

# Did the Canadian Newspaper Acquisitions Raise Prices for Consumers?\*

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## Abstract

In the late 1990s, the Canadian newspaper industry underwent rapid consolidation with a few conglomerates controlling the vast majority of daily papers. Over a 4 year period, about three-fourths of Canada's daily newspapers changed ownership. While the issue received considerable attention and criticism at the time, the concerns were mostly about diversity of opinion. We have not found any study examining the straightforward economic implications of such a large scale realignment in this important industry.

We examine the effect of this consolidation on observable variables relating to consumer welfare. Specifically, we analyze prices for both circulation and advertising, as well as study the extent to which concentration increased using county level circulation data. Our results do not support the notion that greater concentration led to the abuse of market power in the form of higher prices. In fact, our results suggest that newspapers with changed ownership and those in the dominant chains had either lower price increases or greater price declines after the merger, compared with the other papers.

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*Les années 1990 correspondent à une période de consolidation rapide de l'industrie de la presse écrite au Canada. Entre 1995 et 1998, les trois-quarts des quotidiens ont changé de main. Cette consolidation a reçu une large couverture médiatique et relancé le débat sur l'importance de la diversité éditoriale dans la presse canadienne. Nous quantifions l'impact économique de ce réalignement. Nous examinons l'effet de cette consolidation sur des variables observables reliées au surplus des consommateurs. En particulier, nous faisons l'analyse du prix de vente aux lecteurs ainsi que des coûts pour les annonceurs. De plus nous mesurons à quel point la concentration a augmenté en utilisant des données sur la circulation des quotidiens dans comté au pays. Nos résultats ne supportent pas l'assertion que l'augmentation de la concentration dans la presse canadienne a mené à un abus du pouvoir de marché de la part des quotidiens. Au contraire, nous trouvons que les quotidiens qui ont changé de propriétaire ainsi que ceux possédés par un des groupes de presse dominants ont vu des augmentations de prix moins élevés ou des baisses de prix plus fortes après les fusions par rapport aux autres journaux.*

JEL Code: L82, L41.

## **1 Introduction**

The issue of media ownership concentration is an especially delicate one because of concerns over the accurate dissemination of information to consumers and the need to allow room for differing opinions in television, radio and the print media. There appears to be a growing trend towards consolidation in all segments of media markets- the radio industry in North America, for example, is dominated by the huge market power of Clear Channel Communications. Network television in the US is controlled by just 4 groups, whose parent companies (Viacom, for instance) control significant shares of the cable television market as well. Internationally, Rupert Murdoch's News Corporation has controlling stakes in newspapers, television stations, record companies and magazines in the US, UK, Australia, Canada and across Asia. More recently, the trend toward cross-media collaborations and acquisitions

has resulted in the creation of AOL Time Warner, with the combined reach of CNN, Time Magazine, AOL, Warner Bros. among others.

The issue of media concentration recently received widespread attention in the United States with the proposal in 2003 by the Federal Communications Commission to relax ownership and cross-ownership laws in the media: raising the market cap on the reach of television stations owned by the same conglomerate, and allowing firms to own print and broadcast media in the same market. After considerable criticism and debate in the media, the idea appears to have been dropped.

There are two possible effects of an increase in consolidation that can cause concern- the potential for an abuse of market power by firms (the usual economic concern from large mergers) and the potential for reduced diversity of opinions and content from having fewer media sources. In this paper we examine the first of these issues. As we describe in the next section, the Canadian newspaper market experienced huge changes through a number of acquisitions in a surprisingly short time. Our goal is to examine whether these mergers led to price changes or had observable effects on newspaper readership. In Canada, unlike in the United States, there are no special protections accorded to print media which would stop a merger in order to prevent a loss of diversity of editorial opinion. Thus, only strictly economic arguments could have been used to prevent the newspaper mergers in the late 1990's. We discuss this point in more detail in Section 3.

The Canadian newspaper mergers can be traced to three large business acquisitions between 1996 and 2000:

- Through a series of deals in 1995 and 1996, Hollinger Inc. acquired a controlling stake<sup>1</sup> in the Southam group of newspapers (which included 16 daily newspapers) as well as completed the purchase of 25 daily newspapers from the Thomson group and 7 independent dailies.<sup>2</sup>

- On March 1st, 1999, Quebecor Inc. acquired the Sun Media chain of newspapers, including 14 daily papers, in a \$983 million deal. Quebecor

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<sup>1</sup>“Hollinger takes control of Southam: Black leading press baron”, *The Gazette*, May 25, 1996.

<sup>2</sup>“Newspapers Are Reshuffled Across Canada”, *The New York Times*, May 13, 1996.

surpassed a bid by Torstar for purchasing Sun Media, but in turn sold four of its existing dailies to Torstar.<sup>3</sup>

•On July 31st, 2000, Canwest purchased 28 daily newspapers from Hollinger Inc. The \$3.5 billion purchase constituted the largest media deal in Canada’s history. It allowed Canwest to go from having a zero stake in the Canadian newspaper market to becoming the country’s biggest publisher, with 1.8 million daily readers.<sup>4</sup>

Unsurprisingly, the scale and speed of consolidation in the Canadian daily newspaper market led to considerable debate and criticism. However, much of the debate centered around the issue of editorial independence and the possible lack of diversity of opinion resulting from a handful of media conglomerates dominating the popular press, as well as the possibility that the new owners would not represent the interests of local communities. There was relatively little debate about the economic effects of the mergers or standard economic concerns relating to rapid consolidation in any industry.

In fact we have not found any academic work studying the economic effects of the mergers; this is especially surprising for an industry that reaches 79% of adult Canadians every week and generates annual revenues of 3.3 Billion Canadian Dollars (about 2.9 Billion US Dollars).<sup>5</sup> In our paper we attempt to fill this gap by examining whether the mergers affected prices or consumer welfare in the daily newspaper market. When speaking of consumers, it is important to keep in mind that there are two distinct groups of consumers in newspaper markets: readers and advertisers. We will examine the effect of the 1990’s merger wave on reader and advertiser welfare.

Our results do not support the notion that increased concentration led to higher prices, for either circulation prices or advertising rates. In particular, newspapers with changed ownership saw smaller price increases, or

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<sup>3</sup>“It’s Official: Sun Now Quebecor’s”, *The Toronto Sun*, March 2, 1999.

<sup>4</sup>“New news empire is born: CanWest Global picks up dailies from Hollinger for \$3.5 billion.” *The Gazette*, August 1, 2000.

<sup>5</sup>Figures are from the Canadian Newspaper Association and include totals for both daily and weekly newspapers. Revenue figures are the sum of advertising and circulation revenues.

greater price declines than newspapers with unchanged ownership. Additionally, newspapers in the two dominant chains (Hollinger and Quebecor in 1999, and Canwest and Quebecor in 2002) did not have significantly different price changes from the remaining newspapers. For example, we find that circulation prices at newspapers in the dominant chains rose by an average of between 11 and 14 cents, which was a smaller increase than the corresponding increase of around 15 cents for independent newspapers or those in smaller chains. Moreover, average advertising prices decreased by 12 cents per 1000 readers at newspapers in the Hollinger and Quebecor chains, compared with a corresponding rise of 8 cents in the remaining papers. Our results are robust to examining different lengths of time after the mergers; they also do not show a strong relation between local concentration (as indicated by county level data) and higher prices. These results are reassuring from the point of view of consumer surplus in that there is no clear economic effect of increased market power. Thus the Competition Bureau was correct in permitting these mergers since they did lead to abuse of market power in the form of higher prices for either readers or advertisers. Later in the paper we offer reasons for why prices did not rise despite much greater concentration.

These results do not provide a causal effect of these mergers since the set of newspapers changing hands is not exogenous. This is because the set of mergers which were consummated in the 1990's were the outcome of both the choices of firms and approval by Canada's Competition Bureau. However, the Competition Bureau never chooses which firms will merge since this is the prerogative of the firms. Thus for an agency such as the Competition Bureau the correct "experiment" to evaluate the efficacy of merger policy is to vary the set of mergers which are approved, conditional on firms proposing them.

There is a substantial literature which evaluates the effects of proposed mergers on consumer prices such as the recent work by Nevo (2000). The norm in this research is to use a structural model of demand and firm conduct and assume that the merger will change the ownership patterns in the industry, but will not alter the type of equilibrium firms play (such as

allowing the possibility of tacit collusion) or change the preferences of individuals. In contrast, our difference in difference approach can allow for a broader class of effects such as a consumer boycott of merged papers.<sup>6</sup>

Our paper adds to a vast body of work on media markets, but to a relatively small literature on the effects of concentration in these markets.<sup>7</sup> Most closely related to our work is George (2001), who studies the effect of ownership concentration on product variety. She finds that product differentiation among newspapers, as measured by the variety of topics covered, actually increases with ownership concentration. She also finds that the additional variety increases readership. The first result is hardly surprising from a theoretical standpoint; multi-product firms internalize the business stealing effect, and therefore the effect of mergers, or ownership concentration, should be for owners to reposition their products so as to appeal to new and distinct groups of readers. Berry and Waldfogel (1999) find similar results in the radio industry; their results suggest that consolidation in radio markets, caused by the US Telecommunications Act of 1996, increased product variety.

Chandra (2006) argues that advertising prices should not be affected by the degree of concentration in newspaper markets, as long as there is little or no overlap among newspaper readers. This may explain some of the results in this paper; specifically, our finding that per-reader advertising rates do not increase in newspapers with greater market power.

The rest of the paper proceeds as follows: In Section 2, we describe the data used for the project. In Section 3 we provide the historical background pertaining to the newspaper merger wave. In Section 4 we provide detailed results showing the effect that the mergers had on observable characteristics of the industry. Section 5 summarizes our findings and concludes.

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<sup>6</sup>Recent work has evaluated the forecasts of structural merger models by comparing them to changes in prices which followed the merger. Peters (2006) and Weinberg (2006) find these structural models have mediocre performance in predicting the effect of airline and motor oil mergers.

<sup>7</sup>For references on studies of the newspaper industry, see Chandra (2006).

## 2 Data

We use data from three sources.<sup>8</sup> Editor & Publisher Magazine – which is the weekly magazine of the newspaper industry – is our source of information on newspaper prices, advertising rates, aggregate circulation, and other newspaper characteristics (such as the number of employees of the newspaper publisher and the number of pages per copy) for every daily newspaper in Canada. We have collected these data for the years 1995, 1996, 1998, 1999 and 2002. There are, on average 101 daily newspapers in each year, with a small amount of entry.<sup>9</sup>

Summary Statistics at the aggregate level are in Table 1; this contains all daily newspapers in Canada. Note that an observation in this table is a newspaper-year combination, we have data for the 5 years listed above. The data show that, during our sample period, the mean weekday newspaper circulation was 47206 and the median circulation was 18019. While it may appear that circulation on Saturdays and Sundays is considerably higher than on weekdays, it is important to keep in mind that not all newspapers publish on one or both days of the weekend, and those that do tend to be the larger circulating ones. Conditional on having a Saturday edition, average daily circulation is over 56,000 copies, and conditional on having a Sunday edition, average daily circulation is over 98,000.<sup>10</sup> The mean circulation price is \$0.58 and the mean advertising price per column inch is \$2.3 on weekdays. Just over half the newspapers in the sample are published in the evening, while 11% are French language papers.<sup>11</sup>

A supplementary source of data is obtained from county level circulation figures provided by the Audit Bureau of Circulations (ABC). ABC is

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<sup>8</sup>We have made (most) of our data available online so that it is available to other researchers. We have excluded the proprietary data that was purchased from ABC. The dataset and variable descriptions can be accessed at: <http://strategy.sauder.ubc.ca/chandra/canadadata.html>

<sup>9</sup>For example, during this period the *Lloydminster Times* became a daily paper (from a weekly paper), and the *National Post* was founded.

<sup>10</sup>Among those newspapers that publish an edition every day of the week, Saturday circulation is the highest, followed by Sunday circulation.

<sup>11</sup>Of the 11 French papers, there are 9 in Quebec, and 1 each in New Brunswick and Ontario.

Variable	Obs	Mean	Std. Dev.	Min	Max
Weekday Circ.	515	47206	74041	1000	494719
Saturday Circ.	408	68366	106508	2675	739108
Sunday Circ.	139	110750	112708	13693	491105
Average Price (\$)	515	0.58	0.15	0.21	1.04
Average Pages	491	39.7	26.3	8	140
Weekday Ad. Rate (\$)	511	2.3	3.0	0.4	25.6
Saturday Ad. Rate	399	2.9	3.7	0.5	26.9
Sunday Ad. Rate	137	4.0	2.7	1.0	12.5
Evening Paper	515	0.52	0.50	0	1
French	515	0.11	0.31	0	1
Ad. Rate per 10K readers	511	0.98	0.86	0.22	7.70

Source: Editor and Publisher Magazine.

Table 1: Aggregate Summary Statistics

an independent, not-for-profit organization that is widely recognized as the leading auditor of periodical information in North America and many other countries. Potential advertisers in the print media use the circulation data provided by ABC as the basis for determining where to allocate their advertising dollars. The ABC dataset contains extremely detailed information on the circulation of 73 Canadian newspapers for the years 1995-1999. These 73 newspapers constitute the major selling dailies in Canada,<sup>12</sup> and the only ones on which ABC collects information. We have also matched to each county detailed demographic data: median income, education distribution, population and languages spoken. Specifically, we use the Statistics Canada County Demographic data set for the 1996 Census Year. For each newspaper, we know the counties in which it circulates and the number of copies sold (weekday and Sunday separately). Using this dataset, we are able to determine exactly which newspapers compete with each other and how intense that competition is. Relying simply on aggregate data would

<sup>12</sup>Along with the *Globe and Mail* as discussed below.



not allow us to make these distinctions. In fact, ABC provided these data at the postal code level for a subset of newspapers but in order to have comparable observations across papers we have aggregated the postal code level data to the county level.<sup>13</sup> Conceptually, it would seem that merging these two geographies would lead to the loss of a great deal of data. However, since virtually all postal codes are completely contained within a single county, we can aggregate postal code data to the county level.<sup>14</sup> To do this we take Statistics Canada’s Postal Code Conversion File for 1996 (PCCF) which lists the county to which a 6 character postal code belongs. Next, we create a match from 3 digit postal codes to counties. 3 digit postal codes are also known as Forward Sortation Areas or FSAs; for example the FSA for K1A 0G2 is K1A. The match from FSAs to counties is done by taking the median county of all 6 digit postal codes within an FSA. Finally, we aggregate all FSAs in the same county to create county level statistics.

Table 2 has summary statistics at the county level; observations in the first panel are newspaper-county combinations. The average weekday circulation is 4638 per newspaper per county. We also present measures of the Herfindahl index calculated according to county level market shares in weekday circulation. These measures are defined in section 4. Essentially, we compute the herfindahl index in each county and then, for each newspaper or chain of newspapers, weight the value of the herfindahl index in the counties in which it is present by its circulation in that county. This provides an indicator of the competitive environment faced by newspapers or chains, by giving more importance to markets where the newspaper/chain has a greater fraction of its circulation. The mean weighted herfindahl index by newspapers is 0.55; the mean weighted index by chain is 0.61.

Panel 2 of Table 4 provides aggregate circulation figures at the county level as well as demographic data on population and income. Total weekday

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<sup>13</sup>The level of detail at which circulation data are collected differs usually due to the size of the newspapers. For papers with very high circulation, providing and auditing accurate figures at the postal code level is extremely hard, which is why the data are sometimes only available at the county level.

<sup>14</sup>In fact more than 98% of postal codes within a forward sortation area (FSA) are in a single county.

Variable	Obs	Mean	Std. Dev.	Min	Max
<u>Newspaper-Counties:</u>					
Weekday Circ.	3612	4638	16020	1	220930
Saturday Circ.	2007	4719	19020	3	305227
Sunday Circ.	2789	4233	16134	0	188326
Weekly Circulation	3612	31446	108994	9	1598203
Weighted Herfindahl (Individual Paper)	3612	0.55	0.16	0.33	1
Weighted Herfindahl (Group)	3612	0.61	0.19	0.34	1
<u>Counties:</u>					
Total Daily Circ.	1053	15909	38366	1	324940
Total Weekly Circ.	1053	107880	262910	62	2353779
Population (15 plus)	257	87590	201999	5680	1959935
Average Income	257	22352	3504	15548	35555
Median Income	257	17046	3108	10211	27136

Source: Audit Bureau of Circulation (ABC) and Statistics Canada.

Table 2: County level summary statistics

circulation in the average county is 15909. We have observations on 1053 counties pooled across the four years of available data; this translates to observations on approximately 260 counties annually. The demographic data reveal a wide variation in county definitions across the country: the mean county population (15 years and older) is approximately 87,000; however some counties have populations of well over a million.<sup>15</sup>

While it is the case that we do not have county level circulation data for a subset of Canadian dailies, as a practical matter there is no straightforward solution to this problem, since ABC simply does not collect or provide data for the 28 newspapers for which we only have aggregate circulation figures. In the county level analysis that follows, we will restrict our attention to the newspapers for which we do have county level data. For the most part, with one major exception, the 28 newspapers without county data are low circulating, small-town newspapers. The one exception is the *Globe and Mail*, at the time Canada’s only national newspaper and the second largest newspaper in the country with an average daily circulation of over 300,000.<sup>16</sup> ABC does not collect county level circulation data for the *Globe and Mail*, but we were able to obtain circulation figures at the CMA level for this newspaper.<sup>17</sup> We analyze circulation figures specifically for the *Globe and Mail* in Section 4.3; for the present, we note that the *Globe and Mail* was not affected by the newspaper mergers; in fact, its circulation remained quite stable across each province over the period of our study.

We argue that the remaining newspapers for which we do not have county level data will not affect our results significantly. The average weekday circulation of all daily newspapers during our study period is approximately 46,000 while the median is approximately 18,000. By contrast, 18 of the 27 omitted newspapers have a daily circulation of less than 10,000. Of the

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<sup>15</sup>There are 3 such counties; they include substantial portions of the metropolitan areas of Montreal, Toronto and Vancouver, respectively.

<sup>16</sup>The largest circulating newspaper was, and remains, *The Toronto Star*. Its circulation was approximately 465,000 over the study period; however it was almost entirely confined to Ontario.

<sup>17</sup>CMAs (Census Metropolitan Areas) are geographic areas comprising an urban core of at least 100,000 plus the surrounding urban areas.

Variable	Mean	Std. Dev.	Min	Max	Median
Newspapers per County	3.4	1.6	1	13	3
Counties per Newspaper	12.3	17.0	1	92	5

Table 3: Dispersion of Newspapers across Counties

remainder, the largest are the *Kingston Whig-Standard* and the *Peterborough Examiner* with approximate daily circulations of 27,000 and 22,000 respectively. We will proceed with the county level analysis under the assumption that the omitted newspapers did not see major changes in their circulation at the county level, controlling for changes in aggregate circulation; in essence, we will take their county level circulation and market shares as given, and examine those newspapers on which we do have data. This method does allow us to say more on this subject than if we were to restrict ourselves only to the (complete) aggregate data.

Finally, in Table 3, we provide figures on the spread of newspapers across counties. The mean and median number of daily newspapers per county are respectively 3.4 and 3. The mean and median number of counties across which a newspaper circulates are respectively 12.3 and 5.

### 3 Background on the Canadian Mergers

In this section we provide some historical background on the wave of newspaper mergers in Canada in the late 1990s and also present aggregate statistics detailing the extent of consolidation in the industry.

The 1990s saw a wave of consolidation in the Canadian Newspaper industry, spurred by Hollinger’s entry into the Canadian Newspaper market in 1994. Through several acquisitions, by 1998 Hollinger controlled a large fraction of the Canadian Newspaper market. Table 4 shows that the market share of the top 3 newspapers chains in Canada rose from 56% to 78% from

1995 to 1999 with Hollinger's share rising from 0 to 44%.

By 2002, the 3-firm concentration ratio was back down to 67%. Note that over this time, aggregate newspaper circulation in Canada had been steadily declining. The 1995-1996 merger wave is a particularly interesting case study of the effects of media concentration for several reasons. In most western countries, media industries are subject to more stringent restrictions on mergers and concentration than are other industries. For instance, in the United States, the Federal Communications Commission is entrusted with regulating the communications and media sectors. In contrast, Canada does not have specific legislation regarding competition in media. Instead the Competition Bureau regulates newspapers as it does any other product market:

As the Toronto Star editorialized:

“Canada is alone among industrialized nations in having no laws to limit press and broadcast concentration; most countries have strict limits on either the percentage of national audience allowed one company, the number of newspapers or broadcasting stations one company can own, the impact of a proposed merger on editorial diversity, or a combination of all of these.”<sup>18</sup>

Even Canada's Competition Bureau acknowledges this fact:

“As a law of general application that covers all businesses in Canada, the Competition Act has no specific provisions regarding broadcasting, telecommunications, newspapers or other media. Also, the Competition Act is essentially an economic law. When it is applied to specific cases, an analytical framework common to all products and services is employed.”<sup>19</sup>

Thus the issue of insuring diversity in media is substantially sidestepped by Canadian Competition law. This legal arrangement allowed for the unprecedented wave of consolidation in the Canadian newspaper industry in

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<sup>18</sup>“Media concentration is at crisis levels”, *The Toronto Star*, May 2, 1997.

<sup>19</sup>“The Competition Bureau's Work in Media Industries: Background for the Senate Committee on Transport and Communications” Competition Bureau, page 6.

Ownership	Daily Circulation	National Market Share
<u>1995</u>		
Southam	1285746	0.26
Thomson	997425	0.20
Torstar	494719	0.10
Sun Media	472054	0.09
Quebecor	421841	0.08
Trans Canada (JTC)	283472	0.06
Others	1058793	0.21
Aggregate National Circulation	5014050	
<u>1999</u>		
Hollinger/Southam	2211945	0.44
Quebecor/Sun Media	1160572	0.23
Thomson	536346	0.11
Torstar	460654	0.09
Trans Canada (JTC)	257316	0.05
Others	345218	0.07
Aggregate National Circulation	4972051	
<u>2002</u>		
Canwest	1575936	0.33
Quebecor	973059	0.20
Torstar	671231	0.14
Trans Canada (JTC)	415345	0.09
Hollinger	259523	0.05
Others	918383	0.19
Aggregate National Circulation	4813477	

Table 4: Newspaper Ownership by Group

1999:	1995:	Sun Media	Southam	Thomson	Others/Independent	Total
Hollinger/Southam		0	13	23	20	56
Quebecor		8	0	0	5	13
Thomson		0	1	0	1	2
Torstar		0	1	2	1	4
Total		8	15	25	27	75

Source: Editor and Publisher Magazine.

Table 5: Changes in Newspaper Ownership 1995 to 1999

the mid 1990's. It is worth noting that the Canadian newspaper market was already quite concentrated in the early 1990's. Indeed only 9 cities in the country at that time had more than one daily newspaper. The merger wave affected almost all newspaper markets in Canada; between 1995 and 1999, 75 daily newspapers changed hands. Over the same period, the national Herfindahl index rose from 1600 to 2400, indicating a shift from an industry with a moderate level of concentration to one with a high level of concentration.

## 4 Results

The reallocation in the Canadian Newspaper industry as a whole is enormous. Only a quarter of daily newspapers had the same owner in 1999 as in 1995. Table 5 depicts the changes in ownership for the 75 newspapers that changed ownership over the period 1995 to 1999; columns represent 1995 ownership and rows represent 1999 ownership. There are no entries for some newspaper chains, for example Quebecor in 1995, because none of Quebecor's possessions in 1995 changed hands.

The row and column totals tell us that, for example, Thomson lost 25 papers over the 4-year period and gained 2. Hollinger was clearly the biggest gainer with 56 acquisitions. Even if the 13 existing Southam owned papers are not taken into account, the Hollinger/Southam chain acquired 43 news-

papers over this period from Thomson and from independent publishers. Quebecor acquired the largest newspaper to change hands, the *Vancouver Sun*, with a daily circulation exceeding 240,000.

#### 4.1 Price and Quantity Changes

We now present our empirical findings on the effect of the newspaper mergers. Our identification strategy is a difference-in-differences approach. We compare various groups of newspapers: those that changed hands versus those that did not; those in the dominant newspaper chains versus the rest; and those that competed in multi-newspaper cities versus those which operated essentially as local monopolies.

Note that the mergers do not constitute a valid natural experiment, since the newspaper chains determined which papers changed hands and which did not. However, it is not clear that a natural experiment is useful for a Competition Authority deciding on whether to approve a merger. The collection of mergers that come before the Competition Authority are never exogenous since firms initiate mergers. Moreover, mergers which are likely to increase market power will also be more profitable for the merging firms. Thus the fact that two firms were willing to merge indicates that they may be able to increase their market power. In this context, we present an empirical examination of whether newspapers with greater market power exercised that market power in the form of higher prices.

Table 6 compares characteristics of newspapers that changed hands over the four year period of consolidation 1995-1999, to those that did not.

It appears to be the case that neither circulation nor advertising prices at acquired newspapers experienced changes that were significantly different from those that did not change ownership. In general, average circulation prices rose slightly and average advertising rates fell slightly for both groups of newspapers. The fall in advertising prices is related to slight declines in circulation for both groups of newspapers over this period. Upon examining advertising prices per 10,000 readers (i.e. normalizing by circulation), it appears that advertising rates per reader decreased for newspapers with



<u>Change in Variable</u>	Unchanged Ownership		Changed Ownership		Diff-in-Diff	
	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Err</u>
Circ. Price	0.13	0.09	0.11	0.10	-0.02	0.02
Weekday Circ.	-5952	8525	-2932	4075	3020	1736
Ad rate	-0.13	0.94	-0.43	0.67	-0.30	0.20
Av Pages	0.50	7.07	-0.57	5.41	-1.07	1.52
Ad rate per 10K	0.08	0.38	-0.12	0.30	-0.19	0.08
Log Weekday Circ.	-0.10	0.06	-0.10	0.09	0.00	0.02
N	26		75			

Table 6: Difference in Differences estimates for newspapers with changed ownership, 1995 to 1999

new ownership, and this change is significantly different from the change for unacquired newspapers, whose per reader advertising prices rose slightly over the same period. We also examined whether the two groups of newspapers had different percentage changes in circulation by looking at the difference in the logs of daily circulation, but there was no significant difference.

In Table 7, we extend the time period of the study by looking at differences between newspapers with changed and unchanged ownership over the period 1995 to 2002. This allows us to examine whether the ownership changes had a delayed effect; it also allows us to examine the effect of the Canwest takeovers of 2000. The results of Table 6 continue to hold; it is not the case that newly acquired newspapers had significantly different changes in either of the two prices as compared to newspapers with unchanged ownership.<sup>20</sup> However the results do indicate that the newspapers with new ownership had significantly greater percent declines in circulation compared with newspapers that retained their ownership. It is surprising, though, that this change appears a few years following the takeovers, rather than immediately following them.

<sup>20</sup>There are fewer observations with changed ownership in 2002 than in 1999. This is because we classify newspaper ownership only according to the 7 groups defined in Table 4. Some papers that were acquired by a chain in the 1996-1998 mergers reverted to independent ownership by 2002.

<u>Change in Variable</u>	Unchanged Ownership		Changed Ownership		Diff-in-Diff	
	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Err</u>
Circ. Price	0.17	0.12	0.14	0.11	-0.03	0.03
Weekday Circ.	-3257	13354	-5989	13355	-2732	2907
Ad rate	0.26	1.44	-0.10	0.67	-0.36	0.27
Av Pages	-2.13	12.71	0.48	5.97	2.61	2.43
Ad rate per 10K	0.13	0.49	0.08	0.56	-0.05	0.11
Log Weekday Circ.	-0.10	0.13	-0.19	0.29	-0.09	0.04
N	30		71			

Table 7: Difference in Differences estimates for newspapers with changed ownership, 1995 to 2002

In Tables 8 and 9, we examine whether newspapers that were part of the two dominant chains in 1999 and 2002, had significantly different price changes (from their 1995 levels) than the remaining papers. The two dominant chains were Hollinger and Quebecor in 1999 (controlling 67% of the daily newspaper market) and Canwest and Quebecor in 2002 (with 53% of the market).

Once again, there are almost no significant differences in the changes for the two groups. The one variable that is significant (or marginally significant) is the per reader advertising price. However even in this case it is not clear what effect the mergers had; the Hollinger and Quebecor newspapers' per reader advertising prices experienced a significantly greater price decline than the remaining newspapers in 1999; but the Canwest and Quebecor papers of 2002 had somewhat (though marginally significant) higher price increases than the other papers. We also examined percent changes in the variables of interest, rather than simply looking at the change in levels. We do not present those results here, other than the percent changes in circulation, but the results do not point to significant differences between any of the pairs of newspaper groups.

Finally, we discuss the results using Herfindahl indices generated from county level circulation data. As discussed above, we create weighted Herfind-

<u>Change in Variable</u>	Others		Hollinger/ Quebecor		Diff-in-Diff	
	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Err</u>
Circ. Price	0.13	0.10	0.11	0.09	-0.03	0.02
Weekday Circ.	-5118	7949	-3141	4396	1977	1564
Ad rate	-0.27	0.92	-0.39	0.69	-0.12	0.27
Av Pages	-1.65	7.10	0.25	5.24	1.90	2.43
Ad rate per 10K	0.05	0.37	-0.12	0.31	-0.17	0.11
Log Weekday Circ.	-0.10	0.06	-0.10	0.08	0.00	0.04
N	29		72			

Table 8: Difference in Differences estimates for Hollinger and Quebecor, 1995 to 1999

<u>Change in Variable</u>	Others		Canwest/ Quebecor		Diff-in-Diff	
	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Err</u>
Circ. Price	0.15	0.10	0.14	0.13	-0.01	0.02
Weekday Circ.	-3370	10338	-7933	16716	-4564	2956
Ad rate	-0.03	1.03	0.07	0.88	0.10	0.19
Av Pages	-1.10	8.86	1.18	7.38	2.28	1.63
Ad rate per 10K	0.01	0.44	0.21	0.65	0.20	0.12
Log Weekday Circ.	-0.14	0.16	-0.19	0.35	-0.05	0.06
N	61		40			

Table 9: Difference in Differences estimates for Canwest and Quebecor, 1995 to 2002

ahl indices that, for each newspaper, weigh the standard Herfindahl index in each county that the newspaper circulates in, by its circulation in that county, thereby assigning greater importance to counties where the paper has larger audiences. Therefore, as with a regular Herfindahl index, this measure ranges between 0 and 1, and the higher it is, the less the competitive nature of a firm's market. We use these measures to examine whether newspapers that faced a lower level of competition from rival publishers tended to see greater changes in their advertising or circulation prices. We distinguish between two types of the weighted herfindahl index: Own Weighted Herfindahl (OWH), which calculates market shares based on the circulation of individual newspapers, and Group Weighted Herfindahl (GWH), which treats the publishing group as the unit of analysis in each county, though still weighs the herfindahl by each individual paper's circulation. That is, for newspaper  $i$ ,

$$\underbrace{OWH_i}_{\text{Own Weighted Herfindahl}} = \frac{\sum_k \left[ circ_{ik} * \sum_j s_{jk}^2 \right]}{\sum_k circ_{ik}}$$

where  $circ_{ik}$  is  $i$ 's circulation in county  $k$  and  $s_{jk}$  is the market share of newspaper  $j$  in county  $k$ . Similarly, for newspaper  $i$ ,

$$\underbrace{GWH_i}_{\text{Group Weighted Herfindahl}} = \frac{\sum_k \left[ circ_{ik} * \sum_g s_{gk}^2 \right]}{\sum_k circ_{ik}}$$

where  $s_{gk}$  is the market share of group  $g$  in county  $k$ .

As can be seen from Table 2, there is significant variation across newspapers in the values of the Herfindahl measures. The mean value of  $OWH$  is 0.55 and of  $GWH$  is 0.61. However, these values range from 0.33 to 1. We performed panel regressions of advertising rates per reader and circulation prices on the two herfindahl measures and present the coefficients in Table 10. Note that since ABC makes county data available only for 73 papers, the results are on this sample of papers and not on the full set of newspapers in

Dependent Variable: Circulation Price		
	Coefficient	StdErr
Own Weighted Herfindahl	0.047	0.146
Group Weighted Herfindahl	-0.075	0.073
Herfindahl Interaction	-0.34	0.41

  

Dependent Variable: Ad Rate per 10K circ.		
	Coefficient	StdErr
Own Weighted Herfindahl	0.325	0.399
Group Weighted Herfindahl	0.059	0.198
Herfindahl Interaction	-1.94	1.15

Table 10: Newspaper Fixed Effects Regression of prices on Weighted Herfindahl Indices

the Canadian industry.<sup>21</sup> Each regression had as regressors the Herfindahl indices discussed above, the interaction of the two indices, and newspaper fixed effects. The results unambiguously show no effect of the concentration measures on circulation prices, implying that, regardless of the intensity of competition faced by newspaper publishers, there was no effect of the mergers on circulation prices. However, the regression of per reader advertising rates on the herfindahl indices indicates that advertising prices may have risen as a result of the mergers. While neither of the Herfindahl indices is individually significant at the 95% level, they are jointly significant.<sup>22</sup>

We also attempted to gauge the fraction of the population that was impacted by the ownership changes. From 1995 to 1999, 229 out of the 256 counties in our dataset experienced an ownership change for at least

<sup>21</sup>52 out of these 73 newspapers changed ownership over the period 1995-1999, which is about the same proportion of ownership changes of the entire set of newspapers.

<sup>22</sup>We also ran the two regressions in Table 10 using either only Own Weighted Herfindahl or only Group Weighted Herfindahl and found that in each case the coefficient on the Herfindahl was statistically insignificant.

one of the newspapers circulating in the county. The total population of these counties was approximately 97% of the national population. However, only 58% of readers were impacted by the mergers by having their newspaper acquire new ownership. This is due to the fact that the acquired newspapers were, on average, smaller (average circulation of approximately 35,000) than those that were not acquired (average circulation of approximately 75,000). This is driven in large part by the fact that Canada’s 3 largest newspapers—the *Globe and Mail*, *The Toronto Star*, and *Le Journal de Montreal*—did not change ownership over this period.

## 4.2 Multi-Newspaper Cities

In this section we examine whether the newspaper mergers had observable effects on within-city competition among newspapers. Over the period of our analysis there were 9 cities in Canada with more than one newspaper located in the city.<sup>23</sup> The effects of the various mergers on newspaper competition in these cities is summarized as follows:

Alberta: In both **Calgary** and **Edmonton**, there was no effect of the 1996 mergers on the ownership structure. Both cities had one newspaper owned by Sun Media and one owned by Southam and this remained true until 1999. However, Quebecor’s 1999 takeover of Sun Media and Canwest’s later acquisition of many Southam papers affected both cities: By 2002, each city had one newspaper owned by Quebecor and the other owned by Canwest. This did not change the value of the group herfindahl index because they remained multi-ownership cities.

Quebec: Likewise, in **Montreal** there was no effect of the 1996 mergers on ownership. Montreal is the only Canadian city with 4 newspapers, 3 of which had unchanged ownership (Quebecor, JTC and Independent respectively) throughout the period of our study.<sup>24</sup> However, one paper, *The*

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<sup>23</sup>We define a newspaper as being located in a city if its primary publishing office address is within that city.

<sup>24</sup>Part of the reason that Montreal can support 4 daily newspapers (when larger cities, including in the United States, can usually support only 2, rarely 3) is its distinct anglophone and francophone populations as well as demand for multiple papers by the significant fraction of its population that is bilingual. However, 3 of the 4 papers are French.

*Gazette*, was included in Canwest's 2000 takeover of 13 Southam newspapers. Out of **Sherbrooke's** 2 newspapers, one remained under the ownership of JTC throughout the study period while the other, *The Record*, was initially an independent paper, and briefly bought by Quebecor before being sold to Hollinger.

British Columbia: Both of **Vancouver's** daily newspapers were owned by Southam/Hollinger until 2000 when they were both bought by Canwest. Therefore, throughout the sample period, Vancouver was the only multi-newspaper city with just one newspaper owner.

Ontario: **Ottawa** has three newspapers, of which Southam/Hollinger and Sun Media initially owned one each. These were acquired by Canwest and Quebecor respectively. The third, *Le Droit*, was first acquired by Hollinger and then sold to Power Corp in 2000. In **Toronto**, the traditional rivalry between the *Sun* and the *Star* came under the spotlight in 1998 with the *Star's* parent company, Torstar, attempting a hostile takeover of the *Toronto Sun's* parent company, Sun Media. However, eventually Quebecor outbid Torstar to complete its purchase of Sun Media's newspapers. Toronto's other daily, the *Globe and Mail*, at the time Canada's only truly national newspaper, was long owned by the Thomson group, but was acquired by BCE in 2001.

Manitoba: **Winnipeg's** two newspapers were long owned by Quebecor and Thomson respectively, until Thomson sold the *Winnipeg Free Press*, in 2001, to an independent corporation.

Nova Scotia: One of **Halifax's** two newspapers remained independently owned throughout our study period. The other, *The Daily News*, was purchased by Southam/Hollinger during the 1996 merger wave, and then by Canwest during the 2000 mergers.

These 9 cities account for 22 daily newspapers. These are the only newspapers for which the mergers had an appreciable effect on the herfindahl indices defined earlier; the other newspapers did see changes in the weighted herfindahl measures due to variation in their own circulation, but not di-

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One of these papers, *Le Devoir*, has a relatively low daily circulation of about 35,000 and has lost money during most of its existence.

<u>Change in Variable</u>	Others		Multi-Newspaper Cities		Diff-in-Diff	
	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Err</u>
Circ. Price	0.15	0.1	0.13	0.16	-0.02	0.04
Weekday Circ.	-3473	4871	-11295	26645	-7822	5707
Ad rate	-0.09	0.48	0.35	1.86	0.44	0.40
Av Pages	-1.21	7.4	3.79	10.83	5.00	2.45
Ad rate per 10K	0.07	0.41	0.18	0.86	0.11	0.19
Log Weekday Circ.	-0.16	0.14	-0.15	0.49	0.01	0.11
N	79		22			

Table 11: Difference in Differences estimates for Newspapers located in multi-newspaper cities

rectly as a result of the mergers since they did not face direct competition. Therefore, we examine these 22 newspapers which faced significant local competition against the other newspapers with respect to changes in circulation and prices, and compare the changes to the remaining papers. The results are presented in Table 11.

The results do not support the notion that newspapers in these cities had significantly different price and quantity changes from newspapers in other cities. This is also consistent with the results of Section 4.1. It does appear that newspapers in multi-newspaper cities increased their average number of pages relative to the remaining newspapers, and this change was significant.

### 4.3 The *Globe and Mail*

In this section we analyze whether the *Globe and Mail* (henceforth *G&M*) was affected by the mergers of the late 1990s. The reason for the special emphasis on this newspaper is that the *G&M* was at the time, and continues to be, Canada’s most influential daily newspaper. It is considered to be the newspaper of record, and indeed bills itself as ‘Canada’s National Paper’. It is also Canada’s second largest daily, but the only paper with a truly



	1995	1999
<i>Globe and Mail</i>		
Ontario:	195354	210173
Eastern	27,261	29,915
Central	148,901	162,494
Southwestern	12,669	12,115
Northern	5,236	4,635
Northwestern	1,287	1,014
British Columbia	35401	36877
Quebec	17444	18479
Balance in Country	53692	56097
Total	301891	321626
<i>National Post</i>	-	325000
Aggregate Circulation	5.01 M	5.07 M

Table 12: Globe and Mail circulation by province

national reach; the largest newspaper, the *Toronto Star*, has most of its circulation concentrated within Ontario. Another reason to consider the *G&M* independently is that we do not have county level circulation data for this newspaper over our study period. Circulation data for the *G&M* is collected only at the Census Agglomeration (CA) or Census Metropolitan Area (CMA) level. These are urban geographic categories defined by the Canadian census. We obtained circulation data at the CMA and CA levels directly from the *G&M*.

The *G&M* had long been the flagship paper of the Thomson group. It was retained in the 1990s despite the sale of most of Thomson's newspapers; however it was finally sold in 2001 to BCE Inc. In 1998, Conrad Black created the conservative leaning *National Post* as an alternative to the *G&M* as a national paper. In Table 12 we provide figures detailing the circulation of the *G&M* in 1995 and 1999. For comparison purposes, we also provide the aggregate circulation of the *National Post* (which did not exist in 1995) and the total daily circulation of all newspapers in Canada in these years. The

*G&M*'s circulation in various provinces was computed by summing CMA level data across each province.

From the table it appears that, despite the creation of the *National Post*, the *G&M*'s circulation was not affected during our study period. In fact, it increased by about 20,000 daily copies over the 4-year period. The paper also increased its share of the national daily newspaper market. Its circulation across most of the country was remarkably stable. Within Ontario, the *G&M* more or less maintained its circulation throughout the province, with the exception of Central Ontario (which includes the Toronto Metropolitan Area), where its circulation increased by almost 10%.

To summarize, there is no reason to believe that the *G&M* was affected by the creation of the *National Post*. Moreover, the fact that we do not have county level circulation data for the *G&M* does not appear to be a cause for concern, given the stability of its circulation within each province over the period of study.

## 5 Policy Discussion and Conclusion

In this paper we have discussed some of the consequences of the wave of mergers and ownership changes that took place in the Canadian newspaper industry in the mid 1990s. Our goal was to focus on the economic effects that are easily quantifiable—the effect on circulation and advertising prices—rather than on the subjective issue of diversity in media opinions. We use data from immediately before and after the mergers, as well as more recent data, to infer whether changes in the competitive environment led to observable effects on prices and circulation.

The answer appears to unambiguously be that the ownership changes did not lead to higher prices for consumers. There does not appear to have been a collusive effect of the mergers, or an exploitation of concentration to raise prices by chains with market power. Indeed, acquired papers, and those that were part of the dominant chains, saw smaller price rises or greater price declines than other papers. Interestingly, there is only weak evidence that the mergers impacted circulation; it may have been expected that new ownership

could have an initial adverse effect on circulation, through editorial changes or other policies which could alienate existing readers. Our findings hold true throughout the period of study, whether we examine price changes immediately following mergers, or after a 3 year gap. When we examine more detailed, county level data, there is some support for the hypothesis that advertising rates rose for newspapers in more concentrated markets following the mergers, though there appears to be no effect of the mergers on circulation prices. Overall we vindicate the Competition Bureau's decision to permit these mergers since we find that they left the welfare of both readers and advertisers unaffected. Given these results, critics of newsprint consolidation need to prove that diversity in the Canadian press was adversely affected by these mergers.

We now discuss some explanations for our results:

1. Competition from other media: One possible explanation for our results is that newspapers do not necessarily constitute an industry by themselves, but are part of a wider media market that also includes radio and television stations and other print media such as magazines. If consumers view these various sources of news and information as reasonably close substitutes for each other, then consolidation in newspaper markets does not imply an ability by publishers to set higher prices. This story implies that relaxing cross-ownership restrictions across different media, as proposed in the United States should cause concern in circulation markets.
2. Newspapers maximize joint profits in advertising markets: A second explanation focuses on advertising prices and takes almost the extreme opposite view of competition in newspaper markets. To the extent that newspaper subscribers are mutually exclusive (i.e. to the extent that households or individuals purchase a single newspaper and circulations do not overlap), publishers can be viewed as monopolists in advertising markets. The value to a potential advertiser of placing an advertisement in a newspaper is a function of the characteristics of the subscription base. As discussed in Chandra (2006), if this

value exceeds the advertising price, then the advertisement should be placed, regardless of prices at other newspapers.<sup>25</sup> Therefore, each publisher sets advertising prices ignoring prices at other papers (even other papers in the same group). This implies that, regardless of the ownership structure, publishers maximize joint profits in advertising markets, which explains why prices do not rise despite considerable consolidation.<sup>26</sup>

3. Attempts by the newspaper chains to ‘lie low’: Given the scale of the consolidation in the Canadian newspaper industry, and the accompanying debate over the effects of consolidation, newspaper chains may have chosen not to exercise their market power by raising prices, so as to avoid outrage or further scrutiny of the mergers. It would also not be surprising if the Canadian Competition Bureau had imposed ex-ante or ex-post conditions on the merger: requiring, for example, that prices not be raised in either circulation or advertising markets after the mergers.<sup>27</sup> We contacted the Competition Bureau to enquire about this possibility, but we could not get confirmation on this point.

A broader question is relevant regarding the goals of newspaper publishers: Do they maximize profits in the sense of traditional firms or are there other goals that they pursue? A common motive attributed to newspaper moguls is that they have ideological rather than financial reasons to pursue and maintain market shares in their markets. Some media ventures lose money consistently. These are sometimes supported by public financing; at other times they are operated by individuals or firms for whom the loss

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<sup>25</sup>This result holds exactly only if the firm’s marginal costs are constant. If marginal costs are increasing then the ad rate at other papers may enter into the decision to place an ad by changing the total number of clients served by the firm.

<sup>26</sup>It is worth pointing out the possibility that advertising prices are not considered as important as circulation prices by regulatory authorities. This may be because the interests of newspaper readers receive considerably more scrutiny than those of advertising customers, both by politicians and the media. Because the customers of advertising are firms and businesses, there may be less public concern following a rise in advertising prices.

<sup>27</sup>The Competition Bureau imposed these types of controls on ticket prices following the merger between Air Canada and Canadian.

in revenues is trivial compared to the prestige and influence afforded by a large circulation base. A good example is the *New York Post*, owned by Rupert Murdoch, which is estimated to be losing millions of dollars every year. Conrad Black, who was instrumental in most of Canada's newspaper takeovers, was widely alleged to have the goal of making his newspapers project a conservative outlook. In such cases, it may not be surprising that greater market power does not lead to higher prices for consumers since profitability may not have been the original rationale for the mergers in the first place.

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