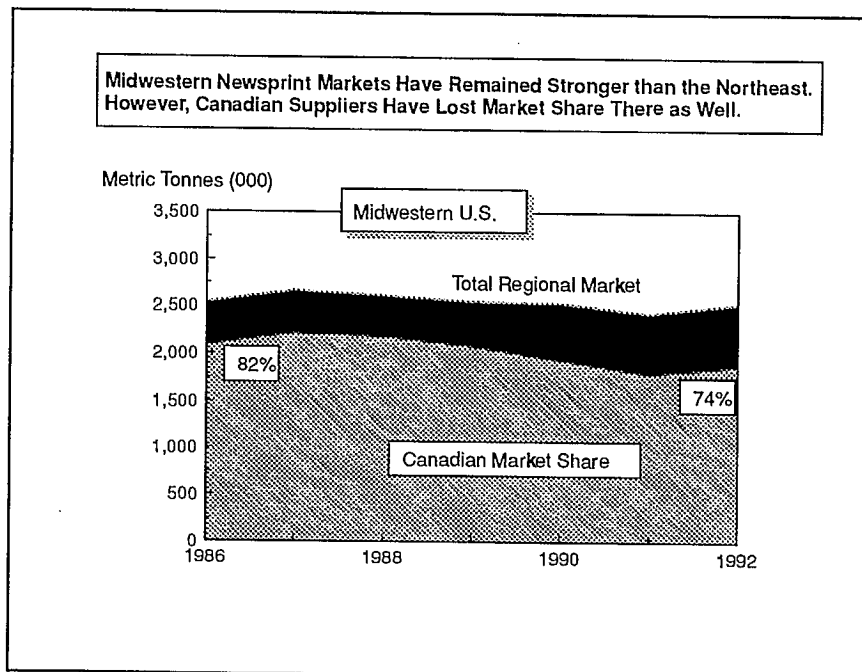
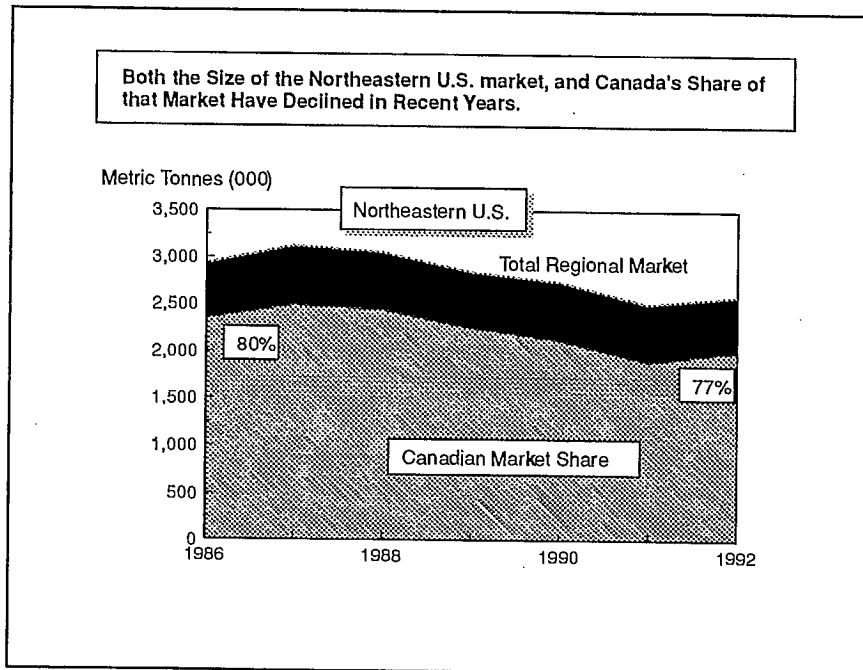
## 5.2 Regional U.S. Newsprint Markets

The U.S. South accounts for the largest portion of U.S. newsprint consumption and the least portion of Canadian exports to the U.S.



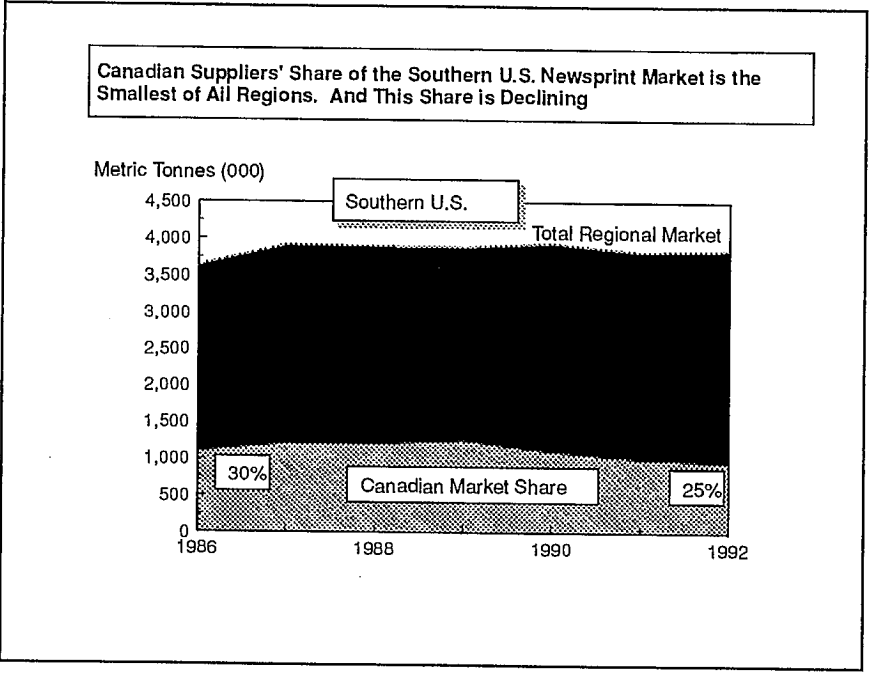
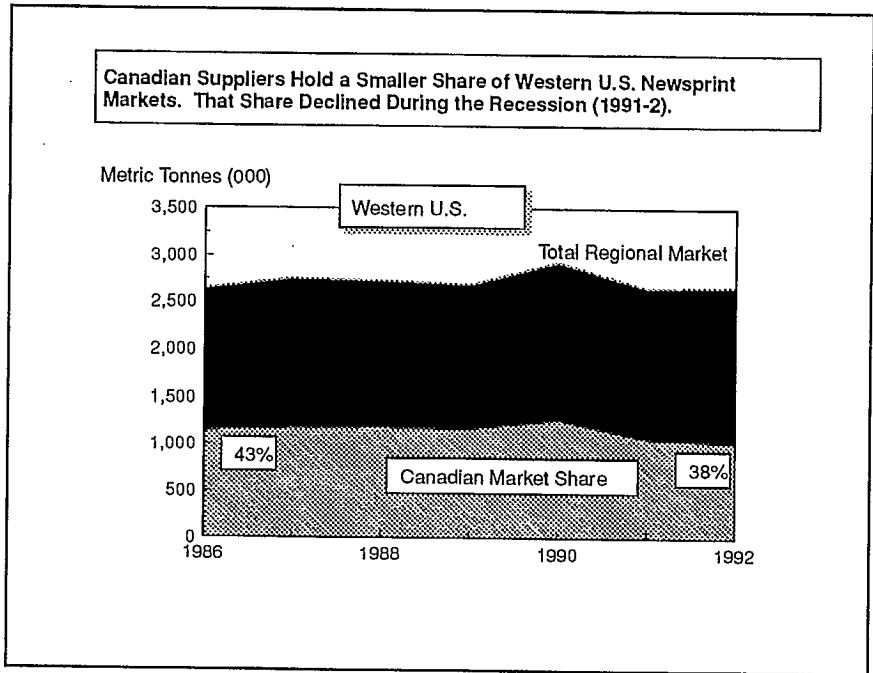
**North American Newsprint Demand (1993-2010)**  
**The Impact of Technological Changes**

Canadian suppliers retain a healthy, but declining share in their two major U.S. markets, the Northeast and Midwest.



**North American Newsprint Demand (1993-2010)**  
**The Impact of Technological Changes**

Meanwhile, Canadian suppliers' share of Western and Southern U.S. newsprint markets is much smaller and declining.



**North American Newsprint Demand (1993-2010)**  
**The Impact of Technological Changes**

---

The recent recession (1991-2) may distort Canada's loss of market share in these regional markets. For it may be the case that certain U.S. publishers will disproportionately cutback on more distant sources of supply (in both a geographic and a political sense) in periods of weak demand.

The following table examines the regional markets during the 1986-1990 period (prior to the recessionary downturn). We see that the Northeastern market was already in decline, while significant growth was experienced in the South and in the West. Meanwhile, Canadian export growth under-performed the growth in all regional markets with the exception of the U.S. West.

**Compound Annual Growth Rates (1986 - 1990)**

<b>U.S. Region</b>	<b>Regional Market Growth</b>	<b>Canadian Export Growth</b>
Northeast	(-1.6%)	(-2.4%)
Mid-West	0.2%	(-1.8%)
West	2.6%	2.5%
South	2.1%	(-0.5%)
Total	0.9%	(-1.0%)

## North American Newsprint Demand (1993-2010) The Impact of Technological Changes

---

In summary:

- The U.S. South is the largest regional U.S. market, and one that has experienced above average growth. Unfortunately, it is also the market where Canadian suppliers have their weakest market penetration.
- Canadian suppliers have been losing market share in all U.S. regions in recent years (1986-1992). If we exclude the potential distortions of the recent recession and focus on the 1986 to 1990 period, then Canadian export growth still under-performs all regional markets with the exception of the U.S. West.
- Two-thirds of Canadian exports to the U.S. are destined for the Northeast and the Midwest. Unfortunately, the Northeastern market has been in decline, even prior to the recessionary period, and demand in the Midwestern region has remained flat.

*The bulk of Canadian exports to the U.S. are destined for markets that have been flat or declining. Canadian suppliers are losing share both in these markets and in the largest regional market with strong growth, namely the U.S. South. Consequently, to maintain this market share in the U.S., the Canadian industry's cost competitiveness must improve relative to the U.S. firms. This improved competitiveness is needed to enable firms to ship the incremental distances needed to maintain overall market shares.*

### **5.3 Projections of Demand in U.S. Regional Markets**

#### **5.3.1 Population Growth As Indicator of Demand Growth**

Both economic growth and population growth will impact newsprint demand. In the short term, there are identifiable differences in regional economic growth. For example, the West, with the decline of the U.S. defense industry, is currently suffering hard times. The South, by contrast, has been rebounding more rapidly from the recent recession. However, in the longer run, we can expect a certain readjustment in these regional economic disparities. And it is long run growth projections that we need.

In the absence of long run regional economic forecasts, we suggest that long run regional population growth estimates are a good proxy for overall prospects of economic activity. Thus we will use population growth estimates as our sole touchstone for determining the prospects of regional growth in the demand for newsprint. The population growth estimates are from Paul R. Campbell (U.S. Bureau of Census, report P25-1111) and are based on projections, at the state level and by race, of births, deaths and inter-state and international migration.

#### **5.3.2 Newsprint Consumption Per Capita**

On the basis of our analysis in Section 2, newsprint consumption in the U.S., per capita, will grow from 100.5 pounds in 1992 to 113.7 pounds in the year 2010. In our regional projections of newsprint demand, as shown in the following table, we assume that the per capita consumption of each market will increase by an equal 13.1 pounds in order to reach a U.S. weighted average per capita consumption of 113.7 pounds by the year 2010. This may understate the potential growth in the South and Mid-West (which have more room to grow, on a per capita basis), and overstate the growth prospects of the more mature Northeastern newsprint market.



North American Newsprint Demand (1993-2010)  
The Impact of Technological Changes

Projected Regional Per Capita Consumption

U.S. Region	Population 1992 (Million)	Consumption 1992 ('000 Tonnes)	Consumption 1992 Lbs / Capita	Consumption 2010 Lbs / Capita
NORTHEAST	51.1	2,598	112.1	125.2
MID-WEST	64.1	2,531	87.1	100.1
WEST	55.4	2,673	106.5	119.5
SOUTH	85.3	3,855	99.7	112.8
TOTAL	255.8	11,657	100.5	113.7

5.3.3 Regional Newsprint Demand Projections

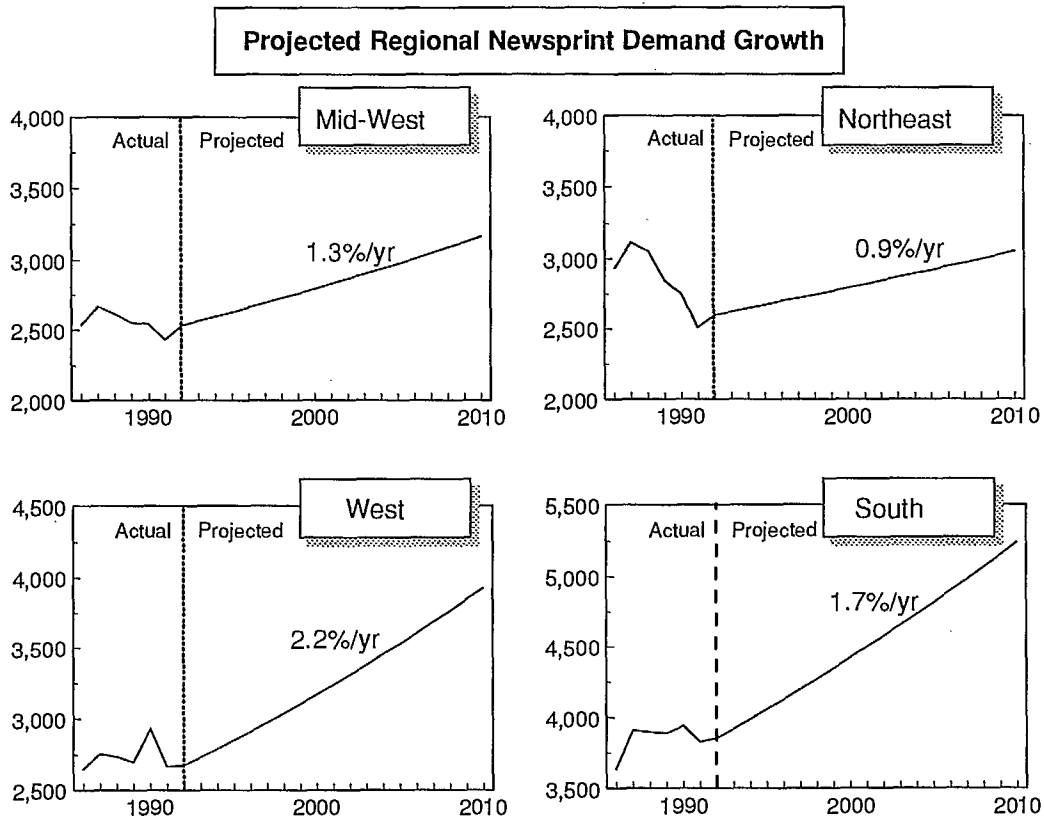
From the point of view of population growth, newsprint demand should grow most rapidly in the West and in the South. Meanwhile, although the declining Northeastern market should start to expand again, it has the lowest rate of population growth.

Projected Regional Newsprint Demand Growth

U.S. Region	Population 2010 (Million)	Population CAGR 1992-2010	Consumption 2010 ('000 Tonnes)	Consumption CAGR 1992-2010
NORTHEAST	53.8	0.3%	3,055	0.9%
MID-WEST	69.7	0.5%	3,166	1.3%
WEST	72.4	1.5%	3,927	2.2%
SOUTH	102.5	1.0%	5,241	1.7%
TOTAL	298.4	0.9%	15,388	1.6%

## North American Newsprint Demand (1993-2010) The Impact of Technological Changes

Two-thirds of Canadian newsprint exports to the U.S. are destined for the Midwestern and Northeastern markets where projected growth in demand is below the national average. Meanwhile, the remaining third of Canadian exports is destined for the higher growth regions in the West and South.



*With the continuous shift in demographics towards the West and the South, we can expect a continued decline in Canada's share of the U.S. market. The increasing demand for recycled newsprint and the threat of new electronic media merely exacerbate these dynamics.*

*The ability of Canadian suppliers to produce competitive, low cost newsprint is essential in order to limit this erosion in Canada's share of U.S. newsprint markets.*

## 6. Summary and Conclusions

- ¶ In our examination of historical trends, we discovered that newsprint consumption has been losing ground:
- readership per household continues to fall
  - newspapers' share of total advertising expenditures continues to decline
- ¶ As such, growth in newsprint consumption will continue to lag behind overall economic growth.
- ¶ Nevertheless, if historical trends continue, newsprint demand will grow in absolute terms throughout the world (and more-so in offshore markets than in North America), and will require a new round of newsprint capacity additions by the turn of the century.
- ¶ Meanwhile, concerns regarding threats from electronic news delivery are premature. Although news-on-demand, and electronic classified advertising are coming, though they are not expected to have a significant presence before the turn of the century. Further, their existence need not result in any abnormal decline in newsprint consumption, certainly not before the year 2010.
- ¶ These matters will need to be revisited as these new technologies become better developed. But from the present point in time, there is no good reason to expect an abnormal reduction in newsprint demand beyond the relative decline that has been experienced over the years.
- ¶ Consequently, we believe that our historically based projections offer the best perspective for planning purposes.
- ¶ Finally, the growing newsprint markets in the U.S. are in the South and the West. These are the very markets in which Canadian suppliers have their lowest market share.
- ¶ If Canadian suppliers are to avoid a continuation of the significant erosion in their share of U.S. markets, they will need to produce competitive, low cost newsprint which can sustain the higher transportation costs of shipping to the higher growth U.S. markets.

## Bibliography

### Electronic Media

Desbarats, Peter. An Industry in Transition. Royal Commission on Newspapers, Vol 1. 1981

Dolan, Peter. "Directory Publishers - Paper or Electronic Directories". Tele-Direct (Publications) Inc. Publishing and Printing Papers Conference. 1993

Fidler, Roger. "The Newspaper of the Future". Washington Journalism Review.

Fidler, Roger. "Newspapers II. Mediamorphosis, or the Transformation of Newspapers into a New Medium".

Gilder, George. Life After Television. Norton & Company. New York. 1993?

Gilder, George. "Telecosm: Digital Darkhorse-Newspapers". Forbes ASAP

Kainz, Alana and Evensen, Brad. "Information Highway". Ottawa Citizen series. 1994

Savitz, Eric. "Dangerous Display: Flat-Panel Floundering Holds Risks for U.S. Industry". Barron's. June 1993.

Waters, J. William. "Video: A New Era". Stanford Research Institute. 1979.

### Newsprint Demand

Campbell, Paul R. "Population Projections for States by Age, Sex, Race and Hispanic Origin: 1993 to 2020". U.S. Bureau of Census, Current Population Reports P25-1111. 1994.

Coen, Robert. "Estimated Annual U.S. Advertising Expenditures 1935-1992". McCann-Erickson. 1993.

Coen, Robert. "Insider's Report. Robert Coen Presentation on Advertising Expenditures" June 1993. McCann-Erickson

Canadian Pulp and Paper Association. Newsprint Data 92: Statistics of World Demand and Supply.

## North American Newsprint Demand (1993-2010)

### Bibliography

---

- Canadian Pulp and Paper Association. Reference Tables 1992.
- CRSS. "*Newsprint Cost and Demand*". 1993. Prepared for Industry Canada
- CRSS. Newsprint II The Sequel. 1993
- Dunnett, Peter. The World Newspaper Industry. 1988
- Foy, John. "The Canadian Daily Newspaper Industry in 1993". Canadian Daily Newspaper Association. Publishing and Printing Papers Conference. 1993.
- Hallman, Oliphant and White. The Newspaper as a Business. Royal Commission on Newspapers, Vol 1. 1981
- Kent, Tom. Royal Commission on Newspapers. Minister of Supply and Services Canada. 1981
- Kerr, Hamish. "*Newsprint Markets. An In-Depth Look Ahead*". Publishing and Printing Papers Conference. 1993
- Kubas, Leonard. Newspapers and their Readers. Royal Commission on Newspapers, Vol 1. 1981
- Maine, John. "*Newsprint Market Outlook*". Resource Information Systems (RISI). 1993.
- NLK-Celpap. Effective Marketing of Newsprint - Changing Requirements in the 1990s. June 1991.
- NLK Consultants. North American Newsprint: Strategic Analysis. 1993.
- Pulp and Paper Forecaster Services. Restructuring in the North American Newsprint Industry - Outlook for 1993-2005. Miller Freeman. 1993.
- Pulp & Paper 1993 North American Factbook
- RISI Pulp and Paper Review. April 1993.
- Whalen, Hugh. "*Sunrise or Sunset? Prospects for the Newsprint Industry*". CFPF. Paris. 1992.
- Willie, Stefan. The Pulp, Paper and Allied Industries in Canada. Aktrin Research Institute. 1988

North American Newsprint Demand (1993-2010)  
Bibliography

---

Companies Interviewed:

Abitibi-Price  
Canadian Pacific Forest Products  
Chicago Sun-Times  
Chicago Tribune  
CRSS  
Knight-Ridder  
McCann-Erickson  
Morgan Stanley  
Ottawa Citizen  
RISI  
RR Donnelly  
Stone Consolidated  
Times-Mirror

