Economic Studies A –H

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ECONOMIC STUDY H: NEWS AND PUBLIC AFFAIRS PROGRAMMING: TELEVISION BROADCAST NETWORK OWNED AND OPERATED STATIONS COMPARED TO NETWORK AFFILIATED STATIONS 1

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Economic Study A:

News and Public Affairs Programming Offered by the Four Top-Ranked Versus

Lower-Ranked Television Stations

Bruce M. Owen, Kent W Mikkelsen, Allison Ivory[*]

Introduction

The FCC's current rules place two restrictions on joint ownership of television stations within a DMA:[1]

> 1. Post-merger, there must be at least eight independently owned and operated full-power commercial or noncommercial stations licensed in the DMA; and

> 2. At least one of the merging stations must be outside the top four-ranked stations in the DMA, as measured by audience share.

Explaining the rationale for this rule, the Commission stated:

> In addition, our analysis has indicated that the top four-ranked stations in each market generally have a local newscast, whereas lower-ranked stations often do not have significant local news programming, given the costs involved.[2]

Economists Incorporated (EI) was asked to determine what empirical basis there is today, if any, for a belief that, outside of the four top-ranked stations in a market, television stations generally do not have a local newscast.

EI's findings can be summarized as follows:

> 1.   There are many stations not ranked among the top four in market audience that carry *local* news programming. Such stations can be found in 38 per-

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cent of all DMAs. A total of 164 stations not ranked among the top four in their markets carry *local* news programming.

2. Thirty percent of all DMAs have one or more broadcast stations not in the top four that carries original *local* news.

3. The average household in the United States lives in a DMA with 6.1 sources of *local* broadcast television news.

4. Not surprisingly, larger markets with more broadcast stations tend to have a larger number of local television news sources.

Data and Findings

EI used two sources to identify stations carrying local television news. First, ratings data from Nielsen Media Research include an indicator for local news programs. EI obtained a database listing all local news programs aired by stations that Nielsen rated in the May 2002 sweeps period.[3] Second, TV Guide maintains a database of program listings for most of the television stations in the United States. TV Guide includes in its database indicators for news, public affairs and current affairs programs, and another indicator that distinguishes local programs from national programs. EI obtained a list of all programs during the week May 4-10, 2002 indicated as news, public affairs or current affairs (both local and national) for all full-power broadcast television stations in the TV Guide database.

EI also obtained Nielsen Media Research audience information for the hours 9:00 a.m. to 12:00 midnight for the May 2002 sweeps period for all rated stations. These data were used to determine which stations were the four top-ranked stations.

BIA Financial Network maintains a database of information about broadcast television stations. This database was used to identify full-power television stations and satellite relationships among stations.

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[3] Stations must reach a weekly cumulative household audience percentage above 2.5 (for local broadcast and local cable origination) or 19.5 (for out-of-market stations, including superstations) to be included in Nielsen's ratings.

The Nielsen local news program information was used to identify each rated station (or cable outlet) carrying local news. To avoid double-counting of identical programming, the news programming on each station or cable outlet was compared to the programming on each other station or cable outlet in the same DMA. Five instances were found in which a cable outlet, low-power station or class A station carried exactly the same news programming at the same time as a full-power broadcast station in the same DMA. The full-power station was retained in the count, but the duplicating signal was not included in the count. After these five instances were removed, the data showed 832 broadcast stations and 20 cable outlets carrying local news. Each broadcast station was compared with the list of four top-ranked broadcast stations in its DMA to determine whether or not it was among the four-top ranked stations.

Table A1 lists all DMAs, sorted by rank, and the following information for each DMA, based on Nielsen identification of local news programs: number of broadcast stations ranked among the four top-ranked stations and carrying local news; number of broadcast stations ranked outside the four top-ranked stations and carrying local news; and the sum of the preceding categories.

Note that Table A1 does not identify all local television news programming in each market. The Nielsen data also showed 20 cable outlets in 19 DMAs carrying local news. Even this number probably understates the number of local news cable outlets. For instance, NewsChannel 8 news carried on several cable systems in the Washington DC DMA was not included in the Nielsen data, presumably because its viewership was not high enough to be rated.

Table A1 shows that all DMAs have at least one station among the four top-rated stations that carries local news. A total of 668 stations met this description. There are 80 DMAs in which one or more broadcast stations outside the four top-rated stations carry local news. In total 164 broadcast stations outside the four top-rated stations carry local news.

Table A2 summarizes the number of stations within the four top-rated stations that carry local news. In 103 DMAs, the four top-rated stations all carry local news. In over half of the DMAs, (107 of 210), one does not find four highest rated stations carrying news. This

finding contradicts the Commission's view that the top four-ranked stations generally carry local news.

Among these 107 DMAs, there are 18 smaller DMAs in which it was not possible to have four top-rated stations carrying news, because there were fewer than four broadcast stations in those DMAs receiving enough audience for Nielsen to report a rating. (These 18 DMAs were ranked among the smallest 66 DMAs, the largest being DMA 145.) Even among these 18 DMAs, however, there were 13 DMAs in which a rated station did not carry local news. In the remaining five DMAs, there are fewer than four stations that received Nielsen ratings, but all of the rated stations in the DMA carry local news.

Table A3 summarizes the number of stations outside the four top-rated stations that are carrying local news. In DMAs ranked 1-50, nearly all (46 of 50) DMAs had at least one station outside the four top-rated stations carrying local news. Three or more stations outside the four top-ranked stations carried news in 21 DMAs. Among DMAs ranked 51-100, it is common (21 of 50 DMAs) to have one or more stations outside the four top-ranked stations carrying local news. This is much less common among DMAs ranked below 100: only 13 of these 110 DMAs have one or more stations outside the four top-ranked stations carrying local news.

Some stations carrying local news rebroadcast programming from another local station. With assistance from personnel at Fox, NBC and Viacom, EI classified each station appearing in the Nielsen local news dataset as carrying "original" news or as airing only "rebroadcast" news.[4] Stations that carried both original and rebroadcast news were designated as "original." In several instances, two stations share news operations and jointly produce the same news programming. In these cases, one of the stations was arbitrarily chosen to be designated "original" and the other "rebroadcast."

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[4]   A preliminary designation was made in which all affiliates of ABC, CBS, Fox and NBC were presumed to have original news; stations whose news program names included the call letters or channel number of another station were presumed to be rebroadcasting; and further designations were made based on trade press articles. Changes were made in this preliminary designation in response to comments from officials at Fox, NBC and Viacom.

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Of the 832 broadcast stations carrying local news, this procedure identified 768 as carrying original news and 64 as carrying rebroadcast news. Among the top four-rated stations carrying news, almost all (661 of 668) carried original news. Among broadcast stations outside the four top-ranked stations, about two-thirds (107 of 164) carried original news. Table A4 repeats the analysis behind Table A3, but is restricted to stations carrying original local news. Even with this restriction, 30 percent of all DMAs have one or more broadcast stations not in the top four that carry original local news. Contrary to the Commission's presumption, in many DMAs stations outside the four top-ranked stations carry not only local news but original local news. In the top 50 DMAs, 76 percent have one or more of such stations carrying original local news. This percentage falls to 26 percent in DMAs 51-100 and to 10 percent in DMAs 101-210.

In the normal course of business, TV Guide compiles information about television programming to include in print and online program guides. As part of this procedure, national programming that is news, public affairs or current affairs is identified as such in TV Guide's programming database. For local programming, TV Guide requests that stations identify news, public affairs or current affairs programming. Where this is not identified, TV Guide personnel add the appropriate designations in the course of researching and preparing program descriptions.

The analyses presented here look at news, public affairs and current affairs programming on a restricted group of stations. Only those stations identified in BIA Financial data as full-power commercial or public stations were included. Low power stations and satellite commercial stations were excluded.

When the TV Guide data are restricted to local news programming only, they are roughly consistent with the Nielsen data on local news programming. See Table A5 for a comparison.

Table A6 summarizes the number of stations in six non-exclusive categories:

1. stations carrying local news

2. stations carrying local news or local public/current affairs

3. stations carrying national news

4. stations carrying national news or national public/current affairs

5. stations carrying news, either local or national

6. stations carrying news or public/current affairs, either local or national.

Separate tabulations are shown for stations among the four top-ranked stations in their DMAs and for stations not among the four top-ranked stations in their DMAs.

Table A6 shows that there are many stations carrying local public/current affairs programming that do not carry local news. Among stations outside the top-four, 165 stations show local news while another 181 stations show no local news but do carry public/current affairs programming. The difference is much smaller among top-four stations: only 21 stations show local public/current affairs programming but no local news. Among stations carrying national news and public/current affairs programming, most stations (80 percent) offer both, and about 20 percent offer public/current affairs programming but not news.

Table A6 can also be used to compare the number of stations carrying local news and national news. Among the top-four ranked stations, slightly fewer stations carry national news than carry local news (598 vs. 641). Most of these stations carry both local and national news (78 percent), but a small percentage carry only local (14 percent) or only national (8 percent). For stations outside the top-four ranked, there are over twice as many stations carrying national news (338) as stations carrying local news (165). Of the stations carrying either local or national news, most (63 percent) carried national news only, 23 percent carried local news only, and 14 percent carried both national and local news.

Table A7 presents a DMA-level view of news and related programming carried by stations not among the four top-rated stations. Among the largest 50 DMAs, almost all DMAs (46 of 50) had one or more stations carrying local news. All of the largest 50 DMAs had one or more stations carrying local news or public/current affairs and one or more stations carrying national news. In the next ranked group of DMAs (51-100), 17 DMAs had one or more stations carrying local news, most (43 of 50) had one or more

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stations carrying local news or local public/current affairs, and all had one or more stations carrying national news. In DMAs ranked 101-210, relatively few (13) had any station outside the top four carrying local news. Local news or public/current affairs programming was carried by at least one station in 43 DMAs, national news in 52 DMAs and national news or public/current affairs in 63 DMAs.

Conclusion

In formulating its current local television ownership rule, the FCC relied on a general view that the four top-ranked stations in each DMA carry local news and stations with lower rankings do not carry local news. Both of these generalities are incorrect almost as often as they are correct. Two sources, Nielsen Media Ratings and TV Guide, were used to identify stations carrying local news and related programming. In about half of the DMAs there are one or more stations rated fourth or higher that do not carry local news. In about 40 percent of DMAs, one or more stations not ranked in the top four carry local news.

Table A1. Stations with Local News

DMA	MARKET	Broadcast stations in the top 4 carrying news	Broadcast stations outside the top 4 carrying news	Total broadcast stations with local news
1	NEW YORK	4	6	10
2	LOS ANGELES	4	8	12
3	CHICAGO	4	4	8
4	PHILADELPHIA	4	3	7
5	SAN FRANCISCO-OAK-SAN JOSE	4	5	9
6	BOSTON (MANCHESTER)	4	4	8
7	DALLAS-FT. WORTH	4	4	8
8	WASHINGTON, DC (HAGRSTWN)	4	2	6
9	ATLANTA	3	2	5
10	DETROIT	4	1	5
11	HOUSTON	4	3	7
12	SEATTLE-TACOMA	4	2	6
13	MINNEAPOLIS-ST. PAUL	4	3	7
14	TAMPA-ST. PETE (SARASOTA)	4	3	7
15	MIAMI-FT. LAUDERDALE	4	6	10
16	PHOENIX	4	4	8
17	CLEVELAND-AKRON (CANTON)	4	2	6
18	DENVER	4	3	7
19	SACRAMNTO-STKTON-MODESTO	4	3	7
20	ORLANDO-DAYTONA BCH-MELBRN	4	4	8
21	PITTSBURGH	4	1	5
22	ST. LOUIS	4		4
23	PORTLAND, OR	4	2	6
24	BALTIMORE	4	1	5
25	INDIANAPOLIS	4	3	7
26	SAN DIEGO	4	3	7
27	CHARLOTTE	4	1	5
28	HARTFORD & NEW HAVEN	4	3	7

DMA	MARKET	Broadcast stations in the top 4 carrying news	Broadcast stations outside the top 4 carrying news	Total broadcast stations with local news
29	RALEIGH-DURHAM (FAYETVLLE)	3	3	6
30	NASHVILLE	4		4
31	KANSAS CITY	4	2	6
32	CINCINNATI	4	1	5
33	MILWAUKEE	4	2	6
34	COLUMBUS, OH	4		4
35	SALT LAKE CITY	4	1	5
36	GREENVLL-SPART-ASHEVLL-AND	4	2	6
37	SAN ANTONIO	4	3	7
38	GRAND RAPIDS-KALMZOO-B.CRK	4	3	7
39	BIRMINGHAM (ANN AND TUSC)	4	1	5
40	WEST PALM BEACH-FT. PIERCE	4	1	5
41	MEMPHIS	4	2	6
42	NORFOLK-PORTSMTH-NEWPT NWS	3	2	5
43	NEW ORLEANS	3	2	5
44	GREENSBORO-H.POINT-W.SALEM	3	1	4
45	OKLAHOMA CITY	4	1	5
46	HARRISBURG-LNCSTR-LEB-YORK	4	1	5
47	BUFFALO	3	2	5
48	ALBUQUERQUE-SANTA FE	4	2	6
49	PROVIDENCE-NEW BEDFORD	4	2	6
50	LOUISVILLE	4		4
51	LAS VEGAS	4	2	6
52	WILKES BARRE-SCRANTON	4	1	5
53	JACKSONVILLE	3	2	5
54	AUSTIN	4		4
55	FRESNO-VISALIA	4	3	7
56	LITTLE ROCK-PINE BLUFF	3	1	4
57	ALBANY-SCHENECTADY-TROY	4	1	5
58	RICHMOND-PETERSBURG	4		4
59	TULSA	4	1	5
60	DAYTON	4		4

E c o n o m i s t s   I n c o r p o r a t e d

DMA	MARKET	Broadcast stations in the top 4 carrying news	Broadcast stations outside the top 4 carrying news	Total broadcast stations with local news
61	CHARLESTON-HUNTINGTON	4		4
62	KNOXVILLE	3	1	4
63	MOBILE-PENSACOLA (FT WALT)	4		4
64	FLINT-SAGINAW-BAY CITY	3		3
65	WICHITA-HUTCHINSON PLUS	3		3
66	LEXINGTON	4	1	5
67	ROANOKE-LYNCHBURG	4	1	5
68	TOLEDO	4		4
69	GREEN BAY-APPLETON	4		4
70	DES MOINES-AMES	3	2	5
71	ROCHESTER, NY	4		4
72	HONOLULU	4	2	6
73	TUCSON (SIERRA VISTA)	3	2	5
74	SPRINGFIELD, MO	4		4
75	OMAHA	4		4
76	FT. MYERS-NAPLES	4		4
77	PADUCAH-C.GIRD-HARBG-MT VN	3		3
78	SPOKANE	4	2	6
79	SHREVEPORT	3	1	4
80	PORTLAND-AUBURN	4	1	5
81	SYRACUSE	4	1	5
82	CHAMPAIGN&SPRNGFLD-DECATUR	3		3
83	HUNTSVILLE-DECATUR (FLOR)	3		3
84	COLUMBIA, SC	4		4
85	MADISON	4		4
86	CHATTANOOGA	4		4
87	SOUTH BEND-ELKHART	4		4
88	JACKSON, MS	3		3
89	CEDAR RAPIDS-WTRLO-IWC&DUB	3		3
90	BURLINGTON-PLATTSBURGH	3		3
91	COLORADO SPRINGS-PUEBLO	4	1	5
92	DAVENPORT-R.ISLAND-MOLINE	4		4

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DMA	MARKET	Broadcast stations in the top 4 carrying news	Broadcast stations outside the top 4 carrying news	Total broadcast stations with local news
93	TRI-CITIES, TN-VA	3	1	4
94	WACO-TEMPLE-BRYAN	3	1	4
95	BATON ROUGE	3		3
96	JOHNSTOWN-ALTOONA	4		4
97	EVANSVILLE	3		3
98	YOUNGSTOWN	4		4
99	SAVANNAH	4		4
100	HARLINGEN-WSLCO-BRNSVL-MCA	3	1	4
101	EL PASO	4	3	7
102	LINCOLN & HASTINGS-KRNY	4		4
103	TYLER-LONGVIEW(LFKN&NCGD)	2		2
104	FT. WAYNE	3		3
105	SPRINGFIELD-HOLYOKE	2		2
106	GREENVILLE-N.BERN-WASHNGTN	4		4
107	FT. SMITH-FAY-SPRNGDL-RGRS	3		3
108	CHARLESTON, SC	4		4
109	FLORENCE-MYRTLE BEACH	2		2
110	RENO	4		4
111	LANSING	4		4
112	SIOUX FALLS(MITCHELL)	3		3
113	TALLAHASSEE-THOMASVILLE	2		2
114	AUGUSTA	3	1	4
115	MONTGOMERY (SELMA)	3		3
116	PEORIA-BLOOMINGTON	4		4
117	TRAVERSE CITY-CADILLAC	3		3
118	MONTEREY-SALINAS	4		4
119	FARGO-VALLEY CITY	4		4
120	SANTABARBRA-SANMAR-SANLUOB	4	1	5
121	BOISE	4		4
122	MACON	2		2
123	EUGENE	3		3
124	LAFAYETTE, LA	2		2

DMA	MARKET	Broadcast stations in the top 4 carrying news	Broadcast stations outside the top 4 carrying news	Total broadcast stations with local news
125	YAKIMA-PASCO-RCHLND-KNNWCK	3		3
126	COLUMBUS, GA	2		2
127	LA CROSSE-EAU CLAIRE	3		3
128	AMARILLO	4		4
129	CORPUS CHRISTI	4	1	5
130	BAKERSFIELD	4	1	5
131	COLUMBUS-TUPELO-WEST POINT	3		3
132	ROCKFORD	3		3
133	CHICO-REDDING	3	1	4
134	MONROE-EL DORADO	3		3
135	DULUTH-SUPERIOR	4		4
136	BEAUMONT-PORT ARTHUR	3		3
137	WAUSAU-RHINELANDER	4		4
138	TOPEKA	2	1	3
139	COLUMBIA-JEFFERSON CITY	4		4
140	MEDFORD-KLAMATH FALLS	3		3
141	WICHITA FALLS & LAWTON	3		3
142	JOPLIN-PITTSBURG	3		3
143	ERIE	4		4
144	SIOUX CITY	3		3
145	TERRE HAUTE	3		3
146	WILMINGTON	4		4
147	ALBANY, GA	3		3
148	LUBBOCK	4	1	5
149	BLUEFIELD-BECKLEY-OAK HILL	2		2
150	WHEELING-STEUBENVILLE	2		2
151	ROCHESTR-MASON CITY-AUSTIN	4		4
152	MINOT-BISMARCK-DICKINSON	2		2
153	SALISBURY	2		2
154	ODESSA-MIDLAND	3		3
155	ANCHORAGE	3	1	4
156	BINGHAMTON	4	1	5

DMA	MARKET	Broadcast stations in the top 4 carrying news	Broadcast stations outside the top 4 carrying news	Total broadcast stations with local news
157	BILOXI-GULFPORT	1		1
158	BANGOR	3		3
159	PANAMA CITY	2		2
160	SHERMAN-ADA	2		2
161	PALM SPRINGS	4	1	5
162	ABILENE-SWEETWATER	3		3
163	QUINCY-HANNIBAL-KEOKUK	2		2
164	GAINESVILLE	2		2
165	CLARKSBURG-WESTON	3		3
166	IDAHO FALLS-POCATELLO	3		3
167	HATTIESBURG-LAUREL	1		1
168	UTICA	3		3
169	MISSOULA	2		2
170	BILLINGS	4		4
171	YUMA-EL CENTRO	3		3
172	DOTHAN	2		2
173	ELMIRA	2		2
174	LAKE CHARLES	2		2
175	RAPID CITY	4		4
176	WATERTOWN	3		3
177	MARQUETTE	2		2
178	HARRISONBURG	1		1
179	ALEXANDRIA, LA	1		1
180	JONESBORO	1		1
181	BOWLING GREEN	3		3
182	GREENWOOD-GREENVILLE	2		2
183	JACKSON, TN	1		1
184	GRAND JUNCTION-MONTROSE	4		4
185	MERIDIAN	2		2
186	PARKERSBURG	1		1
187	GREAT FALLS	2		2
188	TWIN FALLS	3		3

DMA	MARKET	Broadcast stations in the top 4 carrying news	Broadcast stations outside the top 4 carrying news	Total broadcast stations with local news
189	ST. JOSEPH	1		1
190	LAFAYETTE, IN	1		1
191	LIMA	2	1	3
192	CHARLOTTESVILLE	1		1
193	BUTTE-BOZEMAN	2		2
194	LAREDO	4		4
195	EUREKA	4		4
196	MANKATO	1		1
197	CHEYENNE-SCOTTSBLUF	2		2
198	OTTUMWA-KIRKSVILLE	1		1
199	SAN ANGELO	3		3
200	CASPER-RIVERTON	2		2
201	BEND, OR	2		2
202	ZANESVILLE	1		1
203	FAIRBANKS	3	1	4
204	VICTORIA	1		1
205	PRESQUE ISLE	1		1
206	JUNEAU	1		1
207	HELENA	3		3
208	ALPENA	1		1
209	NORTH PLATTE	3		3
210	GLENDIVE	1		1
	TOTAL	**668**	**164**	**832**

Source: Nielsen Media Research

Table A2. DMAs by Number of Top 4 Broadcast Stations Carrying Local News

Top 4 Broadcast Stations Carrying Local News	All DMAs	Ranks 1 - 50	Ranks 51-100	Ranks 101-150	Ranks 151-210
4	103	44	31	20	8
3	60	6	19	20	15
2	29	0	0	10	19
1	18	0	0	0	18
Subtotal: Less than 4	107	6	19	30	52
Total	210	50	50	50	60

Source: Nielsen Media Research

Table A3. DMAs by Number of Broadcast Stations Outside Top 4 Carrying Local News

Broadcast Stations Outside Top 4 Carrying Local News	All DMAs	Ranks 1 - 50	Ranks 51-100	Ranks 101-150	Ranks 151-210
8	1	1	0	0	0
6	2	2	0	0	0
5	1	1	0	0	0
4	5	5	0	0	0
3	14	12	1	1	0
2	20	14	6	0	0
1	37	11	14	7	5
Subtotal	80	46	21	8	5
0	130	4	29	42	55
Total	210	50	50	50	60

Source: Nielsen Media Research

Table A4. DMAs by Number of Broadcast Stations Outside Top 4
Carrying Original News

Broadcast Stations Outside Top 4 Carrying Original News	All DMAs	Ranks 1 - 50	Ranks 51-100	Ranks 101-150	Ranks 151-210
7	1	1	0	0	0
5	2	2	0	0	0
4	2	2	0	0	0
3	6	5	0	1	0
2	13	11	2	0	0
1	38	17	11	7	3
Subtotal	62	38	13	8	3
0	148	12	37	42	57
Total	210	50	50	50	60

Source: Nielsen Media Research

Table A5. Stations Carrying Local News:

Comparison of Nielsen and TV Guide Data

	Nielsen	TV Guide
Broadcast Stations Carrying Local News	832	811
Broadcast Stations Among Top-4-Ranked Carrying Local News	668	642
DMAs in Which There Are 4 Top-4-Ranked Broadcast Stations Carrying Local News	103	88
Broadcast Stations Outside Top-4-Ranked Carrying Local News	164	169
DMAs in Which There Are Broadcast Stations Outside the Top-4-Ranked Carrying Local News	80	77

Sources: Nielsen Media Research; TV Guide

Table A6. Stations Carrying News and Related Programming

	Local news	Local news or public/ current affairs	National news	National news or public/ current affairs	Local or na-tional news	Local or na-tional news or public/ current affairs
Stations in Top 4	641	662	598	728	696	742
Stations out-side Top 4	165	346	338	403	440	527
Total	806	1008	936	1131	1136	1269

Source: TV Guide Data

E C O N O M I S T S   I N C O R P O R A T E D

Table A7. DMAs in which Broadcast Stations Outside the Top-4 Carry News and Related Programming

	Local news	Local News or Public/ Current Affairs	National news	National news or public/ current affairs	Local or national news	Local or national news or public/ current affairs
DMAs 1-50	46	50	50	50	50	50
DMAs 51-100	17	43	50	50	50	50
DMAs 101-150	6	26	38	38	38	38
DMAs 151-210	7	17	14	25	25	26
ALL	76	136	152	163	163	164

Source: TV Guide Data

Economic Study B:

Effect of Common Ownership or Operation on Television News Carriage, Quantity and Quality

Bruce M. Owen, Kent W Mikkelsen, Rika O. Mortimer, Michael G. Baumann[*]

Introduction

Joint ownership or operation of two or more broadcast television stations in a market may affect programming behavior for several reasons. First, both theory and common sense suggest that jointly owned or operated stations will tend to avoid targeting the same audiences on these stations.[1] For example, jointly owned stations might broadcast news programs at different times rather than at the same time. Doing this would give both news viewers and entertainment viewers a wider range of choices in either time slot. It is also possible that the owner would choose to carry news programming on one station but not the other. Second, jointly owned or operated stations may have different costs, and a cost difference may alter the stations' preferred programming mix.[2] Either of these effects could alter the amount or quality of news programming that these stations choose to carry. Third, jointly owned or operated stations may realize economies in news production that increases or changes the quality of their news programming. This paper uses multiple regression techniques to investigate whether full-power commercial broadcast television stations that are commonly owned or operated (via a Local Marketing Agreement (LMA)) with another full-power commercial station in the same DMA are more likely to carry news or have a different quantity or quality of news programming, holding other factors constant.

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[1] For a survey of these effects see Owen and Wildman, *Video Economics* (Harvard Univ. Press, 1992), chapters 3 and 4.

[2] For instance, if joint ownership reduces the cost of selling advertising, stations may find it profitable to increase their audience size through acquisition of higher-quality programming.

Of equal interest is the effect of local common ownership or operation on the quantity and quality of news programming offered to viewers in a DMA. If same-market commonly owned or operated stations alter their programming, one would expect that other broadcast television stations in the same DMA would alter their programming in a competitive response. Suppose, for instance, that commonly owned stations tend to increase their news programming. If the competitive response by other stations were to increase their own news programming, this would magnify the effect of common ownership on news available to viewers. On the other hand, if the competitive response by other stations were to decrease their own news programming, the common ownership effect on news available to viewers would be reduced or possibly eliminated altogether. Accordingly, this paper also examines the effect of common ownership or operation on the quantity and quality of news programming available in a DMA, holding other factors constant.

EI's principal findings are as follows:

1. Stations that are part of a commonly owned local station group or same-market LMA relationship are significantly more likely to carry local news than other stations, even after controlling for other factors.

2. Despite the greater likelihood that same-market, commonly owned or operated stations carry local news, the total minutes of local news carried by such stations is similar to that of other stations, after controlling for other factors. The quality of local news coverage, as indicated by the number of news awards, is also similar.

3. The presence in a DMA of a same-market, commonly owned or operated station group has no significant effect on the amount or quality of news programming available in the DMA, after controlling for other factors.

Data

This study focused on the behavior of full-power commercial broadcast television stations that are either commonly owned in the same DMA or involved in a same-market LMA relationship. For this reason, only full-power commercial broadcast stations were included in the study.

Two sources were used to identify stations carrying local news programming and to measure the amount of local news programming. First, ratings data from Nielsen Media Research include an indicator for local news programs. EI obtained a database listing all local news programs aired by stations that Nielsen rated in the May 2002 sweeps period.[3] Second, TV Guide maintains a database of program listings for most of the television stations in the United States. TV Guide includes in its database indicators for news, public affairs and current affairs programs, and another indicator that distinguishes local programs from national programs. EI obtained a list of all programs during the week May 4-10, 2002 indicated as news, public affairs or current affairs (both local and national) for all full-power broadcast television stations in the TV Guide database. From each of these sources, EI determined whether or not a station carries local news and the total minutes of local news and public/current affairs programming during the respective sample periods.

The Radio and Television News Directors Association (RTNDA) makes annual awards to recognize high quality news programming. The number of RTNDA awards received by a station (which can be zero) is an indicator of news programming quality. This measure was also used in FCC Ownership Paper #7, "The Measurement of Local Television News and Public Affairs Programs," by Thomas C. Spavins, Loretta Denison, Scott Roberts and Jane Frenette. Station news quality is measured by the number of awards earned by a station during 2001 and 2002, as reported on the RTNDA website, http://www.rtnda.org. News quality in a DMA is indicated by the total number of awards earned by any station in a DMA in 2001 and 2002.[4]

Another measure of the amount of news available to viewers in a DMA is the cumulative amount of time during a 24-hour weekday period that a viewer could receive news programming from one or more broadcast stations. With the Nielsen local news program

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[3]   Stations must reach a weekly cumulative household audience percentage above 2.5 (for local broadcast and local cable origination) or 19.5 (for out-of-market stations, including superstations) to be included.

[4]   FCC Paper #7 also used as a measure of quality the number of A.I. DuPont Awards earned by a station 1991-2002. That study focused on the difference between stations owned-and-operated by ABC, CBS, Fox and NBC (O&Os) and other affiliates of these networks not owned by the networks. Many current same-market station groups have only come into existence in recent years. Very few A.I. DuPont awards are given each year, so it was concluded not to use these awards as a measure of news quality in the present paper.

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data, this measure was developed using only those programs that aired every week day in all four weeks of the sample period. The average length for each program was rounded to the nearest half hour. All sources of television local news, including cable, were included. A separate measure was developed using the TV Guide data. Only programs airing all five weekdays in the sample period were included. All sources of television local news contained in the TV Guide data were included.

BIA Financial Network ("BIA") maintains a database of information about broadcast television stations. EI used this database to identify full-power commercial broadcast stations.[5] BIA was also the source for many station- and DMA-level variables discussed below. BIA was also useful in determining which stations are part of a same-market station group or LMA relationship. A preliminary list of such stations was prepared, including all stations within a DMA having a common owner or parent and all stations with a positive indicator in BIA's "LMA" variable. Changes were made in this list in response to comments received from personnel at Fox, NBC and Viacom.

EI constructed several variables to indicate the usage of various non-television media within each DMA, as follows:

Radio

Arbitron reports for each of its Metro Markets the percentage of the population age 12 and older (12+ population) that uses radio during an average quarter hour during the day (persons using radio or PUR). To construct a DMA-level measure, each Metro Market totally contained within a DMA was assigned to that DMA. In some cases, a DMA encompasses several Metro Markets. Metro Markets that extend across a DMA boundary were broken into their constituent counties, and the counties were assigned to the DMAs to which they belong. In these instances, it was assumed that the PUR of each constituent county was the same as the PUR for the Metro Market as a whole. Three counties that belonged to more than one Metro Market were not assigned to any DMA. A weighted average PUR was then calculated for each DMA from the Metro Areas and constituent

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[5]　The stations used in the study are those which BIA designated as "MAIN" and located in DMAs ranked 1-210. Public stations, satellite stations, low-power stations and stations located outside the United States are excluded.

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Metro Market counties assigned to that DMA, weighted by the 12+ population. This procedure resulted in a PUR measure for 145 of the 210 DMAs.

Internet

The U.S. Census Bureau conducted a survey in 2001 that included information on Internet access and use. The survey responses of 56,634 households were available electronically.[6] After limiting the sample in several dimensions, approximately 56,300 observations were left.[7] Each of these observations represents a household in which the reference person was asked "Does anyone in this household connect to the Internet from home?" To construct a DMA-level measure of Internet usage, individual survey responses were assigned to DMAs in which they lived. For approximately 19,500 observations, an assignment was made based on the county in which the respondent lived. For the remaining observations, Census suppressed the county to preserve the confidentiality of survey respondents. About half of these remaining observations had information on the respondent's city of residence (Metropolitan Statistical Area or MSA). In most cases, these MSAs lay entirely or (in a few cases) mostly within a DMA, and all observations in the MSA were assigned to a DMA on this basis. This process brought the number of observations assignable to DMAs to approximately 38,000. The remaining 18,000 observations were not used in this analysis. Of the 210 DMAs, 142 had some Census survey observations assigned to them. The percentage Internet usage in each DMA was calculated using the household weight variable (hwhhwgt): the sum of observation weights for all observations in the DMA reporting Internet use was divided by the sum of all observations in the DMA.

Newspapers

Editor & Publisher maintains a database of all daily newspapers published in the United States. The database included newspapers for which a county of publication was listed and the Monday-Friday circulation was listed. These newspapers were all assigned to

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[6]   See http://www.bls.census.gov/cps/computer/computer.htm

[7]   Household types classified as "group quarters with family" or "group quarters without family" are excluded from the analysis, "adult armed forces household members" are excluded, and only responses by the reference person (perrp=1, 2) are included.

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DMAs based on their county of publication.[8] After the DMA assignment was made, the total Monday-Friday circulation of the daily newspapers in each DMA was summed from the newspapers in the DMA. When used in regression analyses, the total daily newspaper circulation in the DMA was expressed as a percentage of households in the DMA. Observations were available for 208 DMAs.

Cable

EI used data on individual cable systems maintained by Warren Publishing. These data showed the DMA, number of basic subscribers, channel capacity and number of channels not in use by 5,986 cable systems. The number of cable channels offered to subscribers was calculated as the difference between channel capacity and channels not in use. Within each DMA, the weighted average number of channels offered to subscribers was calculated, weighted by the number of subscribers. All DMAs had an observation for this variable.

Procedures and Findings

Station Level

The most basic regression estimation procedure, ordinary least squares (OLS), assumes that the dependent variable is a continuous random variable. In the first model, the dependent variable that indicates whether or not a station carries local news only takes on the value of 1 (if it carries local news) or 0 (if it does not). With a dichotomous dependent variable, it is standard procedure to use a non-OLS regression estimation technique, such as probit or logit. The difference between these two methods arises from assumptions on the distribution of error terms: the probit model assumes normal distribution and the logit model assumes extreme value distribution.[9] However, both of these models predict the probability that an individual station with given characteristics carries news programming.

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8   A few counties are split among multiple DMAs. Newspapers located in these counties were assigned to DMAs based on the location of their city of publication.

9   See *Qualitative Choice Analysis* by Kenneth Train (1986) and *Limited-Dependent and Qualitative Variables in Econometrics* by G.S. Maddala (1983) for further discussions on the probit and logit models.

E C O N O M I S T S   I N C O R P O R A T E D

The second and third models evaluate the effects of a common ownership or operation on the minutes of news programming carried and the number of news awards received. These dependent variables also differ from the form assumed in OLS, because they can be zero (as they are for a large number of stations) or positive (as they are for a large number of stations). A regression with a "censored dependent variable" (e.g., some dependent variables are zero) is usually estimated with a non-OLS method such as tobit.[10] Using the OLS procedure for the censored regression model produces biased and inconsistent parameter estimates.

Independent variables in the regressions are factors believed to affect the decision whether or not to carry local news, the amount of news carried, or news quality. These include station characteristics, DMA characteristics, and a dichotomous variable with a value of 1 for stations in a same-market station group, and 0 otherwise. Station characteristics include four dichotomous variables, for affiliation with ABC, CBS, Fox and NBC, and the number of stations held nationwide by the same owner. DMA characteristics include DMA rank, the number of full-power commercial stations, [11] total station revenue, average household income, the percentage of population age 50 or older, newspaper circulation per household, cable penetration rate, penetration rate for non-cable video delivery systems (e.g., DBS), the average number of channels available in cable, Internet penetration rate, and the percentage of population listening to radio. The complete list of variables used in these models is reported in Table B1. Tables B2 – B6 show the results of the regression analyses.

Table B2 reports the results of the logit regression. The coefficient for DUO2002 (i.e., the common ownership or operation dummy variable) is positive and statistically significant at the 1 percent level, implying that commonly owned or operated stations are more likely to carry news programming. Also, the positive and statistically significant coefficient for NUM_STAS suggests that the higher the number of stations owned by the same

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[10]   See *Limited-Dependent and Qualitative Variables in Econometrics* by G.S. Maddala (1983) for further discussions of the tobit model.

[11]   "MAIN" indicates a full-power commercial station.

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owner, the more likely it is that the owner's stations offer news programming. The results from the probit model are not reported here, but they are very similar.[12]

The table below shows the increased probability, on average, that a station will offer news if it is part of a same-market station group. Using the econometric results presented in Table B2, the estimated probability of carrying news was computed for each station in the sample, using the independent variable values for each station and assuming for each station that the value of DUO2002 was zero, i.e., that the station was not part of a same-market station group. The average over all stations of these estimated probabilities is 66.0 percent. Next, the estimated probability was calculated a second time for each station assuming that the value of DUO2002 was one, i.e., that the station was part of a same-market station group. The average of this second set of estimated probabilities is 73.6 percent. The difference in the two averages, 7.6 percent, is the average change in the probability of carrying news due to a station being part of a same-market station group. On average, a station in a same-market station group is 11.5 percent more likely to carry news than is a station that is not in such a group (an increase from 66.0 percent to 73.6 percent likelihood).

Average Likelihood that a Station Will Carry Local News

Station not in a same-market station group	Station in a same-market station group	Difference	Percentage Increase in Likelihood
66.0%	73.6%	7.6%	11.5%

Table B3 shows the results from the second regression model where the dependent variable is the number of minutes of local news, public and current affairs programs found in the TV Guide data. The coefficient for DUO2002 in this model is positive but statistically

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[12]   To test for robustness, each of the regressions presented in this study was run again omitting the explanatory variables (other than the common ownership or operation variable) that were statistically insignificant. In some cases, omitting the statistically insignificant variables increased the usable sample size. The common ownership or operation variable in B2 remained positive and significant, and the common ownership or operation variable in all the other regressions remained insignificant.

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insignificant.[13] Tables B4–B6 provides the results for the awards regression models. The results from the regression including all DMAs are found in Table B4, and the regression results for "large" and "small" markets are shown in Tables B5 and B6, respectively. The "large" market is defined as DMAs 1 through 50 and the "small" market as DMAs 51 through 210.[14] In all of these cases, the coefficient for DUO2002 is positive but statistically insignificant. Therefore, the results indicate that the quantity and quality of news programming offered by a station is not significantly affected by whether or not it is part of a same-market station group.

DMA Level

Three different dependent variables were used to indicate the quantity and quality of news at the DMA level. First, both Nielsen and TV Guide data made it possible to sum up the total minutes of local news programming during their respective sample periods. Second, both Nielsen and TV Guide data were used to calculate the amount of time during a 24-hour weekday period that a viewer could receive news programming from one or more broadcast stations. Third, the total number of news awards received by all stations in the DMA was used as a measure of news quality. OLS estimation was appropriate for the first two models, but the tobit procedure was used for the last model, as some DMAs had zero awards.

The explanatory variables in the DMA-level regressions are similar to the DMA-level variables used in the station-level estimates discussed above. However, the Internet penetration rate and the percentage of population listening to radio were excluded from the DMA-level regressions, since both variables have missing values for a large number of DMAs and including them in the regressions results in the loss of many observations (i.e., roughly 28 percent of observations can be lost). Also, a variable was added to capture the number of stations in a DMA affiliated with the four major networks (i.e., ABC,

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[13]   The results of regressions using alternative dependent variables, such as total minutes of news programming reported by Nielsen, are not shown here, but the common ownership or operation variable is similarly not significant.

[14]   Since separate awards are offered for stations in "large" and "small" markets, the criteria are not necessarily the same and the quality implied by receiving an award is not necessarily the same for awards in the two market size ranges.

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CBS, Fox, NBC). See Table B1. Tables B7-B11 report the results of DMA-level regressions. Table B7 presents the results of the regression where the dependent variable is the total minutes of local news, public and current affairs programming in a DMA. Table B8 shows the results of a similar regression, but the dependent variable is normalized to the average minutes of local news, public and current affairs programming per station. In both specifications, DUO_DMA (i.e., the common ownership or operation dummy variable) has a positive but statistically insignificant coefficient. The regression results for the minutes of local news, public and current affairs programming available to watch in a 24-hour period are found in Table B9. Again, the coefficient for DUO_DMA is statistically insignificant. [15]

The last three tables, B10-B12, present the results for the awards regressions. Similar to the station-level regressions, the first table shows the regression results for all DMAs, and the second and third tables for "large" and "small" markets, respectively. DUO_DMA has a negative coefficient for the "large" market, but a positive coefficient for the "small" market. However, they are all statistically insignificant, suggesting that participation in a same-market station group does not affect the quality of news programming available in the DMA.

Conclusion

The station-level regressions provide strong evidence that a station is more likely to offer news programming if it is part of a same-market station group. However, there is no statistically significant difference in the total minutes of local news carried by commonly owned or operated stations and other stations. Similarly, the number of awards won by a station is not significantly affected by common ownership or operation.

The results of the DMA-level regression analyses indicate that the presence of a same-market station group neither significantly increases nor significantly decreases the availability or quality of news programming offered within a DMA.

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[15] The results of regressions using alternative dependent variables, such as total minutes of news programming reported by Nielsen, are not shown here, but as in Tables B7-B9, the common ownership or operation variable is not significant.

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Table B1. Variable Definitions

NEWS_LPC_TVG
: 1 if a station offers local news, public and current affairs programming; 0 otherwise (TV Guide)

TOTMIN_LPC_STA_TVG
: Weekly total minutes of local news, public and current affairs programming offered by a station (TV Guide)

AWARDS_STA
: Total number of news awards won by a station (RTNDA)

TOTMIN_LPC_DMA_TVG
: Weekly total minutes of local news, public and current affairs programming offered within a DMA (TV Guide)

AVGMIN_LPC_TVG
: Weekly average minutes of local news, public and current affairs programming offered per station within a DMA (TV Guide)

TOTMINPOSS_LPC_DMA_TVG
: Total minutes of local news, public and current affairs programming during a 24-hour period a viewer could watch within a DMA (TV Guide)

AWARDS_DMA
: Total number of news awards won within a DMA (RTNDA)

DUO2002
: 1 if station is a commonly owned or operated; 0 otherwise (BIA)

DUO_DMA
: 1 if there is at least one same-market station group within a DMA; 0 otherwise (BIA)

RANK
: DMA market rank (Nielsen)

ABC
: A dummy variable for ABC affiliates (BIA)

NBC
: A dummy variable for NBC affiliates (BIA)

CBS
: A dummy variable for CBS affiliates (BIA)

FOX
: A dummy variable for Fox affiliates (BIA)

NUM_STAS
: The number of stations held by the same owner (BIA)

NUMRATED_M
: The number of stations classified as "MAIN" stations (i.e., not cable, public, low power, Class A, translator or satellite) (BIA)

NUM_M_SQ
: NUMRATED_M squared (BIA)

GROSS6
: Total station revenue (BIA)

AVGHHINC
: Average household income (BIA)

TOT50PLUS
: The percentage of population age 50 and older (Nielsen)

PAPERCAPITA
: Newspaper circulation per household (Editor & Publisher)

ADS
: Penetration rate for non-cable video delivery system (BIA)

CABLE
: Cable penetration rate (BIA)

CHANELSINUSE
: The number of channels available in cable (Warren Publishing)

INTERNET
: Internet penetration rate (US Census)

PCTLISTENING
: The percentage of population listening to radio (Arbitron)

FOURMAJOR
: The number of stations affiliated or owned by four major networks (BIA)

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Table B2. Dependent variable: news_lpc_tvg (logit)

Logit estimates

Number of obs   =   949
LR chi2(17)   =   488.71
Prob > chi2   =   0.0000

Log likelihood = -352.27919

Pseudo R2   =   0.4096

news_lpc_tvg	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
duo2002	.6159547	.2258842	2.73	0.006	.1732298	1.05868
rank	-.0186437	.0043436	-4.29	0.000	-.027157	-.0101305
abc	5.649888	.7578109	7.46	0.000	4.164606	7.13517
nbc	4.552737	.5130279	8.87	0.000	3.547221	5.558253
cbs	6.333562	1.037072	6.11	0.000	4.300938	8.366186
fox	2.641721	.3190467	8.28	0.000	2.016401	3.267041
num_stas	.0080173	.0039524	2.03	0.043	.0002707	.015764
numrated_m	-.0369193	.0469747	-0.79	0.432	-.128988	.0551494
gross6	-3.02e-07	5.48e-07	-0.55	0.582	-1.38e-06	7.72e-07
avghhinc	-2.00e-06	.0000219	-0.09	0.927	-.000045	.000041
tot50plus	.0081171	.0347349	0.23	0.815	-.059962	.0761962
papercapita	.0000375	.0006838	0.05	0.956	-.0013028	.0013779
ads	-.0988781	.0377767	-2.62	0.009	-.1729192	-.0248371
cable	-.0072454	.020091	-0.36	0.718	-.0466231	.0321323
channelsin~e	-.0065896	.006037	-1.09	0.275	-.0184218	.0052426
internet	-.0045149	.0141031	-0.32	0.749	-.0321566	.0231267
pctlistening	-.2643757	.1258014	-2.10	0.036	-.5109418	-.0178095
_cons	6.668152	3.56055	1.87	0.061	-.3103987	13.6467

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Table B3. Dependent variable: totmin_lpc_sta_tvg (tobit)

Tobit estimates

Number of obs	=	949
LR chi2(17)	=	954.96
Prob > chi2	=	0.0000

Log likelihood = -5149.5548   Pseudo R2   =   0.0849

totmin_lpc~g	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
duo2002	-6.207429	49.17705	-0.13	0.900	-102.718	90.30315
rank	-5.642292	.8026495	-7.03	0.000	-7.217502	-4.067082
abc	1620.267	63.07714	25.69	0.000	1496.478	1744.057
nbc	1696.803	62.53973	27.13	0.000	1574.068	1819.538
cbs	1819.947	62.57952	29.08	0.000	1697.134	1942.761
fox	1065.588	63.92006	16.67	0.000	940.1442	1191.032
num_stas	.2751165	.9828321	0.28	0.780	-1.653704	2.203937
numrated_m	13.11387	10.09128	1.30	0.194	-6.690383	32.91813
gross6	-.0001983	.0001262	-1.57	0.116	-.0004459	.0000493
avghhinc	.0049359	.0046277	1.07	0.286	-.0041461	.0140179
tot50plus	-6.776929	6.991527	-0.97	0.333	-20.49789	6.944031
papercapita	-.04369	.1465838	-0.30	0.766	-.3313625	.2439825
ads	-13.19863	7.701513	-1.71	0.087	-28.31295	1.915683
cable	-.3091065	4.153226	-0.07	0.941	-8.459866	7.841653
channelsin~e	-.1416292	1.220139	-0.12	0.908	-2.536167	2.252908
internet	.9069043	2.773756	0.33	0.744	-4.536627	6.350436
pctlistening	-43.4646	25.82429	-1.68	0.093	-94.1451	7.215898
_cons	738.2113	727.5353	1.01	0.311	-689.586	2166.008
_se	552.2104	15.94297			(Ancillary parameter)	

Obs. summary: 306   left-censored observations at t~lpc_~g<=0
                       643   uncensored observations

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Table B4. Dependent variable: awards_sta

Sample: All DMAs (tobit)

Tobit estimates

Number of obs	=	643
LR chi2(17)	=	126.32
Prob > chi2	=	0.0000

Log likelihood = -584.53798

Pseudo R2　 = 　0.0975

awards_sta	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-.0398801	.0096105	-4.15	0.000	-.0587529	-.0210073
abc	5.640062	.907632	6.21	0.000	3.85769	7.422434
nbc	6.235683	.9018888	6.91	0.000	4.46459	8.006777
cbs	6.360973	.9064309	7.02	0.000	4.58096	8.140987
fox	3.492036	.9431857	3.70	0.000	1.639845	5.344227
num_stas	-.0124963	.013659	-0.91	0.361	-.0393194	.0143268
numrated_m	-.3183166	.1161983	-2.74	0.006	-.5465022	-.090131
gross6	4.69e-06	1.45e-06	3.24	0.001	1.85e-06	7.53e-06
avghhinc	-.0000527	.0000549	-0.96	0.338	-.0001605	.0000551
tot50plus	-.0138423	.0721148	-0.19	0.848	-.1554584	.1277738
papercapita	.0006365	.0015331	0.42	0.678	-.0023741	.0036471
cable	-.0836274	.0467698	-1.79	0.074	-.175472	.0082172
ads	-.0850303	.0862305	-0.99	0.324	-.2543663	.0843056
channelsin~e	-.0024257	.0143248	-0.17	0.866	-.0305561	.0257047
internet	.0570449	.0313083	1.82	0.069	-.0044372	.1185269
pctlistening	-.4094511	.295359	-1.39	0.166	-.9894654	.1705633
duo2002	.5122457	.5614294	0.91	0.362	-.5902673	1.614759
_cons	9.522524	8.38174	1.14	0.256	-6.937206	25.98226
_se	3.913205	.2586839			(Ancillary parameter)	

Obs. summary:　　492　left-censored observations at awards~a<=0
　　　　　　　　　151　　　uncensored observations

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Table B5. Dependent variable: awards_sta

Sample: DMAs 1-50 (tobit)

Tobit estimates

Number of obs	=	335
LR chi2(17)	=	96.89
Prob > chi2	=	0.0000
Pseudo R2	=	0.1452

Log likelihood = -285.25241

awards_sta	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-.1249886	.0488207	-2.56	0.011	-.221041	-.0289362
abc	7.179079	1.366858	5.25	0.000	4.489852	9.868306
nbc	7.984626	1.348246	5.92	0.000	5.332018	10.63723
cbs	7.800617	1.34963	5.78	0.000	5.145284	10.45595
fox	5.589213	1.3454	4.15	0.000	2.942203	8.236224
num_stas	.0045253	.0227855	0.20	0.843	-.040304	.0493547
numrated_m	-.2837931	.1608125	-1.76	0.079	-.600184	.0325978
gross6	3.56e-06	1.99e-06	1.79	0.075	-3.60e-07	7.48e-06
avghhinc	-.0000939	.0000979	-0.96	0.339	-.0002865	.0000988
tot50plus	-.1383661	.1333787	-1.04	0.300	-.4007822	.12405
papercapita	.0015579	.001954	0.80	0.426	-.0022866	.0054023
cable	.0013094	.0819388	0.02	0.987	-.1599013	.1625201
ads	.0163082	.1562182	0.10	0.917	-.2910436	.32366
channelsin~e	-.0328849	.03538	-0.93	0.353	-.1024934	.0367236
internet	.0470915	.0734162	0.64	0.522	-.0973514	.1915344
pctlistening	-.2726524	.5343177	-0.51	0.610	-1.323897	.7785919
duo2002	.4636424	.7855118	0.59	0.555	-1.081814	2.009099
_cons	6.959052	16.97962	0.41	0.682	-26.44754	40.36565

_se	4.109369	.3814121	(Ancillary parameter)			

Obs. summary: 260   left-censored observations at awards~a<=0
                       75   uncensored observations

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Table B6. Dependent variable: awards_sta

Sample: DMAs 51-210 (tobit)

Tobit estimates

Number of obs	=	308
LR chi2(17)	=	60.67
Prob > chi2	=	0.0000

Log likelihood = -281.76352

Pseudo R2   =   0.0972

awards_sta	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-.0597648	.0195819	-3.05	0.002	-.0983048	-.0212247
abc	1.985912	1.228824	1.62	0.107	-.4325965	4.404421
nbc	2.485927	1.208119	2.06	0.041	.1081678	4.863686
cbs	2.848913	1.214587	2.35	0.020	.4584246	5.239402
fox	-.891132	1.388037	-0.64	0.521	-3.622997	1.840733
num_stas	-.0304313	.0170314	-1.79	0.075	-.0639516	.003089
numrated_m	-.3237931	.1851138	-1.75	0.081	-.6881247	.0405385
gross6	6.46e-06	.0000203	0.32	0.751	-.0000336	.0000465
avghhinc	-.0000426	.0000776	-0.55	0.583	-.0001954	.0001102
tot50plus	-.0018249	.0875713	-0.02	0.983	-.1741784	.1705285
papercapita	-.004518	.0039429	-1.15	0.253	-.0122783	.0032423
cable	-.1008676	.0539301	-1.87	0.062	-.2070102	.005275
ads	-.1884868	.0988671	-1.91	0.058	-.383072	.0060985
channelsin~e	.0101765	.0160781	0.63	0.527	-.0214676	.0418205
internet	.0440579	.0326046	1.35	0.178	-.0201129	.1082287
pctlistening	-.614535	.3741495	-1.64	0.102	-1.350917	.1218472
duo2002	.0222488	.8321694	0.03	0.979	-1.615585	1.660083
_cons	23.51069	9.855491	2.39	0.018	4.113614	42.90777
_se	3.354541	.3127699			(Ancillary parameter)	

Obs. summary: 232   left-censored observations at awards~a<=0
                  76   uncensored observations

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Table B7. Dependent variable:totmin_lpc_dma_TVG (OLS)

Source	SS	df	MS			
				Number of obs	=	208
				F(12, 195)	=	115.82
Model	1.1556e+09	12	96296865.0	Prob > F	=	0.0000
Residual	162125048	195	831410.503	R-squared	=	0.8770
				Adj R-squared	=	0.8694
Total	1.3177e+09	207	6365639.75	Root MSE	=	911.82

totmin_lpc~g	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-19.28379	2.321622	-8.31	0.000	-23.8625	-14.70508
avghhinc	.0570481	.0141885	4.02	0.000	.0290655	.0850308
gross6	-.0003415	.0007966	-0.43	0.669	-.0019125	.0012296
tot50plus	6.540646	21.12012	0.31	0.757	-35.11255	48.19384
ads	-3.484666	18.14325	-0.19	0.848	-39.26686	32.29753
cable	3.538876	11.16747	0.32	0.752	-18.48565	25.5634
channelsin~e	2.851245	4.193282	0.68	0.497	-5.418762	11.12125
papercapita	.4817465	.5009899	0.96	0.337	-.5063077	1.469801
numrated_m	-6.905675	112.0573	-0.06	0.951	-227.9056	214.0943
num_m_sq	16.99663	6.101049	2.79	0.006	4.96412	29.02915
fourmajor	234.7177	110.8773	2.12	0.036	16.04511	453.3903
duo_dma	71.95325	168.9917	0.43	0.671	-261.3328	405.2393
_cons	1322.75	1550.769	0.85	0.395	-1735.682	4381.182

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Table B8. Dependent variable: avgmin_lpc_tvg (OLS)

Source	SS	df	MS			
				Number of obs	=	208
				F(12, 195)	=	13.99
Model	6181848.73	12	515154.061	Prob > F	=	0.0000
Residual	7182653.82	195	36834.1222	R-squared	=	0.4626
				Adj R-squared	=	0.4295
Total	13364502.6	207	64562.8143	Root MSE	=	191.92

avgmin_lpc~g	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-4.1976	.4886624	-8.59	0.000	-5.161342	-3.233858
avghhinc	.0071713	.0029864	2.40	0.017	.0012814	.0130612
gross6	-.0002557	.0001677	-1.52	0.129	-.0005864	.000075
tot50plus	.66704	4.445431	0.15	0.881	-8.100257	9.434337
ads	-4.200996	3.818849	-1.10	0.273	-11.73255	3.330554
cable	-.3522188	2.350564	-0.15	0.881	-4.988011	4.283573
channelsin~e	1.615157	.8826153	1.83	0.069	-.12554	3.355855
papercapita	-.0179995	.1054499	-0.17	0.865	-.2259684	.1899693
numrated_m	-189.2159	23.58619	-8.02	0.000	-235.7327	-142.6991
num_m_sq	6.827104	1.284168	5.32	0.000	4.294462	9.359746
fourmajor	44.51874	23.3378	1.91	0.058	-1.508155	90.54564
duo_dma	7.433687	35.5699	0.21	0.835	-62.71742	77.58479
_cons	1508.303	326.4107	4.62	0.000	864.5548	2152.052

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Table B9. Dependent variable: totminposs_lpc_dma_tvg (OLS)

Source	SS	df	MS			
				Number of obs	=	208
				F(12, 195)	=	46.22
Model	3087727.70	12	257310.641	Prob > F	=	0.0000
Residual	1085583.36	195	567.09416	R-squared	=	0.7399
				Adj R-squared	=	0.7239
Total	4173311.06	207	20160.923	Root MSE	=	74.613

totminposs	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-.9369814	.1899757	-4.93	0.000	-1.311652	-.5623106
avghhinc	.0035363	.001161	3.05	0.003	.0012465	.0058261
gross6	-.0000717	.0000652	-1.10	0.272	-.0002003	.0000568
tot50plus	-.6647991	1.728236	-0.38	0.701	-4.073233	2.743634
ads	.7515885	1.484642	0.51	0.613	-2.176428	3.679605
cable	1.211189	.9138211	1.33	0.187	-.5910531	3.01343
channelsin~e	.0645248	.3431315	0.19	0.851	-.6122005	.7412501
papercapita	.0335058	.0409954	0.82	0.415	-.0473455	.1143572
numrated_m	9.675407	9.169526	1.06	0.293	-8.408768	27.75958
num_m_sq	.6957546	.4992419	1.39	0.165	-.2888523	1.680361
fourmajor	-5.283546	9.07296	-0.58	0.561	-23.17727	12.61018
duo_dma	-8.137557	13.8284	-0.59	0.557	-35.40998	19.13486
_cons	93.1869	126.8976	0.73	0.464	-157.0811	343.4549

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Table B10. Dependent variable: awards_dma

Sample: All DMAs (tobit)

Tobit estimates

Number of obs	=	208
LR chi2(12)	=	138.29
Prob > chi2	=	0.0000
Pseudo R2	=	0.1753

Log likelihood = -325.21186

awards_dma	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-.0840747	.0148299	-5.67	0.000	-.1133213	-.0548281
avghhinc	.0000557	.0000762	0.73	0.466	-.0000946	.0002059
gross6	5.07e-06	3.72e-06	1.36	0.175	-2.27e-06	.0000124
tot50plus	-.0937105	.1125939	-0.83	0.406	-.3157617	.1283406
ads	-.0821242	.1070665	-0.77	0.444	-.2932744	.129026
cable	-.1513226	.0658188	-2.30	0.023	-.2811266	-.0215186
channelsin~e	.0014653	.0222565	0.07	0.948	-.0424277	.0453583
papercapita	.0026941	.0027952	0.96	0.336	-.0028185	.0082067
numrated_m	-.2947599	.6026394	-0.49	0.625	-1.48325	.8937301
num_m_sq	-.0141901	.0309285	-0.46	0.647	-.0751854	.0468051
fourmajor	-.1924026	.6538659	-0.29	0.769	-1.481918	1.097113
duo_dma	.3107899	.8592278	0.36	0.718	-1.383729	2.005308
_cons	21.38865	8.826585	2.42	0.016	3.981375	38.79592
_se	4.025193	.2964249		(Ancillary parameter)		

Obs. summary:	107	left-censored observations at awards~a<=0
	101	uncensored observations

Table B11. Dependent variable: awards_dma

Sample: DMAs 1-50 (tobit)

Tobit estimates

Number of obs	=	50
LR chi2(12)	=	27.52
Prob > chi2	=	0.0065

Log likelihood = -124.95553

Pseudo R2   =   0.0992

awards_dma	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-.176806	.0929091	-1.90	0.065	-.3648907	.0112786
avghhinc	-.000019	.0001682	-0.11	0.911	-.0003594	.0003215
gross6	4.29e-06	5.35e-06	0.80	0.428	-6.55e-06	.0000151
tot50plus	-.3033064	.2617147	-1.16	0.254	-.8331201	.2265074
ads	-.0154115	.2691707	-0.06	0.955	-.5603192	.5294961
cable	-.1160965	.1553056	-0.75	0.459	-.4304963	.1983033
channelsin~e	-.0835524	.0735786	-1.14	0.263	-.2325045	.0653997
papercapita	.0066773	.0045554	1.47	0.151	-.0025446	.0158992
numrated_m	.6439497	1.261992	0.51	0.613	-1.910819	3.198718
num_m_sq	-.0503342	.0558715	-0.90	0.373	-.1634401	.0627718
fourmajor	1.919041	1.955296	0.98	0.333	-2.039248	5.877331
duo_dma	-.9636662	1.830974	-0.53	0.602	-4.67028	2.742947
_cons	19.18063	20.61536	0.93	0.358	-22.55298	60.91424
_se	4.374504	.4930422			(Ancillary parameter)	

Obs. summary:	9	left-censored observations at awards~a<=0
	41	uncensored observations

Table B12. Dependent variable: awards_dma

Sample: DMAs 51-210 (tobit)

Tobit estimates

Number of obs	=	158
LR chi2(12)	=	106.48
Prob > chi2	=	0.0000
Log likelihood = -182.4645	Pseudo R2	=	0.2259

awards_dma	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
rank	-.0903237	.0197366	-4.58	0.000	-.12933	-.0513174
avghhinc	.0000639	.0000755	0.85	0.399	-.0000853	.000213
gross6	.0000145	.0000255	0.57	0.570	-.0000359	.0000649
tot50plus	-.0027792	.1041736	-0.03	0.979	-.2086622	.2031038
ads	-.1929274	.0976817	-1.98	0.050	-.3859802	.0001253
cable	-.1648014	.0605477	-2.72	0.007	-.2844646	-.0451383
channelsin~e	.0118842	.0213153	0.56	0.578	-.0302421	.0540105
papercapita	-.0049352	.004226	-1.17	0.245	-.0132873	.0034169
numrated_m	-.1637	1.003765	-0.16	0.871	-2.147487	1.820087
num_m_sq	-.0343448	.0729143	-0.47	0.638	-.1784486	.109759
fourmajor	-.9145304	.6665457	-1.37	0.172	-2.231855	.4027942
duo_dma	1.096179	.7974512	1.37	0.171	-.4798607	2.672218
_cons	27.87195	9.094764	3.06	0.003	9.897553	45.84635
_se	3.022481	.2927925			(Ancillary parameter)	

Obs. summary: 98   left-censored observations at awards~a<=0
                   60   uncensored observations

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Economic Study C:

Comments on FCC Ownership Study #10

Bruce M. Owen, Michael G. Baumann, Rika O. Mortimer, Kent W Mikkelsen

The author of FCC Study #10 notes, "An important caveat to these results is that varying degrees of measurement error are associated with local radio revenue and revenue from retail ads in newspapers. Due to these limitations inherent in the underlying data, the results of this study cannot be considered conclusive." (C. Anthony Bush, "On the Substitutability of Local Newspaper, Radio, and Television Advertising in Local Business Sales" [revised version], FCC Ownership Study #10, at 3). This is an understatement. The imperfections of the study include, but go beyond, measurement errors. EI has identified six errors, each potentially fatal, in Study #10. The study is not a reliable basis for drawing any policy conclusions about local media advertising market definition.

- The study uses national radio and television advertising prices rather than local prices.

- The study lacks a local measure of newspaper advertising expenditures. The proxy measure is not supported by evidence and may significantly distort results regarding substitutability of media.

- The study's television and radio prices are "cost per point," but the audience represented by a "point" varies between television and radio within a DMA and, within television or radio, across DMAs. Hence, the cost per point price measures are meaningless.

- The study's newspaper advertising prices are not adjusted for audience size and inappropriately averages newspapers of different sizes.

- The study's regressions do not control for non-price media characteristics that might affect the choice of advertising media.

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- The study incorrectly states advertising expenditures on a per-business establishment basis.

Data Issues

1. The study uses national radio and television advertising prices rather than local prices.

Study #10 aims to explore the substitutability of various media from the perspective of local advertisers. But it relies on price data from national spot advertisers, not local advertisers, and it makes no attempt to show that the prices paid by national spot advertisers are representative of the prices paid by local advertisers. This is a potentially fatal defect, depending upon the divergence of national spot from local spot advertising prices.

Lacking local price information for television and radio ads, the study uses an estimate of the national spot advertising price provided by Service Quality Analytics Data (SQAD). Keith Brown and George Williams, the authors of FCC Study #4, *Consolidation and Advertising Prices in Local Radio Markets*, state, "Because [SQAD] radio advertising price data derives exclusively from the records of national and regional advertising agencies, it only includes the local radio advertising purchases made through these advertising agencies, and does not include data on local radio advertising purchases made by actual local businesses." Hence, as Brown and Williams point out, these data "only reflect the prices reported by national and regional advertising agencies for purchases of local radio advertising time. The rates paid by local advertisers likely differ from the rates paid by national and regional advertisers."

2. The study lacks a local measure of newspaper advertising expenditures. The proxy measure is not supported by evidence and may significantly distort results regarding substitutability of media.

Study #10 also does not use data on local newspaper advertising expenditures. Instead, it relies on an allocation of national newspaper advertising expenditures to local markets based on population aged 16+. In a study seeking to understand the effects of local price

variations, it is a fatal error to assume that local newspaper advertising expenditures do not vary in response to local prices for advertising.

In order to derive an estimate of retail newspaper advertising revenue in each DMA, the study relies on an estimate of total national newspaper retail advertising expenditure, allocating that amount across markets based on local population aged 16+. There is no basis for this allocation method, and no test of the robustness of the results to the allocation methodology. The allocation method implicitly assumes that the amount of newspaper advertising, and hence the share of local advertising expenditure attributable to newspapers, is not related to local market prices. Because the allocation scheme affects the shares of each of the three media examined, there is no basis to assume that the regression coefficients have any validity. To see this, consider the extreme case in which this allocation scheme is used for all three media instead of just newspapers. In this example, the local share of any medium would be independent of the prices charged in any market. This would incorrectly imply that the media are not substitutes.

3. The study's television and radio prices are "cost per point," but the audience represented by a "point" varies between television and radio within a DMA and, within television or radio, across DMAs. Hence, the cost per point price measures are meaningless.

Any study of price behavior must use comparable price data, not apples and oranges. However, Study #10 employs price measures for the three media that are not in comparable units, both within a DMA and across DMAs. That the study's results can be significantly affected by the choice of units in comparing these media is a fatal defect in a study that focuses on the substitutability of advertising in the various media.

The study uses the average cost per rating point ("CPP") as the price of both radio and television advertising. TV stations typically serve wider geographic areas than radio stations. Therefore, the Arbitron radio market population typically is smaller than the Nielsen DMA population. Hence, a rating point for radio is likely to encompass fewer people than a rating point for television within each of the DMAs used in the study. Moreover, because population varies across DMAs and Arbitron radio markets, a rating point represents a different audience size in each area. Therefore, the television and radio "prices" in

the study are not the prices of reaching the same number of people either within a DMA or across DMAs. The study therefore "mixes apples and oranges." The study uses the sample mean price in the regression, but it is not clear what this average measures if there is no control for the size of the audience being purchased. The average price of apples and oranges is a meaningless number. It is noteworthy that Keith Brown and George Williams in FCC Study #4 did not use CPP but used CPM, the cost of reaching 1,000 listeners aged 18-49.

4. The study's newspaper advertising prices are not adjusted for audience size and inappropriately averages newspapers of different sizes.

The newspaper price used in Study #10 is the charge for a one-inch, black-and-white, one-day advertisement. This price does not appear to be adjusted either for circulation or for market size. Hence, the newspaper price is not comparable to the radio and television prices, which are the costs of reaching a certain number of people within a DMA, and the newspaper price also is not comparable across DMAs. Indeed, the price does not appear to be comparable even across newspapers within a DMA. Since there often are several newspapers within a DMA, the study uses the mean price for newspapers in the DMA. However, if these prices are not on a comparable circulation basis, their average is meaningless. As with radio and TV, the study uses the sample mean newspaper price in the regression, but it is not clear what this average measures if there is no control for the size of the audience being purchased. Again, the study mixes different fruits together, this time pineapples and grapes.

Methodological Issues

5. The study's regressions do not control for non-price media characteristics that might affect the choice of advertising media.

Advertising prices and the market shares of local media vary from one market to another for many reasons: market size, demographics, availability of media, competition, and so on. Study #10 does not attempt to control for any market characteristics other than price

that might affect the mix of advertising media used.[1] It does not take into account any demographic characteristics. It does not consider the differing availability of alternative media across the markets studied (e.g., cable advertising). Failure to take account of these factors is a fatal flaw, unless, by some unlikely coincidence, none of these factors affects the relationship between media prices and media substitutability.

6. The study incorrectly states advertising expenditures on a per-business establishment basis.

Study #10 focuses on the behavior of local customers for media advertising and therefore expresses its data on a per-customer basis. However, it counts *all* local businesses as media customers, even though many local businesses do not sell at retail and therefore have no use for local mass media advertising. This is a fatal error because the proportion of local businesses that have a demand for local media advertising varies from one market to another.

Dividing local advertising expenditure by the number of business establishments in a DMA is not appropriate because some businesses don't advertise at all via media, e.g., that are not retail businesses. Not all businesses equally likely to advertise, and the percentage of businesses that are likely to advertise is unlikely to be the same across all DMAs analyzed. Some DMAs are likely to have more manufacturing businesses relative to retail businesses than other markets. For those DMAs with a higher concentration of non-retail firms, the average local advertising expenditure per business calculated in the study may be quite small even though the advertising expenditures of those businesses that actually advertise may be relatively large. This approach will produce unreliable or simply meaningless results if different mixes of firms choose different mixes of advertising given the same relative price levels, i.e., if the demand for various media is affected by the mix of businesses in the local area. In this case, the data would have share move-

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[1] The only attempt to control for differences across DMAs is the use of two dummy variables, one that indicates if the DMA is in the top 10 DMAs, and another that indicates if the DMA is between 11 and 50. These two dummy variables do not adequately control for differences across DMAs.

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ments correlated with the missing "business mix" variables. This could lead to what is known as omitted variable bias in the estimated coefficients.[2]

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[2]   There is also likely to be a problem with heteroskedasticity since this is a cross-sectional model and there has been no control for market characteristics.

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Economic Study D:

Comment on FCC Ownership Study #4

Bruce M. Owen, Michael G. Baumann, Rika O. Mortimer

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Keith Brown and George Williams examine the effect of concentration in radio markets on the price of local radio advertising in their study, "Consolidation and Advertising Price in Local Radio Markets." (FCC Study #4) Brown and Williams run fixed-effects regressions using a panel data set from 1996 to 2001. They find that increases in local concentration accounted for an increase in real advertising prices of 2.5-3.5 percent.[1] This is a small portion of the 60 percent increase in real advertising rates the authors calculate occurred over this period, most of which was due to the growth of demand for advertising.[2] They also find that national concentration did not affect advertising prices and that a greater presence of large national owners in a local market tends to lower advertising prices.[3]

The authors summarize their local concentration finding as follows: "At the local level, the explanation appears to be that consolidation does create more market power, by allowing the exercise of increased unilateral market power." (p. 18) This conclusion is unwarranted for at least two reasons.

First, the study fails to control for changes in the quality or attractiveness of radio advertising, as perceived by advertisers. One goal of consolidation is to make radio advertising

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[1]   This is based on the authors' revised econometric results.

[2]   The authors report a 68 percent increase in real advertising rates. They calculate this as the percent change in nominal advertising rates minus the percent change in the CPI. However, if one properly deflates prices first, one finds a real price increase of 60 percent, not 68 percent as reported in the paper. The authors do not include the change in national concentration when calculating the effect of increased concentration on prices. The authors' original regression results and their "preferred" revised regression results suggest that the increase in national concentration may have led to a 7 percent decrease in local advertising rates. Therefore, taken together, the overall effect of the local and national increases in ownership concentration may have produced a decline in local radio advertising rates compared to what they would have been.

[3]   In one version of their revised econometric results the authors find that an increase in national concentration has a significant negative effect on local advertising prices.

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a better (i.e., higher quality) product and this may explain some or all of the price increase attributed to local consolidation. The data used in the study do not reflect the quality of the demographic being purchased. If local consolidation has produced better targeting of specific demographics, or increased the ability of radio to provide advertisers with a broad unduplicated reach, then the quality of the advertising time has increased and the 2.5-3.5 percent increase in rates attributed to consolidation could reflect this increased quality.

Second, conditions of other media advertising markets may impact the radio advertising markets. It is desirable to include the availability of substitutes such as, newspaper or TV advertising.[4] The study failed to take account of competition from other media. The omission of these important explanatory variables may have biased the authors' parameter estimates.

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[4]   See, for example, "Statement of Professor Jerry A. Hausman," attached as Appendix C to *Comments of Viacom Inc.*, March 27, 2002, filed in MM Docket No. 01-317 and MM Docket No. 00-244.

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Economic Study E:

Concentration Among National Purchasers of Video Entertainment Programming

Bruce M. Owen and Michael G. Baumann

This study examines concentration in the purchase of national video entertainment programming rights in the United States in 2001.[1] National exhibition rights permit the purchaser to distribute the programming to an audience located anywhere in the country, typically through a specified distribution medium and for some specified period of time or number of viewings. Broadcast networks, syndicators, cable networks, DBS operators, PPV providers, and distributors of videocassettes and DVDs purchase national exhibition rights. Expenditures on news and sports programming are excluded from the study because most of the inputs used in creating such programs are not readily substitutable with the inputs used in creating entertainment television programs and theatrical films. This study concludes that the purchase of video entertainment programming at the national level is at the lower end of the "moderately concentrated" range defined in the *Merger Guidelines*.

Table E1 summarizes the results of the study. The Herfindahl-Hirschman Index ("HHI"), a measure of concentration, is 1120. This value is at the lower end of the range characterized as "moderately concentrated."

The basis for the estimates in Table E1 is presented below.

Introduction

Broadcasters require programming to show to their audiences and produce a portion of their programming themselves. Whatever programming is not produced internally must be purchased from other sources. Broadcast networks buy from program producers. Sta-

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[1] This is an update of an earlier Economists Incorporated study using data from 1994. The results of that previous study were reported in "An Economic Analysis of the Broadcast Television National Ownership, Local Ownership and Radio Cross-Ownership Rules," May 17, 1995, filed in MM Docket No. 91-221. See, in particular, Appendix G.

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tions obtain from networks and syndicators.[2] The programming shown on broadcast television is substitutable with programming distributed by cable, DBS and other satellite services, and through prerecorded videocassettes and DVDs.[3] Additionally, the personnel and equipment used to create this programming is largely undifferentiated, and can move freely from producing programming for one distribution outlet to producing for another outlet. Because these inputs can be employed in other uses, a portion of the inputs would migrate away from making video entertainment programs in response to lower prices. Thus, the distributors must pay a competitive price to get the inputs they want to go into video entertainment production. Therefore, the proper product market in which to consider the programming purchases of television stations should include all video programming.

The competitive significance of cable, DBS and other non-broadcast video delivery modes does not depend on their adoption by all or even most television households. Cable television now passes and therefore is available to nearly all television households. DBS is also available to a large fraction of all TV households. If the quality of broadcast television programming available to viewers were to decrease significantly, both cable and DBS provide programming that is an alternative to broadcast television. It is the presence of these alternative delivery systems and their ability rapidly to take dissatisfied viewers away from broadcast television that is important, not their present scale of operation. Further, the fact that these alternative media are not available to each and every TV household does not mean that they provide ineffective competitive restraints on broadcasters. Broadcasters cannot discriminate between those viewers who have and those who do not have competitive alternatives. Hence, those viewers who do have alternatives, if sufficient in number, protect the interests of those who do not.

In determining whether to include videocassettes and DVDs ("pre-recorded video") in the analysis, the important analytical question is not whether viewers could completely re-

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[2]   Programming can be purchased either through a money payment, or through granting advertising time to the programming supplier, such as a network or barter-syndicator.

[3]   Programming on the Internet or through video on demand and subscription video on demand also substitutes for programming shown on broadcast television. This study does not provide an estimate of the value of the national distribution rights obtained by firms that distribute through these channels.

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place broadcast viewing with the viewing of pre-recorded video, but whether a hypothetical decrease in quality or increase in price would cause significant substitution from broadcast viewing to the viewing of pre-recorded video. Households typically do not have enough pre-recorded video on hand to "program" the entire viewing day for an extended period of time. However, just as broadcast and cable television are available throughout the day, any VCR/DVD household can watch a rented or purchased pre-recorded video any hour of the day.[4] It is hard to argue that a family sitting down to watch a pre-recorded video movie during prime time is not in many or most cases substituting this programming for broadcast or cable programming, or that morning viewers of an exercise videotape are not doing the same.

Programming Expenditures of Broadcast Networks

The 2001 expenditures of the seven broadcast television networks on video entertainment programming and television rights to theatrical films were estimated at $7,125 million. (See Table E2.) The estimate of each broadcast television network's expenditure was constructed as follows.[5]

Kagan World Media ("Kagan") reports estimates of total programming expenditures for each of four networks—ABC, CBS, Fox and NBC.[6] Unfortunately, the Kagan data include expenditures on news and sports programming and this study seeks to examine only expenditures on non-news and non-sports programming. In order to identify the portion of total programming expenditures that is attributable to news and sports programming, the study relies on investment analyst reports for two of these networks—ABC and Fox.[7] Adjustments to Fox's total programming expenditures are based on the analyst re-

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[4] The same is true for households that view programming provided through pay-per-view, video on demand, and subscription video on demand.

[5] The Joint Commenters commissioned this study. However, because data on expenditures of other broadcast networks are available only from third party sources, consistency concerns led EI to conclude that it would be more accurate for purposes of this study to rely on the same, presumably consistent, third-party source for all the broadcast networks.

[6] Kagan World Media, *The Economics of TV Programming & Syndication 2002*, p. 100.

[7] In order to maintain consistency across estimates for all of the networks, EI decided to use the Kagan estimate on total programming expenditure for all of the networks and to use the investment analyst reports only to determine the percentage of total programming expenditure that is attributable to news

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port for Fox and adjustments to ABC's, CBS's and NBC's total programming expenditure are based on the analyst report for ABC.

UBS Warburg offers data on Fox network programming costs broken down by sports and non-sports programming.[8] Expenditure data are reported for fiscal years ending June 30. Expenditures for the calendar year 2001 were assumed to equal the average of the programming costs for the fiscal years ending June 30, 2001 and June 30, 2002. This yielded an estimated 2001 non-sports programming cost for Fox of $868 million and a sports programming cost of $869 million. Hence, UBS Warburg estimates that half of Fox's total programming expenditures is for video entertainment programming. Applying this percentage to Kagan's estimated total programming expenditure for Fox, $1,549 million, yields an estimate of $775 million for Fox's video programming expenditures.

Morgan Stanley reports that ABC network programming costs, excluding news and sports, for 2001 were $1,964.5 million.[9] Morgan Stanley also estimates that ABC network's 2001 news and sports programming costs were $1,438.7 million. Hence, for ABC, news and sports account for about 42 percent of total programming expenditures. Kagan reports total 2001 programming expenditures for ABC of $3,131 million. Using the Morgan Stanley estimate that news and sports account for 42 percent of total programming expenditures, ABC's 2001 expenditures on video entertainment programs and broadcast rights to theatrical films are estimated at $1,816 million.

Economists Incorporated (EI) assumed that CBS and NBC also devoted 42 percent of their programming budgets to news and sports. Kagan reports total 2001 programming expenditures for CBS of $2,574 million. Assuming that the 2001 percentage of CBS's programming costs attributable to news and sports is the same as ABC's percentage, then CBS's expenditures on video entertainment programs and broadcast rights to theatrical films were $1,493 million.

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and sports programming rather than to use the analyst reports to determine the absolute level of non-news and non-sports programming expenses.

[8] Leland Westerfield, *Fox Entertainment Group, Inc.*, UBS Warburg, June 4, 2002, p. 15. The Fox broadcast television network does not produce news.

[9] Richard Bilotti, *Walt Disney Company*, Morgan Stanley, October 11, 2002, p. 30.

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Similarly, Kagan reports total 2001 programming expenditures for NBC of $2,907 million. Assuming that the 2001 percentage of NBC's programming costs attributable to news and sports is the same as ABC's percentage, then NBC network expenditures on video entertainment programs and broadcast rights to theatrical films were $1,686 million.

Kagan does not provide individual estimates for the UPN, WB, and PAX broadcast networks, but does report total 2001 broadcast network spending on U.S. produced programming, $11,516 million.[10] Subtracting out Kagan's estimate of total program spending for the four major networks, $10,161 million,[11] implies that programming expenditures by the other three networks totaled $1,355 million.[12] EI assumed that this amount did not include significant expenditures on news or sports, and that these expenditures are divided equally among UPN, WB,[13] and PAX.

Programming Expenditures of Basic Cable Networks

The 2001 expenditures of basic cable networks on relevant television programs were estimated at $4,785 million.[14] This is based on Kagan's report that 97 basic cable networks spent $7,877 million on programming in 2001. EI assumed that news programming accounted for $807 million of this.[15] Further, EI assumed that sports programming accounted for $2,270 million.[16] EI excluded programming expenditures of $16 million by

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[10] Kagan World Media, *The Economics of TV Programming & Syndication 2002*, p. 116.

[11] Kagan World Media, *The Economics of TV Programming & Syndication 2002*, p. 100.

[12] Note that the total is for broadcast network licensing of U.S. produced programming. To the extent that the four major networks have expenditures on non-U.S. produced programming the estimate for the other three networks is too small. To the extent that Spanish language broadcast networks license U.S. produced programming and that this is included in the Kagan estimate, the estimate for the other three English language networks is too large.

[13] All programming expenditures by the WB network are attributed to the majority owner, AOL/Time Warner.

[14] Kagan Media World, "Don't Cry for Cable," *Cable Program Investor*, May 10, 2002.

[15] This is based on Kagan's estimate for combined expenditures of the following cable networks: Bloomberg, CNBC, CNN, CNNfn, Fox News, MSNBC, NWI, and the Weather Channel.

[16] This is based on Kagan's estimate for combined expenditures of the following cable networks: CNNSI, ESPN, ESPN Classic, ESPN2, ESPNews, Fox Sports, Golf Channel, and Speed Channel.

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the TV Guide and Discovery en Espanol channels.[17] A breakdown of expenditures by basic cable network is provided in Table E3.

Programming expenditures by basic cable networks were allocated among the owners of these networks according to their ownership interests. In cases of multiple ownership, if entity A owns more than 50 percent of entity B, then entity B is combined into entity A. However, if no one entity has more than 50 percent ownership of entity B, then entity B is treated as a separate company.

Programming Expenditures of Premium Cable Networks

EI estimates that 2001 expenditures of premium cable networks on relevant television programs were $2,063 million.[18] (See Table E4.) The component expenditures are: HBO/Cinemax, $1,103 million; Showtime/The Movie Channel, $528 million; and Starz!/Encore, $432 million.

Programming Expenditures of Pay-per-view Cable Networks

Studio film revenue in 2001 from *a la carte* cable programming (PPV, NVOD, and VOD) is estimated at $434 million.[19] EI assumed that all pay-per-view programming is attributable to iN-Demand. (See Table E5.)

Expenditures on Syndicated Programming

Syndicator revenue from broadcast television in 2001 totaled $4,795 million.[20] This includes $2,559 million in cash and $2,236 in barter. However, syndicator revenue includes both payments for the programming and payments for the distribution services provided by the syndicator. The value of the distribution services must be netted out to determine the expenditures on programming. Based on discussions with industry personnel, EI assumed that distribution fees equal one-third of revenues. Therefore, net of distribution

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[17]   Numbers do not add to the total due to rounding.

[18]   Kagan Media World, "Pay Program Costs Outpace Revenue Gains," *The Pay TV Newsletter*, June 28, 2002.

[19]   Adams Media Research, "Filmed Entertainment by Pipeline," May 2, 2002.

[20]   Kagan World Media, *The Economics of TV Programming & Syndication 2002*, p. 147. This figure includes the following categories of syndicator revenue: affiliate cash, independent cash, and barter. It excludes cable cash since cable payments for programming are captured elsewhere.

fees, broadcast television expenditures on syndicated programming in 2001 were $3,197 million.

Total estimated expenditures were allocated among syndicators based on the viewership of the top 100 syndicated programs, measured by their national ratings during 2000-2001. Some syndicated programming was sports. Based on the allocation method employed, $105 million of expenditures was attributed to sports programming. Therefore, the estimated expenditure on prerecorded syndicated video entertainment programming is $3,092 million. A breakdown by distributor is presented in Table E6.

Programming Expenditures of Home Video Distributors

Studio revenue from videocassette and DVD sales and rentals in 2001 totaled $13,261 million.[21] EI assumed that each studio serves as its own distributor and therefore that video rental distributor expenditures on programming are equal to studio revenues. A breakdown by distributor is presented in Table E7.

Market Shares and HHI

Of the eight largest purchasers of programming, three own no broadcast network, and a fourth—AOL/Time Warner—owns only a minor broadcast network. The top four firms—Viacom, AOL/Time Warner, Disney, and NewsCorp—have a combined 60 percent share. The top eight firms—adding Vivendi, NBC, Sony and Dreamworks—have a combined 81 percent market share. One measure of market concentration is the HHI, which is computed by summing the squares of each firm's share. According to the *FTC/DOJ Merger Guidelines*, an HHI value below 1000 is considered "unconcentrated," an HHI between 1000 and 1800 is "moderately concentrated," and an HHI above 1800 is "highly concentrated." Based on the shares in Table E1, the HHI is 1120, at the lower end of the range characterized as moderately concentrated.[22]

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[21]   Adams Media Research, "Rental and Sell-Through Market Share By Studio," 2002.

[22]   The category "Other" was assumed to consist of a large number of small firms and therefore was excluded when computing the HHI.

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Table E1. Purchasers of Video Entertainment Programming

Company	Expenditure ($ millions)	Share (%)
Viacom	5,958	19.4
AOL/Time Warner	5,469	17.8
Disney	4,731	15.4
NewsCorp	2,413	7.8
Vivendi	2,119	6.9
NBC	1,709	5.6
Sony	1,688	5.5
Dreamworks	769	2.5
MGM	591	1.9
Liberty Media	455	1.5
Paxson	452	1.5
iN-Demand	434	1.4
Artisan/Hallmark	348	1.1
A&E Network	338	1.1
Discovery	276	0.9
Lifetime	268	0.9
CableVision Systems	207	0.7
The E.W. Scripps Co.	187	0.6
Comedy Central	124	0.4
Pearson	102	0.3
Carsey-Werner	89	0.3
Tribune	78	0.3
Oxygen	75	0.2
E!	71	0.2
Hallmark	70	0.2
Outdoor Life	48	0.2
Court TV	38	0.1
Game Show Network	27	0.1
Vulcan Ventures	26	0.1
Western Intl.	22	0.1
Concept Communications	12	0.0
MBC Network	10	0.0
Jones International Networks	5	0.0
Global Outdoors	3	0.0
Inspirational Network	3	0.0
Ovation	3	0.0
Other	1,541	5.0
TOTAL	30,761	
HHI		**1120**

Table E2. Programming Expenditures of Broadcast Networks

Network	Owner	Expenditure ($ million)
ABC	Disney	1,816
CBS	Viacom	1,493
FOX	NewsCorp	775
NBC	NBC	1,686
PAX	Paxson	452
UPN	Viacom	452
WB	AOL/Time Warner	452

Table E3. Programming Expenditures of Basic Cable Networks

Network	Owner	Percent ownership	Expenditure ($ million)
A&E Network	A&E Network	100%	191.0
ABC Family	Disney	100%	129.8
AMC	CableVision Systems	59.2%	67.0
Animal Planet	Discovery	100%	34.1
BBC America	Discovery	100%	26.6
BET	Viacom	100%	50.0
BET on Jazz	Viacom	100.0%	8.4
Biography	A&E Network	100%	14.4
Bravo	CableVision Systems	59.2%	62.1
Cartoon	AOL/Time Warner	100%	62.1
CMT	Viacom	100%	16.0
Comedy Central	Comedy Central	100%	123.6
Court TV	Court TV	100%	38.4
Discovery	Discovery	100%	90.2
Discovery Civ.	Discovery	100%	1.4
Discovery H&L	Discovery	100%	1.4
Discovery Health	Discovery	100%	18.0
Discovery Kids	Discovery	100%	4.7
Discovery Wings	Discovery	100%	1.4
Disney Channel	Disney	100%	109.0
DIY	The E.W. Scripps Co.	100%	13.3
E!	E!	100%	70.8
Fine Living	The E.W. Scripps Co.	100%	1.0
Food Network	The E.W. Scripps Co.	64.0%	57.7
FX Network	NewsCorp	100%	166.9
Game Show Network	Game Show Network	100%	27.0
Goodlife TV	Concept Communications	71.0%	12.4
Great Am. Country	Jones International Net's	100%	5.0
Hallmark	Hallmark	100%	70.0
Health Network	NewsCorp	100%	22.5
HGTV	The E.W. Scripps Co.	100%	115.2
History Channel	A&E Network	100.0%	120.0
History Intl.	A&E Network	100%	13.0
Ind. Film Channel	CableVision Systems	59.2%	19.7
Inspiratnl. Ntwk.	Inspirational Network	100%	2.8
Intl. Channel	Liberty Media	90.0%	23.1
Lifetime	Lifetime	100%	264.6
Lifetime Mv. Ntwk.	Lifetime	100%	3.2

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Network	Owner	Percent ownership	Expenditure ($ million)
MBC	MBC Network	100%	10.0
MTV	Viacom	100%	227.0
MTV S	Viacom	100%	5.0
MTV X	Viacom	100%	4.9
MTV2	Viacom	100%	5.0
MuchMusic USA	CableVision Systems	74.0%	10.0
Natl. Geographic	NewsCorp	67.0%	20.0
Nick GAS	Viacom	100%	5.0
Nick Too	Viacom	100%	7.5
Nickelodeon	Viacom	100%	352.4
Noggin	Viacom	100%	10.0
Outdoor Channel	Global Outdoors	100%	3.3
Outdoor Life	Outdoor Life	100%	48.4
Ovation	Ovation	100%	2.5
Oxygen	Oxygen	100%	75.0
SCI FI	Vivendi	100%	105.9
Science Channel	Discovery	100%	1.4
SoapNet	Disney	100%	7.5
TBS	AOL/Time Warner	100%	375.5
TCM	AOL/Time Warner	100%	25.5
techtv	Vulcan Ventures	100%	26.0
TLC	Discovery	100%	78.9
TNN	Viacom	100%	199.4
TNT	AOL/Time Warner	100%	545.0
Toon Disney	Disney	100%	19.0
Travel Channel	Discovery	100%	17.6
Trio	Vivendi	100%	10.1
TV Land	Viacom	100%	41.0
USA	Vivendi	100%	282.8
VH1	Viacom	100%	115.0
VH1 Classic	Viacom	100%	5.0
VH1 Music First	Viacom	100%	5.0
VH1 Soul	Viacom	100%	5.0
WE	CableVision Systems	59.2%	48.0
Other	Unknown		27.5

Table E4. Programming Expenditures of Premium Cable Networks

Network	Owner	Percent ownership	Expenditure ($ million)
HBO/Cinemax	AOL/Time Warner	100%	1,103
Showtime/The Movie Channel	Viacom	100%	528
Starz!/Encore	Liberty Media	100%	432

Table E5. Programming Expenditures of Pay-per-view Cable Networks

Network	Owner	Percent ownership	Expenditure ($ million)
iN-Demand	iN-Demand	100	434

Table E6. Programming Expenditures on Syndicated Programming

Distributor	Owner	Expenditure ($ million)
King World	Viacom	608.61
Warner Bros.	AOL/Time Warner	581.64
Paramount	Viacom	514.05
Columbia TriStar	Sony	220.31
20th Century Fox	NewsCorp	170.63
Worldvision Ent.	Viacom	145.32
Buena Vista	Disney	118.79
Pearson	Pearson	102.41
Carsey-Werner	Carsey-Werner	89.26
Tribune Ent.	Tribune	78.44
Universal TV	Vivendi	52.19
Twentieth TV	NewsCorp	46.06
Studios USA	Vivendi	41.60
MGM	MGM	39.54
Disney/ABC	Disney	38.06
20th Television	NewsCorp	36.29
Eyemark Ent.	Viacom	35.08
MCA TV	Vivendi	31.25
Multimedia Ent.	Vivendi	30.45
Group W	Viacom	24.30
NBC Enterprises	NBC	23.24
Western Intl.	Western Intl.	22.10
New Line TV	AOL/Time Warner	20.58
Viacom	Viacom	14.22
Universal Studios	Vivendi	7.53

Table E7. Programming Expenditures of Home Video Distributors

Distributor	Owner	Expenditure ($ million)
Buena Vista	Disney	2,493.15
Warner Bros.	AOL/Time Warner	1,695.92
HBO	AOL/Time Warner	96.66
New Line	AOL/Time Warner	510.62
Dreamworks	Dreamworks	769.34
Universal	Vivendi	1,404.15
Columbia/Tristar	Sony	1,413.20
FoxVideo	NewsCorp	1,175.20
Paramount	Viacom	1,081.52
MGM	MGM	551.84
Artisan/Hmark.	Artisan/Hallmark	348.15
USA	Vivendi	153.31
Trimark	Sony	54.07
Other		1,513.54

Counting Outlets and Owners in Milwaukee: An Illustrative Example
Bruce M. Owen, Kent W Mikkelsen[*]

Comments submitted by the Joint Commenters argue that no FCC restrictions on media ownership are needed beyond antitrust enforcement. However, should the FCC determine to retain some standards to preserve diversity of outlets in local markets, the Comments propose that mergers be permitted as long as the number of independent outlet owners in place after the merger would exceed some minimum safe-harbor benchmark.

Economists Incorporated (EI) was asked to provide an example of the data and calculations that could be used to evaluate a hypothetical merger of two media outlets in a specific DMA. The calculations here focus on a hypothetical merger of two television stations in the Milwaukee DMA. Milwaukee is ranked 31st among the 210 Nielsen DMAs, so it is large enough that many of the relevant data issues should be manifest but not so large that it is unrepresentative of many other DMAs.

The proposed standard requires a calculation of the number of local media outlets *available* to the average person in the area served by the merging outlets. It is necessary to take an average because not all local media reach the entire DMA. The definition of the "relevant" geographic market begins with the location of the customers served by both of the merging parties. Seven types of media outlets are included here: daily newspapers, weekly newspapers, television stations, radio stations, cable television, regional magazines, and the Internet. The methods used in this illustration are not necessarily the only or even the best methods, but they are intended to illustrate the underlying principles and to provide a starting point for discussion of practical measurement issues.

The DMA was chosen as the geographic area of interest here because, in general, the DMA is the geographic area in which households can view the two merging television stations. If the hypothetical merger dealt with, say, a daily newspaper and a radio station,

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[*]   The authors wish to acknowledge research assistance from Jason Coburn.

the geographic area of interest would be the area in which both outlets are available, which could be much different than a DMA.

Daily Newspapers

Editor & Publisher publishes an electronic database of all daily newspapers. For most daily newspapers, the state, city and zip code are identified. The state variable was used to identify all Wisconsin daily newspapers, and then a database obtained from MapInfo was used to link the zip code of each newspaper with its county. A total of nine daily newspapers are published in one of the ten counties in the Milwaukee DMA, as defined by Nielsen Media Research. Except for a few national newspapers (e.g., *USA Today*, *Wall Street Journal*), each daily newspaper could reasonably present content specific to the DMA in which it is published, so all daily newspapers published in the Milwaukee DMA are considered local outlets.[1]

This portion of the calculation seeks to estimate the number of local daily newspaper outlets available to the average household in the Milwaukee DMA. The term "available" requires some interpretation. Most newspapers offer to distribute their newspapers by mail, so it would be possible for households throughout the DMA to have regular access to any daily newspaper published in the DMA. A more restrictive interpretation would be to assume that a daily newspaper is available to a household if the household lives in an area served by home delivery on the day of publication. Information about delivery areas can be obtained for many daily newspapers from the Audit Bureau of Circulation (ABC).

For purposes of this illustration, a simpler method was used. A publication titled *Circulation*, published by Standard Rate and Data Service (SRDS), lists the principal counties of circulation for many daily newspapers. It was assumed here that each daily newspaper is "available" to all households in each of the counties SRDS lists as a "county in paper's Metro area" for that newspaper. If a daily newspaper were not covered in *Circulation*, it might be assumed that the newspaper is "available" to all households in the county in

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[1]   National newspapers often publish regional editions to serve advertisers' needs; such editions demonstrate the possibility of local content in such publications. If such local content is present, the publication would be counted as "in the market." If it could readily (i.e., cheaply) be added, the publication should be regarded as a potential entrant.

which it is published. All of the daily newspapers identified in the Milwaukee DMA, together with their owners and the counties in which they are assumed to be available, are presented in Table F1.[2]

To calculate the number of daily newspapers available to the average household in the Milwaukee DMA, one next calculates for each county in the DMA the number of daily newspapers available in the county. A weighted average number of newspapers across counties in the DMA, using the number of households in each county as weights, is then computed. County household figures were obtained from the U.S. Census.[3] The components of this calculation are presented in Table F2. Those calculations yield an average of 1.2 daily newspapers available to the average household in the Milwaukee DMA.

Weekly Newspapers

Weekly newspapers (and other newspapers published less frequently than daily) present many of the same measurement issues as daily newspapers. Weekly newspapers are presumed to be local outlets because they could reasonably present content that is specific to the DMA in which they are published. National weekly newspapers (e.g., *Barrons*) may not be considered local in the DMA in which they are published. Editor & Publisher also provides an electronic database showing the city of publication for weekly newspapers. A total of 87 weekly newspapers were identified that are published in one of the counties in the Milwaukee DMA.

Accurate measurement of the size of the audience to which each weekly newspaper is available requires information about the circulation areas of each weekly newspaper. For purposes of this illustration, however, it was assumed that each weekly newspaper is "available" to all households in the city for which the newspaper is named (or, if there is no city in the name, the city in which the newspaper is published). The number of weekly newspapers available to the average household in the Milwaukee DMA can then be calculated by adding up the households in the city of publication for each weekly newspaper

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[2]   Ownership information was supplemented from other sources, as noted in Table F1.

[3]   See http://quickfacts.census.gov/qfd/.

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and dividing this sum by the total number of households in the DMA.[4] City household figures were obtained from the U.S. Census.[5] The weekly newspapers in the Milwaukee DMA, together with their owner and city of publication and its number of households, are shown in Table F3. There are 3.2 weekly newspapers available to the average household in the Milwaukee DMA. Note that in some instances the owner of the newspaper was not identified in Editor & Publisher's electronic database.

Television Stations

Various private firms compile databases that attempt to list all television stations in each DMA. One such source, BIA Financial Network, lists 14 broadcast stations operating in the Milwaukee DMA. It is generally presumed (and assumed in this illustration) that all television stations in a DMA can be viewed throughout the DMA, in which case each television station is an outlet available to all households in the DMA.[6] In some DMAs, stations are only viewed in a portion of the DMA. In that case, it may be necessary to weight television stations by the number of households that can view it, as discussed for newspapers. See Table F4 for a listing of the Milwaukee DMA television stations and their owners, based on BIA information.

Some households in the Milwaukee DMA can also view television stations located outside the DMA (e.g., in the Chicago DMA). Depending on the circumstances, it may be appropriate to investigate whether these out-of-DMA television stations could reasonably provide content that would be considered "local" in the Milwaukee DMA. For this illustration, out-of-DMA television stations are not considered to be local outlets.

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[4]   The analogous procedure, applied to daily newspapers, would be to determine for each daily newspaper in the DMA the number of households in the counties in which the daily newspaper is "available," sum these households across all daily newspapers in the DMA, and divide this sum by the number of households in the DMA. This procedure gives the same average as described above.

[5]   See http://factfinder.census.gov.

[6]   Note that of the 14 stations in the Milwaukee DMA, BIA classifies one as "Class A" and another as "Translator."

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Radio Stations

Various private firms compile databases of radio stations. This illustration uses the radio database produced by BIA Financial Network to identify the stations in the Milwaukee DMA. Table F5 lists the 66 radio stations located in the Milwaukee DMA with their owners. Radio stations located outside the DMA might provide local content, as discussed in connection with out-of-DMA television stations above. For this illustration, radio stations located outside the DMA are not considered to be local outlets.

Arbitron conducts surveys to estimate the listening audience of radio stations. Arbitron provides data for three different local survey areas: the Metro Market (a small group of core counties); the Total Survey Area (TSA); and the DMA. The Milwaukee DMA includes all or part of three Metro Markets: Milwaukee-Racine (entirely within the DMA); Sheboygan (entirely within the DMA); and Chicago (Kenosha Co., Wisconsin is in the Milwaukee DMA). All of the counties in the Milwaukee DMA are within the Milwaukee-Racine TSA, and some of the counties are also within other TSAs. It is not clear from these categorizations whether all the radio stations located in the Milwaukee DMA can be heard throughout the DMA. It may be desirable in an actual merger investigation to determine more precisely the reach of radio signals in the DMA, perhaps through the use of broadcast signal contours.

For this illustration, it was assumed that each radio station reaches all households within the Arbitron Metro Market in which is it located, but no households outside its Arbitron Metro Market. Stations not located in any Arbitron Metro Market (or assigned by Arbitron to a Metro Market outside the Milwaukee DMA) were assumed to reach all households in the county that included the station's city of license. The number of radio stations available to the average household in the Milwaukee DMA can be calculated as was done for daily newspapers. First, one calculates for each county in the DMA the number of radio stations available in the county. One then calculates the weighted average across counties in the DMA, using the number of households in each county as weights. Table F6 shows there are 35.2 radio stations available to the average household in the Milwaukee DMA.

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DBS Television

DirecTV and EchoStar, the two current Ku-band direct broadcast satellite operators, are not counted as additional independent voices for purposes of this illustration. This is something of a close call given that DBS operators now carry regional sports networks with local content as well as local broadcast stations. This demonstrates the technical feasibility today of DBS provision of local content. In the future, as DBS capacity increases, the opportunities to supply local content will also increase (or, equivalently, the cost of doing so will decrease). Therefore, while we treat DBS today, in this illustration, as only a potential entrant (as with national newspapers that have regional editions), DBS may properly be included in the future.

Cable Television

Nationwide, Kagan estimates that over 97 percent of television households are passed by cable.[7] Unless the Milwaukee DMA is far from the national average, therefore, cable television programming is available to nearly all households in the DMA. Warren Publishing identifies 28 cable systems in the Milwaukee DMA. It is very rare, however, for a household to have more than one cable system available to it. Thus, the number of cable outlets available to any given household is close to one. A slightly more accurate measure would be calculated as households passed by cable divided by total households, with those households passed by two cable systems counted twice in the numerator.

Cable systems are commonly required to make some channel capacity available for public access. Except possibly within very broad parameters (e.g., decency), cable systems typically do not control the public access programming. For this illustration, each cable system is counted as contributing two outlets: one multichannel outlet controlled by the cable operator, and another public access channel not controlled by the cable operator.

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[7]   *Kagan World Media,* October 22, 2002, p. 8 estimates 106.6 million U.S. TV homes and 103.7 million homes passed by cable.

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Regional Magazines

Magazines have some differences with daily and weekly newspapers, but also some similarities. Many magazines have a national audience and would not find it economical to produce content specifically for a single DMA. National magazines of this type are not included in the count of Milwaukee outlets. However, some national magazines (e.g., *Time, Newsweek* and *U.S. News*) do publish different content by region. All three of these magazines publish content specifically for Milwaukee and are included in the count of Milwaukee outlets. Other magazines might be identified that also publish Milwaukee-specific content.

There are also magazines that generally serve readers in a geographic area similar to the Milwaukee DMA and could reasonably offer "local" content. *National Directory of Magazines* identifies magazines published throughout the U.S. Based on the information in the *National Directory of Magazines* entries, 12 magazines were identified which it appears could plausibly offer content specific to the Milwaukee DMA or a large portion thereof. These are listed, along with their owners, in Table F7. In an actual merger evaluation, more information about these publications might be collected. Each magazine is assumed to be available to all households in the DMA.

Internet

Table F8 lists a sample of non-governmental Internet websites that it appears do or could plausibly offer content specific to the Milwaukee DMA.[8] It is common for newspapers and television and radio stations to operate a website. Those in the Milwaukee DMA that could be identified are also listed in Table F8, along with the associated newspaper or broadcast station. All the websites are available throughout the DMA. There are also dozens of websites operated by cities, counties and boards of education within the Milwaukee DMA that are not included in Table F8.

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[8]   Internet websites with direct government sponsorship (indicated by .gov URL) were not included in the list. Some of the organizations operating the listed websites have ties to government operations (e.g., state-operated schools). One could debate whether these websites should be considered outlets for private speech, or whether their Internet content is controlled by government. Even if they are excluded, the list of websites with no government control would remain very long.

Counting Outlets

As noted above, any minimum safe-harbor benchmark standard would require the calculation of the number of local media outlets available to the average household in the relevant area. Table F9 summarizes the number of local outlets of each type available to the average household in the Milwaukee DMA, derived from the preceding tables. Across all the media examined, and with the limitations discussed above, the average household in the Milwaukee DMA has over 170 local outlets available.

With the information from Tables F1-F9, one can determine the number of independently owned media outlets available to the average person in the Milwaukee DMA. The outlets that are easiest to examine are those that reach the entire DMA—here, broadcast television, regional magazines, and Internet.[9] There are apparently 89 different owners of one or more outlets in these three media alone in the Milwaukee DMA.[10] More than three-quarters of the outlets are independent of any other DMA-wide outlet. Only four of the owners control five or more outlets. Looking only at these three media, the merger of any two media outlet owners would still leave 88 independent owners.

Ownership of DMA-wide Media Outlets in the Milwaukee DMA

Number of Outlets	1	2	3	4	5+	Total
Number of Owners	69	11	4	1	4	89

If in some DMA the number of independently owned DMA-wide outlets would be less than the safe-harbor threshold after the merger, it would then be necessary to consider outlets that do not reach the entire DMA: radio, daily newspapers, weekly newspapers, and cable. Independent outlets must be counted with care, because an outlet that is independent in one area of the DMA may not be independent in another area. For instance,

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[9]   As noted above, a television station may not reach an entire DMA in some instances. Television stations that do not reach the entire DMA would be considered below along with the other outlets that do not reach the entire DMA, including radio, daily newspapers, weekly newspapers, and cable.

[10]   Several outlets whose ownership could not readily be determined were excluded from this count. It is also possible that further investigation would reveal common ownership among outlets that appear to be independent.

including daily newspapers in the count of independent outlets would tend to add, for the average household in the DMA, one additional outlet. However, a daily newspaper circulating in Milwaukee, Ozaukee, Washington and Waukesha Counties is owned jointly with television and radio stations, and hence does not count as an independent outlet for households in those counties.

To avoid this complication, the next step in the analysis removes from the list of radio, daily newspaper, weekly newspaper and cable outlets those with an owner that also owns a DMA-wide outlet. For daily and weekly newspapers and cable, it is likely that none of the remaining owners will have more than a single outlet serving any given portion of the DMA. (For instance, it would be uncommon for a cable operator to own a newspaper or for a single owner to circulate both a daily and a weekly newspaper to the same households.) If this is the case, one can then use the remaining outlets to calculate the number of daily newspaper, weekly newspaper and cable outlets available to the average household in the DMA. This number can be added to the number of independently owned DMA-wide outlets previously calculated.

In radio, it is not only possible but likely that some owners will have more than a single station serving the same portion of the DMA. For this part of the analysis, one would re-calculate Table F6 to exclude stations jointly owned with a DMA-wide outlet (television, Internet or regional magazine). In instances where a single owner has multiple stations covering the same households, one would further eliminate all but one of such stations. This revised calculation yields the number of radio station owners independent of each other and of any DMA-wide outlet whose stations can be heard by the average household in the Milwaukee DMA. This recalculated number can be added to the number of independently owned DMA-wide outlets and adjusted daily newspaper, weekly newspaper and cable numbers previously calculated.

Table F1. Daily Newspapers and Availability Areas in the Milwaukee DMA

Newspaper/Company Name	Owner	Counties Where Available
Daily Citizen	Madison Newspapers Inc.**	Dodge
Daily Jefferson County Union	Hoard's Dairyman**	Jefferson
Watertown Daily Times	Johnson Newspaper Corp.	Jefferson
Kenosha News	United Communications Corp.	Kenosha
Milwaukee Journal Sentinel	Journal Communications*	Milwaukee, Ozaukee, Washington, and Waukesha
Journal Times	Lee Enterprises Inc.	Racine
Sheboygan Press	Gannett Co. Inc.	Sheboygan
Daily News	Conley Publishing Group	Washington
Waukesha Freeman	Conley Publishing Group	Waukesha

Source: Editor and Publisher Yearbook; MapInfo Corporation
Notes: * Owner information obtained from www.jc.com/companies/
          ** Owner information obtained by telephone

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Table F2. Daily Newspapers Available to the Average Household in the Milwaukee DMA

County	# of daily newspapers	Households per county	County household weight	Weighted number of daily newspapers
DODGE	1	31,417	0.04	0.04
JEFFERSON	2	28,205	0.03	0.07
KENOSHA	1	56,057	0.07	0.07
MILWAUKEE	1	377,729	0.44	0.44
OZAUKEE	1	30,857	0.04	0.04
RACINE	1	70,819	0.08	0.08
SHEBOYGAN	1	43,545	0.05	0.05
WALWORTH	0	34,522	0.04	0.00
WASHINGTON	2	43,842	0.05	0.10
WAUKESHA	2	135,229	0.16	0.32
Total		852,222	1.00	1.20

Daily Newspapers Available to Average Household in Milwaukee DMA 1.20

Sources: Editor and Publisher Yearbook; SRDS Circulation 2003; US Census Bureau.

Table F3. Weekly Newspapers in the Milwaukee DMA

Name Of Newspaper	Owner	City	Households in city
50 Plus	Plus Publications	Hartland	3,002
AdVantage	Conley Publishing Group Ltd.	West Bend	11,375
Brookfield News	Journal Communications*	New Berlin	13,891
Brown Deer Herald	Journal Communications*	New Berlin	5,134
Bulletin	United Communications Corp.	Kenosha	34,411
Burlington Standard Press	Southern Lakes Newspapers LLC	Burlington	3,838
Catholic Herald	Milwaukee Catholic Press Apostolate	Milwaukee	232,188
Community Journal	Patricia Pattillo**	Milwaukee	232,188
Courier	Hometown News LP**	Waterloo	1,242
Cudahy/St. Francis Reminder-Enterprise	Journal Communications*	New Berlin	11,938
Delavan Enterprise	Bliss Communications Inc.	Delavan	2,931
Dodge County Independent-News	Times Publishing Inc.	Juneau	31,417
East Troy News	Southern Lakes Newspapers LLC	East Troy	1,350
Elkhorn Independent	Southern Lakes Newspapers LLC	Elkhorn	2,919
Elm Grove Elm Leaves	Journal Communications*	New Berlin	2,444
Fox Point/Bayside/River Hills Herald	Journal Communications*	New Berlin	5,184
Franklin Hub	Journal Communications*	New Berlin	10,602
Germantown Banner-Press	Journal Communications*	New Berlin	6,904
Glendale Herald	Journal Communications*	New Berlin	5,772
Good Morning Advertiser	Hoard's Dairyman**	Whitewater	4,132
Greendale Village Life	Journal Communications*	New Berlin	6,011
Greenfield Observer	Journal Communications*	New Berlin	15,697
Hartford Booster	Booster Inc.	Hartford	4,279
Hartford Times-Press	Conley Publishing Group Ltd.	Hartford	4,279
Horicon Reporter	Wisconsin Free Press	Horicon	1,474
Irish American Post	Independently Owned**	Milwaukee	232,188
Italian Times	Italian Community Center, Inc.	Milwaukee	232,188
Kettle Moraine Index	Journal Communications*	Hartland	3,002

Name Of Newspaper	Owner	City	Households in city
Kewaskum Statesman	Independently Owned**	Kewaskum	1,212
Lake Country Reporter	Journal Communications*	Hartland	3,002
Lake Geneva Regional News	Lake Geneva Printing & Publishing	Lake Geneva	3,053
Lake Mills Leader	Hometown News LP	Lake Mills	1,924
Mayville News	Wisconsin Free Press**	Mayville	1,988
Menomonee Falls News	Journal Communications*	New Berlin	12,844
Mequon/Thiensville Courant	Journal Communications*	New Berlin	9,364
Metroparent	Journal Sentinel	Wauwatosa	20,388
Milwaukee Courier	Jerrel Jones**	Milwaukee	232,188
Milwaukee Star	Hometown News LP**	Milwaukee	232,188
Monday-Mini	Madison Newspapers Inc.	Beaver Dam	6,349
Mukwonago Chief	Journal Communications*	Mukwonago	2,392
Muskego Sun	Journal Communications*	New Berlin	7,533
New Berlin Citizen	Journal Communications*	New Berlin	14,495
News Graphic	Conley Publishing Group Ltd.	Cedarburg	4,432
North Woods Trader	Delphos Herald Inc.	Eagle	592
Oak Creek Pictorial	Journal Communications*	New Berlin	11,239
Oconomowoc Buyers' Guide	Journal Communications*	Hartland	4,968
Oconomowoc Enterprise	Conley Publishing Group Ltd.	Oconomowoc	4,968
Ozaukee Guide	Conley Publishing Group Ltd.	Cedarburg	4,432
Ozaukee Press	Port Publications Inc.	Port Washington	4,071
Palmyra Enterprise	Southern Lakes Newspapers LLC	Palmyra	689
Pennysaver	Lee Enterprises Inc.	Racine	31,449
Review	Barry Johanson**	Plymouth	3,262
Sharon Reporter	Not available	Sharon	565
Sheboygan Falls News	Barry Johanson**	Sheboygan	20,779
Shepherd Express Weekly News	Alternative Publications Inc.	Milwaukee	232,188
Shoreline Chronicle	Gannett Co. Inc.**	Sheboygan	20,779
Shorewood Herald	Journal Communications*	New Berlin	6,539
Sounder	Times Publishing Inc.**	Random Lake	613
South Milwaukee Voice Graphic	Journal Communications*	New Berlin	8,694
Spotlight	Jim Clifford**	Watertown	8,022
Sunday Booster	Booster Inc.	Hartford	4,279
Sunday Post	Conley Publishing Group Ltd.	Cedarburg	4,432
Sunday Post	Conley Publishing Group Ltd.	West Bend	11,375

Name Of Newspaper	Owner	City	Households in city
Sussex Sun	Journal Communications*	Hartland	3,310
This Week!	Journal Communications*	Waukesha	25,663
Three Lakes News	Delphos Herald Inc.	Eagle	592
Times	Not available	Walworth	850
Tri-County	Madison Newspapers Inc.	Beaver Dam	6,349
Union Extra	Hoard's Dairyman	Fort Atkinson	4,760
Vilas County News Review	Delphos Herald Inc.	Eagle	9,066
Walworth County Shopper-Advertiser/Sunday Shopper	Community Shoppers Inc.	Delavan	34,522
Waterford Post	Southern Lakes Newspapers LLC	Waterford	1,561
Waukesha Area Sunday Post	Conley Publishing Group Ltd.	Waukesha	25,663
Wauwatosa News-Time	Journal Communications*	New Berlin	20,388
West Allis Star	Journal Communications*	New Berlin	27,604
West Bend Booster	Booster Inc.	West Bend	11,375
Westine Report	Southern Lakes Newspapers LLC	Union Grove	1,631
Westosha Report	Southern Lakes Newspapers LLC	Twin Lakes	1,973
Whitefish Bay Herald	Journal Communications*	New Berlin	5,457
Whitewater Register	Southern Lakes Newspapers LLC	Whitewater	4,132
Wisconsin Hi-Liter	Hi-Liter Graphics Inc.	Burlington	3,838
Wisconsin Jewish Chronicle	Milwaukee Jewish Federation	Milwaukee	232,188
Wisconsin Light	Not available	Milwaukee	232,188
		Total Households	2,712,377
		Total DMA Households	852,222

Number of Weekly Newspapers Available to the Average Household in the Milwaukee DMA   **3.2**

Notes: * Owner information obtained from www.jc.com/companies/
           ** Owner information obtained by telephone

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Table F4. Broadcast Television Stations in the Milwaukee DMA

CALL LTRS	CHANNEL	OWNER
W63CU	63	Weigel Broadcasting Company
WCGV-TV	24	Sinclair Broadcast Group Inc
WDJT-TV	58	Weigel Broadcasting Company
WISN-TV	12	Hearst-Argyle TV Incorporated
WITI	6	Fox Television Stations Inc
WJJA	49	TV-49 Inc
WMLW-LP	41	Weigel Broadcasting Company
WMVS	10	Milwaukee Area Technical College District Board
WMVT	36	Milwaukee Area Technical College District Board
WPXE	55	Journal Communications*
WTMJ-TV	4	Journal Communications*
WVCY-TV	30	VCY America Inc
WVTV	18	Sinclair Broadcast Group Inc
WWRS-TV	52	National Minority TV

Source: BIA Database
Notes: * Owner information obtained from www.jc.com/companies/
     ** Owner information obtained by telephone

Table F5. Radio Stations in the Milwaukee DMA

CALL LTRS	Owner
WAUK	WALT-WEST Wisconsin Inc
WAZI	L&L Pewaukee Ventures Inc
WBEV	Good Karma Broadcasting
WBFM	Midwest Communications Incorporated
WBJX	WBJX Inc
WBKV	Bliss Communications Inc
WBSD	Burlington Area School District
WBWI	Bliss Communications Inc
WCCX	Carroll College
WCLB	RBH Enterprises Incorporated
WEMP	Entercom
WEXT	NextMedia Group
WEZY	Bliss Communications Inc
WFAW	Marathon Media Group LLC
WFDL	BBK Broadcasting Inc
WFMR	Saga Communications Incorporated
WFZH	Salem Communications Corporation
WGLB	Kinlow, Joel J.
WGLB	Starboard Broadcasting Inc
WGTD	Wisconsin Public Radio
WHAD	Wisconsin Public Radio
WHBL	Midwest Communications Incorporated
WHBZ	Midwest Communications Incorporated
WIIL	NextMedia Group
WISN	Clear Channel Communications
WJJO	Mid-West Family Broadcast Group
WJMR	Saga Communications Incorporated
WJUB	Jubiliation Ministries
WJYI	Saga Communications Incorporated
WJZI	Milwaukee Radio Alliance LLC
WKCH	Marathon Media Group LLC
WKKV	Clear Channel Communications
WKLH	Saga Communications Incorporated
WKSH	ABC Radio Incorporated
WKTI	Journal Communications*
WLIP	NextMedia Group
WLKG	Kwiatkowski, Tom
WLTQ	Clear Channel Communications
WLUM	Milwaukee Radio Alliance LLC
WLZR	Saga Communications Incorporated
WMCS	Milwaukee Radio Alliance LLC
WMDC	BBK Broadcasting Inc
WMIL	Clear Channel Communications
WMSE	Milwaukee School of Engineering

CALL LTRS	Owner
WMWK	Family Stations Inc
WMYX	Entercom
WNOV	Courier Communications
WOKY	Clear Channel Communications
WRIT	Clear Channel Communications
WRJN	Bliss Communications Inc
WRRD	Salem Communications Corporation
WSHS	Wisconsin Public Radio
WSJY	Marathon Media Group LLC
WSLD	WPW Broadcasting Incorporated
WSUW	University of Wisconsin System
WTKM	Kettle Moraine Broadcasting Company Inc
WTKM	Kettle Moraine Broadcasting Company Inc
WTMJ	Journal Communications
WTTN	Good Karma Broadcasting
WUWM	University of Wisconsin System
WVCY	VCY America Incorporated
WXER	RBH Enterprises Incorporated
WXRO	Good Karma Broadcasting
WXSS	Entercom
WYMS	Milwaukee Board of School Directors
WZRK	Starboard Broadcasting Inc

Source: BIA Database

Notes: * Owner information obtained from www.jc.com/companies/

Table F6. Radio Stations Available to the Average Household in the Milwaukee DMA

County	# of radio stations	Households per county	County household weight	Weighted number of radio stations
DODGE	6	31,417	0.04	0.22
JEFFERSON	7	28,205	0.03	0.23
KENOSHA	3	56,057	0.07	0.20
MILWAUKEE	44	377,729	0.44	19.50
OZAUKEE	44	30,857	0.04	1.59
RACINE	44	70,819	0.08	3.66
SHEBOYGAN	7	43,545	0.05	0.36
WALWORTH	4	34,522	0.04	0.16
WASHINGTON	44	43,842	0.05	2.26
WAUKESHA	44	135,229	0.16	6.98
Total		852,222	1.00	35.2

Radio Stations Available to Average Household in Milwaukee DMA   35.2

Sources: BIA Financial Data; US Census Bureau.

Table F7. Regional Magazines Available in the Milwaukee DMA

Regional Magazines	Publishing Company/Owner
Alive Magazine	Milwaukee Zoological Society
Milwaukee Symphony Orchestra Encore	Encore Ltd.
Lore	Milwaukee Public Museum
Alverno Magazine	Alverno College
Mt. Mary Magazine	Mount Mary College
Quarterly	Carroll College
Small Business Times	Small Business Times
Shepherd Express	Alternative Publications
Ou-Tre	Mike Paul
Greater Milwaukee Dining Visitors Guide	Greater Milwaukee Convention & and Visitors Bureau
Milwaukee Magazine	Milwaukee Magazine, Inc,
Wisconsin Times	Wisconsin School for the Deaf
US News and World Report	US News and World Report
Time Magazine	AOL Time Warner
Newsweek	The Washington Post Company

Source: National Directory of Magazines, 2000

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Table F8. Local Websites Available in the Milwaukee DMA

Name	Owner	URL
Milwaukee's LGBT Center		http://www.mkelgbt.org/
American Red Cross		http://www.redcrossinsewis.org/
Milwaukee Aquarium Society		http://fishclubs.com/WI/MAS/home2.htm
Milwaukee Astronomical Society		http://www.milwaukeeastro.org/
Cavalry Chapter of Milwaukee		http://www.ccmil.com/
Congregation Shalom		http://www.cong-shalom.org/
United Church of God		http://www.ucgmil.org/
Alverno College		http://www.alverno.edu/
Marquette University		http://www.marquette.edu/
Milwaukee Area Technical College		http://www.matc.edu/
Milwaukee Institute of Art and Design		http://www.miad.edu/
Milwaukee School of Engineering		http://www.msoe.edu/
UW-Milwaukee		http://www.uwm.edu/
YWCA of Milwaukee		http://www.ywcaogm.org/orgs4rj.htm
Hunger Task Force of Milwaukee		http://www.hungertaskforce.org/
PTA council of Milwaukee		http://www.myschoolonline.com/site/0,1876,53529-147930-56-8307,00.html
Atwater PTA		http://www.shorewoodschools.org/sch_Atwater/atw_PTA/atw_PTA.htm
Milwaukee's Teacher and Educators' Association		http://www.mtea.org/
Associated General Contracters of Greater Milwaukee		http://www.agc-gm.org/
Guide to Milwaukee		http://www.cityonthelake.com
Guide to Milwaukee		http://www.officialmilwaukee.com/main.cfm
Milwaukee Hurling Club		http://www.hurling.net/
Milwaukee Bar Association		http://www.milwbar.org/
Milwaukee Fire Department		http://www.milfire.com/
Milwaukee Yacht Club		http://www.milwaukeeyc.com/
Milwaukee County Historical Society		http://www.milwaukeecountyhistsoc.org/
Milwaukee Naturally		http://www.milwaukee-naturally.com/

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Name	Owner	URL
Milwaukee Jewish Federation		http://www.milwaukeejewish.org/
Milwaukee One		http://www.mke1.com/
Milwaukee Rocks		http://www.milwaukeerocks.com/
MKE Blue		http://www.december.com/places/mke/blue.html
All About Milwaukee		http://www.allaboutmilwaukee.com/
Zoological Society of Milwaukee		http://www.zoosociety.org/
Metro Milwaukee Association of General Commerce		http://www.mmac.org/
Historic Milwaukee		http://www.historicmilwaukee.org/
Milwaukee Akido Club		http://gbit.com/milwac/
Greater Milwaukee Today		http://www.gmtoday.com/index.asp
Greater Milwaukee Foundation		http://www.greatermilwaukeefoundation.org/
Milwaukee Youth Symphony Orchestra		http://www.myso.org/
Guide to Milwaukee		http://milwaukee.areaguides.net/
United Way		http://www.unitedwaymilwaukee.org
eBay		www.ebay.com
digitalcity.com		www.digitalcity.com
digital-neighbor.com		www.digital-neighbor.com
All About Wisconsin, Inc.		wisconline.com
onmilwaukee.com		www.onmilwaukee.com
onwisconsin.com	Journal Communications*	www.onwisconsin.com
WCGV-TV	Sinclair Broadcast Group Inc	http://www.wcgv24.com/
WDJT-TV	Weigel Broadcasting Company	http://www.cbs58.com/
WISN-TV	Hearst-Argyle TV Incorporated	http://www.themilwaukeechannel.com/
WITI	Fox Television Stations Inc	http://www.fox6milwaukee.com/
WMLW-LP	Weigel Broadcasting Company	http://www.wmlw.com/
WMVS	Milwaukee Area Technical College District Board	http://mptv.org/
WMVT	Milwaukee Area Technical College District Board	http://mptv.org/
WTMJ-TV	Journal Communications*	http://www.touchtmj4.com/
WVCY-TV	VCY America Inc	http://www.vcyamerica.org/
WVTV	Sinclair Broadcast Group Inc	http://www.wvtv18.com/
WAZI	L&L Pewaukee Ventures Inc	www.lifemessage.org/
WBJX	WBJX Inc	www.lacampeona.com
WCCX	Carroll College	http://cscbeta.cc.edu/wccx/
WEXT	NextMedia Group	www.extremecountry.com
WFMR	Saga Communications Incorporated	www.wfmr.com
WGLB	Kinlow, Joel J.	http://my.execpc.com/~wglb/
WGLB	Starboard Broadcasting Inc	http://my.execpc.com/~wglb/fm/fm.html

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Name	Owner	URL
WGTD	Wisconsin Public Radio	www.gateway.tec.wi.us/Campuses/WGTD_FM91/wgtd_fm91.html
WHAD	Wisconsin Public Radio	www.wpr.org/
WIIL	NextMedia Group	www.95wiil.com
WISN	Clear Channel Communications	www.broadcast.com/radio/talk/wisn
WJJO	Mid-West Family Broadcast Group	www.wjjo.com
WJUB	Jubiliation Ministries	www.wjub.org/
WKKV	Clear Channel Communications	www.v100.com/main.html
WKLH	Saga Communications Incorporated	www.wklh.com/
WKTI	Journal Communications*	www.wkti.com
WLIP	NextMedia Group	www.wlip.com
WLKG	Kwiatkowski, Tom	www.wlkg.com
WLTQ	Clear Channel Communications	www.light97.net/main.html
WLUM	Milwaukee Radio Alliance LLC	www.newrock.com/home.asp
WLZR	Saga Communications Incorporated	www.wlzr.com
WMCS	Milwaukee Radio Alliance LLC	www.1290wmcs.com
WMIL	Clear Channel Communications	www.fm106.com/main.html
WMSE	Milwaukee School of Engineering	www.wmse.org/
WMWK	Family Stations Inc	www.familyradio.com/
WOKY	Clear Channel Communications	www.am920woky.com/jacor-common/pax.htm
WSHS	Wisconsin Public Radio	www.sheboygan.k12.wi.us/north/Media/wshs/wshs.htm
WSUW	University of Wisconsin System	www.wsuw.org/
WTKM	Kettle Moraine Broadcasting Company	http://webcenteramer.com/wtkm/index.html
WTKM	Kettle Moraine Broadcasting Company	http://webcenteramer.com/wtkm/index.html
WTMJ	Journal Communications*	www.620wtmj.com/
WUWM	University of Wisconsin System	www.uwm.edu/WUWM//
WXER	RBH Enterprises Incorporated	www.wxer.com/pthome.html
WYMS	Milwaukee Board of School Directors	www.wyms.org/
Daily Citizen	Madison Newspapers Inc.**	www.citizenol.com
Daily Jefferson County Union	Hoard's Dairyman**	www.dailyunion.com
Watertown Daily Times	Johnson Newspaper Corp.	www.wdtimes.com
Kenosha News	United Communications Corp.	www.kenoshacounty.com
Milwaukee Journal Sentinel	Journal Communications*	www.jsonline.com
Journal Times	Lee Enterprises Inc.	www.journaltimes.com
Sheboygan Press	Gannett Co. Inc.	www.wisinfo.com/sheboyganpress/index.shtml
Daily News	Conley Publishing Group	www.rhinelanderdailynews.com
Waukesha Freeman	Conley Publishing Group	www.gmtoday.com

Notes: * Owner information obtained from www.jc.com/companies/

    ** Owner information obtained by telephone

Table F9. Local Outlets Available to the Average Household in the
Milwaukee DMA

Daily Newspapers	1.2
Weekly Newspapers	3.2
Broadcast Television	14.0
Radio	35.2
Cable Television	2.0
Magazines	15.0
Internet	100.0
Total	**170.6**

Economic Study G:

Preemption by O&Os Compared to Affiliates

Bruce M. Owen, Michael G. Baumann, Allison Ivory

The four major broadcast television networks—ABC, CBS, Fox, and NBC—requested that Economists Incorporated ("EI") aggregate and summarize the individual networks' preemption data. Each network provided EI with information on its prime-time preemptions for calendar year 2001. The data were provided separately for network owned and operated ("O&O") stations and for non-owned affiliates. Additionally, the networks provided a breakdown of the preemptions by the type of programming that replaced the network program, e.g., sports, news, telethon, paid programming, etc.[1]

Taken together, the four networks' 57 O&O stations preempted an average of 6.8 hours per year per station in 2001. During the same period, the 651 non-owned affiliates preempted an average of 9.5 hours per year per station. A breakdown of preemptions by the category of programming that replaced the network program is presented in Table G1. To provide some perspective on the preemption data, preemption of prime-time programming is rare. As groups, both O&O stations and affiliates preempt less than one percent of prime-time programming. This suggests that whatever differences there are, if any, in the behavior of the two groups are of little policy consequence.

As shown in Table G1, on average, O&O stations preempt roughly the same amount of programming—0.8 hours per station—as affiliates for news, political and public affairs programming. Affiliates have a slightly higher average number of hours preempted for entertainment programs while O&Os have a slightly higher number of hours preempted for sports. Taking these two categories together, the average per station annual hours preempted for entertainment and sports programming is the same for O&O stations as for affiliates.

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[1] This breakdown was provided by ABC, CBS, and Fox. EI classified the replacement programming by category for NBC, in consultation with NBC personnel.

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The major differences between O&O stations and affiliates are the greater affiliate pre-emptions for the Billy Graham Crusade, other paid programming, and telethons.

Table G1. Average Annual Hours of Prime-Time Network Programming Preempted

per Station in 2001, by Type of Replacement Programming

(ABC, CBS, Fox, and NBC Networks Combined)

Station Type/Category of Preemption	Hours per Year
O&O Stations	
Billy Graham Crusade Preemptions	0.0
Content Preemptions	0.0
Entertainment Preemptions	0.3
News Preemptions	0.7
Political Preemptions	0.0
Public Affairs Preemptions	0.1
Religious Programming Preemptions	0.0
Sports Preemptions	5.4
Technical Failure Preemptions	0.0
Telethon Preemptions	0.3
Other Paid Program Preemptions	0.0
Total	**6.8**
Affiliate Stations	
Billy Graham Crusade Preemptions	1.2
Content Preemptions	0.0
Entertainment Preemptions	1.4
News Preemptions	0.5
Political Preemptions	0.0
Public Affairs Preemptions	0.3
Religious Programming Preemptions	0.1
Sports Preemptions	4.3
Technical Failure Preemptions	0.1
Telethon Preemptions	1.2
Other Paid Program Preemptions	0.3
Total	**9.5**

E C O N O M I S T S   I N C O R P O R A T E D

<div align="center">

Economic Study H:
News and Public Affairs Programming: Television Broadcast Network Owned and
Operated Stations Compared to Network Affiliated Stations

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Bruce M. Owen, Kent W Mikkelsen, Rika O. Mortimer and Michael G. Baumann[*]

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Executive Summary

In connection with the omnibus review of its current media ownership rules, the FCC in October 2002 released a staff study that examined the extent and quality of news and public affairs programming of broadcast television network owned-and-operated (O&O) stations and of affiliates of ABC, CBS, FOX and NBC. This study concluded that O&O stations carry more minutes of local news and public affairs programming than affiliates and receive more awards for news quality than affiliates.

More recently, the National Association of Broadcasters (NAB) and an allied group of network affiliates submitted in this proceeding a study (NAB/NASA study) challenging the FCC staff results. The NAB study criticizes the FCC staff study on various methodological grounds and reports its own independent analysis. The NAB/NASA study concludes that, if Fox O&O and affiliate stations are excluded, affiliates and O&O stations offer about the same number of minutes of local news and public affairs programming. The NAB study also finds that affiliates earn more awards for news quality than O&O stations.

In this paper, Economists Incorporated (EI) reports the results of its own independent investigation of these issues and assesses the methods used in the FCC staff and NAB/NASA studies. EI concludes that O&O stations carry more minutes of local news and public affairs programming and receive about the same number of awards for news quality as affiliates. EI also concludes that the NAB/NASA study has a serious methodological flaw, the exclusion of the Fox O&O and affiliate stations.

For reasons explained in the paper, EI believes that its own results are more reliable than the other two studies. Stepping back, however, the three studies (FCC staff, NAB/NASA and EI) taken together at face value provide strong support for the conclusion that O&O stations provide at least as much local news and public affairs programming as affiliated stations and earn about the same number of awards for news quality. Therefore, the evidence as a whole fails to provide any basis for a rule limiting network ownership of TV stations.

Introduction

FCC Study #7, "The Measurement of Local Television News and Public Affairs Programs," by Thomas C. Spavins, Loretta Denison, Scott Roberts and Jane Frenette, studied the news performance of network owned-and-operated (O&O) stations and affiliates of ABC, CBS, FOX and NBC. It concluded that O&O stations tend to carry more minutes of local news and public affairs programming and receive more awards for news quality than affiliates. The study found that ratings of early evening newscasts were about the same for the two groups of stations.

FCC Study #7 used a fairly simple methodology in reaching its conclusions, as its authors acknowledge. It basically made a comparison of average performance indicators for the two groups to see which group had a higher average. It did not attempt to control for factors other than network ownership that might affect news performance.[1]

Subsequently, the National Association of Broadcasters ("NAB") and the Network Affiliated Stations Alliance ("NASA") submitted a paper titled "'The Measurement of Local Television News and Public Affairs Programs': Analysis of Media Ownership Working Group Study" ("NAB/NASA paper"). This paper criticized FCC Study #7 on several grounds. First, it argued that market size (or DMA rank) has an important effect on television stations' news output, and the failure of FCC Study #7 to take market size into ac-

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[1] The study excludes O&O and affiliate stations in DMAs that did not have at least one O&O and at least one affiliate. This may control for factors related to smaller DMAs where O&Os do not occur. This restriction is retained in the EI study.

count makes its findings unreliable. Second, it argued that Fox O&O stations and Fox affiliated stations should not have been included in the study.[2]

The hypothesis that market size affects television stations' news output is plausible and worth considering. Regression analysis makes it possible to consider simultaneously the effects of multiple factors, including market size and whether or not the station is O&O. Both the NAB/NASA paper and the EI regression results presented below confirm that market size is a significant factor in explaining television stations' news output.

The argument that Fox O&O and affiliate stations should be removed from the analysis is far from convincing, however. The NAB/NASA paper states that "Fox stations (O&O and Affiliate) are clearly outliers with a remarkable variation in hours of news programs when compared with the other networks." Variability in the amount of news carried by Fox stations does not make these observations "outliers," and provides no reason to exclude them.[3] The NAB/NASA paper also argues that, since many Fox O&O stations were acquired in the past few years, the amount of news carried on the station may have attracted Fox to purchase the station, rather than that Fox ownership resulted in a greater amount of news carriage. In addition, the paper speculates that Fox affiliates are still in transition from independent stations to network affiliates, which may affect their news output.

The idea that Fox stations should be excluded from the study on the grounds that Fox O&O stations' decisions regarding news programming reflect, not Fox's policies, but the policies of previous owners, is absurd. First, it does not take long to replace local news programming with syndicated programming, if that were Fox's preference. No extended "transition" is required. Second, Fox's acquisition of stations with strong local news departments is evidence consistent with a preference on Fox's part that its O&O stations have strong local news programming, and this seems much more logical than the inference that Fox acquired such attractive stations in order to shut down one basis for their

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[2]   The NAB/NASA paper also questions the accuracy of some of the data used in FCC Study #7.

[3]   Residual-fitted and leverage-residual plots were examined for the news minutes regressions described below, and no evidence was found that Fox stations should be excluded from the sample.

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attractiveness. Indeed, Fox has increased news minutes since acquiring its O&O stations. EI understands that Fox internal analyses show that Fox O&Os carry over 50 percent more news minutes on average than they did before they were acquired by Fox.

The EI study described in detail below uses data separate from those used in FCC Study #7 and the NAB/NASA paper. The EI study looks at news performance of O&O and affiliate stations of ABC, CBS, FOX and NBC using multiple regression analysis. This approach makes it possible to control for other variables that could affect news performance. The regression analysis permits a clear statistical test of whether, holding other factors constant, network ownership of stations is associated with more or fewer minutes of news. These data were also used to investigate whether O&O stations are more likely to receive news awards.

The EI Study

Data

This study focused on the difference, if any, between stations owned and operated by ABC, CBS, FOX and NBC and non-owned affiliates of these networks. The stations in the sample included all O&Os and affiliates of these networks located in DMAs that had at least one O&O and at least one affiliate. For purposes of this study, a station partially affiliated with one of these networks and partially affiliated with a network outside this group was excluded from the sample. The sample comprised 132 stations in 33 DMAs.

The principal source used to measure the amount of local news and public affairs programming was data supplied by TV Guide. TV Guide includes in its database indicators for news, public affairs and current affairs programs, and another indicator that distinguishes local programs from national programs. EI obtained a list of all programs during the week May 4-10, 2002 indicated as news, public affairs or current affairs (both local and national) for all full-power broadcast television stations in the TV Guide database. A separate measure that covered local news programming only was also derived from the TV Guide data. In addition, ratings data from Nielsen Media Research include an indicator for local news programs. EI obtained a database providing the number of quarter

hours broadcast for all local news programs aired by stations that Nielsen rated in the May 2002 sweeps period.[4] From each of these sources, EI determined the total minutes of local news or local news and public/current affairs programming during the respective sample periods.

The Radio and Television News Directors Association (RTNDA) makes annual awards to recognize high quality news programming. The number of RTNDA awards received by a station (which can be zero) is an indicator of news programming quality. This measure was also used in FCC Study #7. Station news quality is measured by the number of awards earned by a station during 2001 and 2002, as reported on the RTNDA website, http://www.rtnda.org.[5]

BIA Financial Network ("BIA") maintains a database of information about broadcast television stations. BIA was used to identify all stations affiliated with ABC, CBS, FOX or NBC. Ownership information in the BIA data and trade press was used to identify those stations both affiliated with and owned by ABC, CBS, FOX and NBC.[6] Stations in DMAs not containing at least one affiliate and at least one O&O station were not included. BIA was also the source for many station- and DMA-level variables discussed below.

EI constructed several variables to indicate the usage of various non-television media within each DMA, as follows:

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[4]   These quarter hours were converted to minutes and divided by four to put them on a weekly basis to provide another measure of local news programming. Stations must reach a weekly cumulative household audience percentage above 2.5 (for local broadcast and local cable origination) or 19.5 (for out-of-market stations, including superstations) to be included in the Nielsen data. One affiliate station was not included in the Nielsen news measure because it was not rated.

[5]   FCC Study #7 uses as a measure of quality both the RTNDA awards and the number of A.I. DuPont Awards earned by a station 1991-2002. The NAB/NASA study relies solely on the DuPont awards. Very few A.I. DuPont awards are given each year, and awards made in the early years of the last decade may not be representative of current practices. EI did not use DuPont awards as a measure of news quality.

[6]   "The Top 25 TV Groups," *Broadcasting & Cable,* April 8, 2002, pp. 46-73. Fox, NBC and Viacom personnel also reviewed the list of O&O stations for their respective networks.

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Radio

Arbitron reports for each of its Metro Markets the percentage of the population age 12 and older (12+ population) that uses radio during an average quarter hour during the day (persons using radio or PUR). To construct a DMA-level measure, each Metro Market totally contained within a DMA was assigned to that DMA. In some cases, a DMA encompasses several Metro Markets. Metro Markets that extend across a DMA boundary were broken into their constituent counties, and the counties were assigned to the DMAs to which they belong. In these instances, it was assumed that the PUR of each constituent county was the same as the PUR for the Metro Market as a whole. Three counties that belonged to more than one Metro Market were not assigned to any DMA. A weighted average PUR was then calculated for each DMA from the Metro Areas and constituent Metro Market counties assigned to that DMA, weighted by the 12+ population. This procedure resulted in a PUR measure for 145 of the 210 DMAs.

Internet

The U.S. Census Bureau conducted a survey in 2001 that included information on Internet access and use. The survey responses of 56,634 households were available electronically.[7] After limiting the sample in several dimensions, approximately 56,300 observations were left.[8] Each of these observations represents a household in which the reference person was asked "Does anyone in this household connect to the Internet from home?" To construct a DMA-level measure of Internet usage, individual survey responses were assigned to DMAs in which they lived. For approximately 19,500 observations, an assignment was made based on the county in which the respondent lived. For the remaining observations, Census suppressed the county to preserve the confidentiality of survey respondents. About half of these remaining observations had information on the respondent's city of residence (Metropolitan Statistical Area or MSA). In most cases, these MSAs lay entirely or (in a few cases) mostly within a DMA, and all observations in the

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[7]   See http://www.bls.census.gov/cps/computer/computer.htm.

[8]   Household types classified as "group quarters with family" or "group quarters without family" are excluded from the analysis, "adult armed forces household members" are excluded, and only responses by the reference person (perrp=1, 2) are included.

MSA were assigned to a DMA on this basis. This process brought the number of observations assignable to DMAs to approximately 38,000. The remaining 18,000 observations were not used in this analysis. Of the 210 DMAs, 142 had some Census survey observations assigned to them. The percentage Internet usage in each DMA was calculated using the household weight variable (hwhhwgt): the sum of observation weights for all observations in the DMA reporting Internet use was divided by the sum of all observations in the DMA.

Newspapers

Editor & Publisher maintains a database of all daily newspapers published in the United States. The database included newspapers for which a county of publication was listed and the Monday-Friday circulation was listed. These newspapers were all assigned to DMAs based on their county of publication.[9] After the DMA assignment was made, the total Monday-Friday circulation of the daily newspapers in each DMA was summed from the newspapers in the DMA. When used in regression analyses, the total daily newspaper circulation in the DMA was expressed as a percentage of households in the DMA. Observations were available for 208 DMAs.

Cable

EI used data on individual cable systems maintained by Warren Publishing. These data showed the DMA, number of basic subscribers, channel capacity and number of channels not in use by 5,986 cable systems. The number of cable channels offered to subscribers was calculated as the difference between channel capacity and channels not in use. Within each DMA, the weighted average number of channels offered to subscribers was calculated, weighted by the number of subscribers. All DMAs had an observation for this variable.

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[9]   A few counties are split among multiple DMAs. Newspapers located in these counties were assigned to DMAs based on the location of their city of publication.

News Minutes

The most basic regression estimation procedure, ordinary least squares (OLS), assumes that the dependent variable is a continuous random variable. In these regressions, the number of minutes of local news and public affairs programming can be zero (as they are for some stations in the sample) or positive (as they are for most stations in the sample). A regression with a "censored dependent variable" (e.g., some dependent variables are zero) is usually estimated with a non-OLS method such as tobit.[10] Using the OLS procedure for the censored regression model produces biased and inconsistent parameter estimates.

Independent variables in the regressions are factors believed to affect the minutes of local news programming. These include station characteristics, DMA characteristics, and a dichotomous variable with a value of 1 for O&O stations, and 0 otherwise. Station characteristics included three dichotomous variables, for affiliation with ABC, CBS, and NBC, station revenue and the number of stations held nationwide by the same owner.[11] DMA characteristics included DMA rank, the number of full-power commercial stations,[12] total station revenue, average household income, the percentage of population age 50 or older, newspaper circulation per household, cable penetration rate, penetration rate for non-cable video delivery systems (e.g., DBS), the average number of channels available on cable, Internet penetration rate, and the percentage of population listening to radio. The complete list of variables used is reported in Table 1.

Table 2 shows the results of the regression using minutes of local news and public/current affairs from the TV Guide data. This regression uses the simple model presented in the NAB/NASA paper. The only explanatory variables, in addition to a constant term, are O&O status and DMA rank (1 for the largest DMA, 2 for the second-largest DMA, etc.) The O&O coefficient is positive and highly significant. Although the results using the

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[10] See *Limited-Dependent and Qualitative Variables in Econometrics* by G.S. Maddala (1983) for further discussion of the tobit model.

[11] The dummy variable for Fox was dropped in this regression because of collinearity.

[12] "MAIN" indicates a full-power commercial station.

Nielsen data and the TV Guide measure excluding public/current affairs are not reported here, they are similar to the findings in Table 2. In this simple model, O&O stations offer significantly more minutes of local news, public and current affairs programming than affiliate stations, even after adjusting for the effects of DMA rank. The coefficient on DMA rank was negative and highly significant, indicating that stations in larger DMAs tend to carry more news minutes, other things equal.

Table 3 presents the regression results using a richer set of explanatory variables, including O&O status and DMA rank. Once again, the O&O coefficient is positive and highly significant. The same result, not shown, was obtained using the Nielsen data and the TV Guide measure excluding public/current affairs to measure minutes of local news. Thus, both regression analyses show that O&O stations carry significantly more news minutes per station than do affiliate stations, holding other factors constant.

The magnitude of the difference between O&O stations' average news minutes and affiliate stations' average news minutes can be seen in the table below. Column (1) reports the average news minutes for the two station groups using the EI sample. On average, O&O stations carried 31 percent more news minutes than affiliate stations in the sample, a difference of 430 minutes per week or 7.2 hours per week.[13]

	EI Sample Average	Estimated Average, Controlling for Other Factors	
		Simple Model	Full Model
	(1)	(2)	(3)
Minutes/Week	1,802	1,781	1,864
O&Os	1,372	1,376	1,357
Affiliates	430	405	507
Difference			
Hours/Week			
O&Os	30.0	29.7	31.1
Affiliates	22.9	22.9	22.6
Difference	7.2	6.8	8.5
O&Os as Percentage of Affiliates	131%	129%	137%

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[13] For comparison, note that FCC Study #7 reported a 23 percent difference.

The NAB/NASA paper argued that such a comparison fails to account for factors other than network ownership that could affect news minutes. In the remaining columns, such factors are taken into account, using the regression results from Table 2 and Table 3. Column (2) shows the number of news minutes that would be estimated for O&O and affiliate stations if the other factor in the simple model (i.e., market rank) were held constant. If an O&O station and an affiliate station were each located in a DMA with the average rank in the sample, the O&O station would have an estimated 1,781 news minutes per week and the affiliate station an estimated 1,376 news minutes per week. The difference is 405 minutes per week (6.8 hours per week), with the O&O station carrying 29 percent more news minutes than the affiliate station. Column (3) also presents estimated news minutes for O&O and affiliate stations, but it uses the results of the full model. If an O&O station and an affiliate station each had the average value for all the explanatory variables other than ownership, the O&O station would carry an estimated 507 minutes per week (8.5 hours per week) per week more than the affiliate station, a difference of 37 percent.

News Awards

The NAB/NASA paper argued that the conclusions of FCC Study #7 with regard to news awards were similarly flawed by failure to account for market size. To control for market size, the NAB/NASA paper limited its analysis to the O&O and affiliate stations in the top 10 DMAs. Within those DMAs, it calculated the percentage of stations that were O&Os. This was compared to the percentage of awards received O&Os out of the total awards received by any station in this group. The same calculations and comparisons were done for affiliate stations in those 10 DMAs. The NAB/NASA paper focused on the DuPont awards, one of the two awards measures used in FCC Study #7. NAB/NASA found that in the top 10 DMAs, O&Os made up 70 percent of the stations but earned only 54 percent of the awards. The paper concludes that O&O stations are significantly less likely to win Dupont awards than are affiliates in the same markets.

EI performed a similar calculation with the other news award used in FCC Study #7, the RTNDA awards. As shown in the table below, O&O stations as of May 2002 made up 67 percent of O&O and affiliate stations in the top 10 DMAs and earned almost the same percentage, 66 percent, of the RTNDA awards received by stations in this group in the preceding two years. In the top 50 DMAs, the corresponding numbers for O&O stations were 28 percent of stations and 27 percent of awards. From these results, there is no discernible difference between O&Os and affiliates in the likelihood of winning RTNDA awards.[14]

	Top 10 DMAs		Top 50 DMAs	
	% of Stations	% of Awards	% of Stations	% of Awards
O&O	67.44	65.57	27.94	27.40
Affiliate	32.56	34.43	72.06	72.60

Conclusion

EI's principal findings are as follows:

1. O&O stations carry more minutes of local news and public affairs programming than affiliates, holding other factors constant. This result is statistically highly significant.

2. The number of news awards received by O&O stations is not significantly different from the number of news awards received by affiliates.

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[14]   Regression analyses of RTNDA news awards similarly showed no statistically significant difference between O&Os and affiliates, holding other factors constant.

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Table H1. Variable Definitions

TOTMIN_LPC_STA_TVG	Weekly total minutes of local news, public and current affairs programming offered by a station (TV Guide)
OANDO	1 if it is an O&O station; 0 otherwise (BIA)
RANK	DMA market rank (Nielsen)
ABC	A dummy variable for ABC affiliates (BIA)
NBC	A dummy variable for NBC affiliates (BIA)
CBS	A dummy variable for CBS affiliates (BIA)
NUM_STAS	The number of stations held by the same owner (BIA)
STAREV8	Station revenue
NUMRATED_M	The number of stations classified as "MAIN" stations (i.e., not cable, public, low power, Class A, translator or satellite) (BIA)
GROSS6	Total station revenue (BIA)
AVGHHINC	Average household income (BIA)
TOT50PLUS	The percentage of population age 50 and older (Nielsen)
PAPERCAPITA	Newspaper circulation per household (Editor & Publisher)
ADS	Penetration rate for non-cable video delivery system(BIA)
CABLE	Cable penetration rate (BIA)
CHANELSINUSE	The number of channels available in cable (Warren Publishing)
INTERNET	Internet penetration rate (US Census)
PCTLISTENING	The percentage of population listening to radio (Arbitron)

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Table H2. Dependent variable: totmin_lpc_sta_tvg (tobit), Simple Model

Tobit estimates

			Number of obs	=	132
			LR chi2(2)	=	31.53
			Prob > chi2	=	0.0000
Log likelihood = -1000.2368 | | | Pseudo R2 | = | 0.0155 |

totmin_lpc~g	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
oando	405.4635	99.34643	4.08	0.000	208.9185	602.0085
rank	-6.701585	1.695678	-3.95	0.000	-10.05628	-3.34689
_cons	1585.765	81.56363	19.44	0.000	1424.401	1747.128

_se	546.9244	34.27191	(Ancillary parameter)		

Obs. summary: 3   left-censored observations at t~lpc_~g<=0
                129   uncensored observations

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TableH 3. Dependent variable: totmin_lpc_sta_tvg (tobit), Full Model

Tobit estimates

Number of obs	=	129
LR chi2(2)	=	57.25
Prob > chi2	=	0.0000
Log likelihood = -967.02234	Pseudo R2	=	0.0288

totmin_lpc~g	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
oando	507.379	105.75	4.80	0.000	297.849	716.9091
rank	-4.78015	4.613436	-1.04	0.302	-13.92108	4.360782
abc	-7.789415	132.8033	-0.06	0.953	-270.922	255.3432
cbs	163.219	125.2898	1.30	0.195	-85.02678	411.4647
nbc	11.52199	125.7664	0.09	0.927	-237.668	260.712
num_stas	-8.478493	3.19308	-2.66	0.009	-14.80517	-2.151814
starev8	.0101272	.0023762	4.26	0.000	.005419	.0148353
numrated_m	12.21823	28.56693	0.43	0.670	-44.38348	68.81994
gross6	-.0013437	.0009904	-1.36	0.178	-.0033061	.0006188
avghhinc	.0008828	.0152894	0.06	0.954	-.0294112	.0311768
tot50plus	-6.680776	19.56807	-0.34	0.733	-45.4524	32.09084
papercapita	-.2202343	.2220813	-0.99	0.323	-.66026	.2197913
ads	4.545311	24.06356	0.19	0.851	-43.13355	52.22418
cable	1.0517	12.02467	0.09	0.930	-22.77364	24.87704
channelsin~e	5.909503	5.599047	1.06	0.293	-5.184289	17.0033
internet	-4.850556	8.440626	-0.57	0.567	-21.57457	11.87346
pctlistening	28.65329	77.62397	0.37	0.713	-125.1486	182.4552
_cons	1049.214	2631.27	0.40	0.691	-4164.311	6262.738
_se	480.7851	30.29916			(Ancillary parameter)	

Obs. summary: 2   left-censored observations at t~lpc_~g<=0
                 127   uncensored observations