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Quantity of Local News and Public Affairs Programming on Television Broadcast
Network Owned and Operated Stations Relative to Network Affiliate Stations**

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Summary

One issue in this proceeding is the effect of broadcast television station ownership on localism, and especially on the extent of local news programming. The National Association of Broadcasters (“NAB”) and the Network Affiliated Stations Alliance (“NASA”) have argued that affiliate stations provide more local news programming than network owned and operated (“O&O”) stations. However, the facts are consistent with this claim only if the facts are distorted. When all four major broadcast networks are considered, network O&Os offer substantially more local news than affiliates even after controlling for a long list of other factors. Accordingly, to make the facts fit their claims, NAB/NASA insist that any comparison should exclude the Fox stations.

Having failed previously to offer any plausible *reason* to exclude the Fox stations from the analysis, NAB/NASA now offer a new basis to exclude Fox—that Fox affiliates are more likely than Fox O&Os and the affiliates of the three other major networks to operate in the UHF frequency band. If frequency band is an important explanatory variable, the appropriate course is not to exclude the Fox stations but to insert a variable to control for frequency band. We do so, and demonstrate that, on average, the four networks’ *O&O stations offer about 30 percent more local news hours than do their affiliate stations*. This difference is both statistically significant and substantial.

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Background

NAB/NASA continue to press their case that it is appropriate to exclude the Fox stations when analyzing differences in the hours of local news programming on affiliate and O&O television stations.¹ NAB/NASA's latest argument for excluding the Fox stations from the analysis is that a smaller percentage of the Fox affiliates are VHF stations than is the case for ABC, CBS, and NBC.² The networks have asked Economists Incorporated ("EI") to assess this new argument. This paper presents the results of regression analyses that account for the possibility that the minutes of local news may vary between VHF and UHF stations. If UHF/VHF status affects the minutes of local news offered, instead of excluding the Fox stations from the analysis, it is more appropriate to include the station's UHF/VHF status in the analysis to capture the UHF/VHF effect for all networks.³ EI's study finds that using either NAB/NASA's data and model or EI's data and model, O&O stations across all four networks have substantially more minutes of local news programming than affiliates, and that this difference is statistically significant. Based on the results of the EI model, controlling for other factors, *including* UHF/VHF status, on average an O&O station carries 29 percent more local news than an affiliate station.

¹ See *Ex Parte* Letter to Chairman Michael Powell, filed by the Network Affiliated Stations Alliance, May 5, 2003, at 2 and *Ex Parte* Letter to Chairman Powell and Commissioners Abernathy, Martin, Copps, and Adelstein, filed by the National Association of Broadcasters and the Network Affiliated Stations Alliance, April 22, 2003, at 2.

² *Reply Comments of the National Association of Broadcasters and the Network Affiliated Stations Alliance*, February 3, 2003 ("NAB/NASA Reply Comments") at 52-55.

³ It is easy to understand why a UHF station might have different programming from a VHF station given the economic history of Commission licensing policies. It is not so easy to understand why there should be a difference once other factors, such as station revenues and market MVPD penetration rates, are taken into account. Rather than debate the point on a conceptual level, we simply permit the undistorted data to speak for themselves.

Analysis

NAB/NASA Study

In terms of the quantity of local news, NAB/NASA do not dispute that there is a significant difference between ABC, CBS, Fox, and NBC O&Os and their affiliates.⁴ NAB/NASA argue, however, that it is inappropriate to include the Fox stations in the analysis. As pointed out in EI's original comments, however, NAB/NASA's two initial arguments for why the Fox stations should be removed from the analysis are far from convincing.⁵

NAB/NASA's most recent argument for the exclusion of the Fox stations from the analysis is that, compared to the Fox O&Os and the affiliates of the three other major networks, Fox affiliates are disproportionately UHF stations.⁶ NAB/NASA argue that

⁴ See, "The Measurement of Local Television News and Public Affairs Programs": Analysis of Media Ownership Working Group Study," attached to *Early Submission of the National Association of Broadcasters and the Network Affiliated Stations Alliance*, December 9, 2002 ("NAB/NASA Early Submission") at fn. 6. "If you include these Fox stations, then the same regression analysis will show a statistically significant difference between the hours of local [news] programming shown by O&O stations."

⁵ EI's original study was attached as Appendix 1 to *Response of Fox, NBC/Telemundo, and Viacom to Early Submission of NAB and NASA*, December 19, 2002. The study also was attached as Economic Study H to *Comments of Fox Entertainment Group, Inc. and Fox Television Stations, Inc., National Broadcasting Company, Inc. and Telemundo Communications Group, Inc., and Viacom*, January 2, 2003. ("EI Study H")

NAB/NASA first argued that the Fox stations should be excluded because (1) the Fox stations have a remarkable variation in hours of news programming compared to the other networks and (2) many Fox O&O stations were acquired in the past few years and the amount of news carried on the station may have attracted Fox to purchase the station. These reasons are inadequate. First, variability by itself provides no reason to exclude the Fox stations. Indeed, an analysis of residuals performed as part of EI's regression analysis found no evidence that the Fox stations were outliers or that they should be excluded from the sample. 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. Indeed, Fox has *increased* news minutes since acquiring its O&O stations. Since it does not take long to replace local news programming with syndicated programming, the notion that news programming on Fox O&O stations reflects not Fox's policies but the policies of previous owners is absurd.

⁶ NAB/NASA Reply Comments at 52.

VHF stations air more local news, while UHF stations air less local news, regardless of who owns them.⁷ Even if it is true that UHF stations are likely to run less local news than VHF stations, the correct response is to include UHF/VHF status among the factors held constant in the regression, not to exclude the Fox stations from the analysis.

Indeed, NAB/NASA present the results of a ordinary least squares (OLS) linear regression analysis, holding constant the frequency band, but looking at the hours of local news aired *only* by Fox O&Os and Fox affiliates.⁸ The results of this NAB/NASA regression are summarized in Table 1.⁹

Table 1
Total Hours of Local News
Fox Stations Only (NAB/NASA data)

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Statistic</i>	<i>P-value</i>
Intercept	8.18	4.22	1.94	0.07
Market Rank	-0.03	0.09	-0.31	0.76
VHF Station	19.83	3.74	5.30	0.00
O&O	1.33	3.96	0.34	0.74

This regression implies that Fox O&Os air 1.33 more news hours per week than Fox affiliates, but that this difference is not statistically significant.

Interestingly, while NAB/NASA report the results of a regression that controls for differences in frequency band for the Fox O&O and affiliate stations, they do not report the results of a similar regression that would control for differences in frequency band for the O&O and affiliate stations of all four major networks together. Table 2 presents a

⁷ NAB/NASA Reply Comments at 53.

⁸ NAB/NASA Reply Comments at 54-55.

⁹ NAB/NASA Reply Comments, Table 11. Complete regression results are presented in Table A1 at the end of this paper.

summary of the regression results using the specification of Table 1 but including the NAB/NASA data for all four major networks.¹⁰

Table 2
Total Hours of Local News
ABC, CBS, Fox and NBC Stations (NAB/NASA data)

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Statistic</i>	<i>P-value</i>
Intercept	13.63	1.58	8.62	0.00
Market Rank	-0.04	0.03	-1.25	0.22
VHF Station	9.14	1.31	7.00	0.00
O&O	2.61	1.17	2.23	0.03

With the stations owned by or affiliated with the other three networks added, the VHF variable remains positive and statistically significant. However, the O&O variable is now both greater and statistically significant. This means that when the stations associated with all four of the major networks are considered together, on average, O&O stations carry about 2.6 more hours of local news per week than affiliates, even after accounting for the effects of market rank and frequency band on hours of news.

EI Study

The analysis of local news and public affairs programming on O&O and affiliate stations in EI Study H was based on a different data set than that used by the authors of FCC Study #7 and by NAB/NASA. EI Study H also considered a richer set of explanatory variables than either the FCC study or the NAB/NASA study. The measures of weekly

¹⁰ Complete regression results are presented in Table A2 at the end of this paper. The data used in the NAB/NASA Early Submission and the NAB/NASA Reply Comments, as well as in Tables 1 and 2, are based on the data used in FCC Study #7, “The Measurement of Local Television News and Public Affairs Programs,” by Spavins, Denison, Roberts, and Frenette. The NAB/NASA Early Submission asserts that FCC Study #7 data has mistakes. To correct for these mistakes in the FCC data, the WB station in San Francisco, the independent stations in Phoenix and Birmingham, and the four stations in Orlando were deleted from the FCC data, and the Fox station in Washington, DC was recoded as O&O. As in the NAB/NASA paper, the stations in Marquette are not included in any EI analysis. Following FCC Study #7 and NAB/NASA, only DMAs that have at least one O&O and at least one affiliate are included in any EI analysis.

minutes of local news, public and current affairs programming used in the analysis were provided by TV Guide for a week in May 2002. The set of explanatory variables includes not only market rank and whether a station was O&O or not, but also other market characteristics and the use of other media in the market.¹¹

Table 3 presents a summary of the regression results for the O&O and VHF variables using the EI data.¹² As shown in the table, both the VHF and O&O coefficients are positive and statistically significant. Contrary to NAB/NASA’s claims, controlling for any variation in the hours of local news programming that might be attributable to the frequency band (VHF or UHF) does not alter the conclusion that the effect of network station ownership on local news coverage is positive and significant.

Table 3
Total Minutes of Local News and Public Affairs
EI Data

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Statistic</i>	<i>P-value</i>
VHF Station	563.34	100.91	5.58	0.000
O&O	405.53	96.57	4.20	0.000

Dependent Variable: Local News and Public Affairs Minutes

Note that coefficient estimates for other variables included in the regression, such as market rank and the intercept, are not reported in this table but are included in the complete regression results (see Table A4).

Table 4 compares the results of the original EI Study H to those in this paper. Columns (1) – (3) were originally reported in EI Study H. Column (4) in the table presents revised results when VHF is added as an explanatory variable. Under this model specification, on average, an O&O station carries an estimated 6.8 hours per week (29 percent) more local news than an affiliate station. In summary, O&O stations carry substantially more local

¹¹ The complete list of variables is reproduced in Table A3 at the end of this paper.

¹² Complete regression results are reported in Table A4 at the end of this submission. The EI study uses a Tobit model to perform the regression analysis, but similar results are obtained using OLS, the NAB/NASA method.

news than affiliate stations, even after controlling for any variation of hours of news programming due to the station's frequency band, VHF or UHF.

Table 4

	EI data	Estimated average, controlling for other factors		
	Simple average	Simple model	Full model excluding VHF variable	Full model including VHF variable
	(1)	(2)	(3)	(4)
News Hours/week				
O&Os	30.0	29.7	31.1	30.0
Affiliates	22.9	22.9	22.6	23.2
Difference	7.2	6.8	8.5	6.8
O&Os as percentage of affiliates	131%	129%	137%	129%

Source: EI Study H and Table A4 below.

Table A1: NAB/NASA Data - Fox Stations Only

<i>Regression Statistics</i>						
Multiple R	0.805					
R Square	0.649					
Adjusted R Square	0.603					
Standard Error	7.982					
Observations	27					

ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	3	2705.726	901.909	14.156	0.0000	
Residual	23	1465.403	63.713			
Total	26	4171.130				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	8.18	4.22	1.94	0.0652	-0.56	16.91
Market Rank	-0.03	0.09	-0.31	0.7575	-0.21	0.16
VHF	19.83	3.74	5.30	0.0000	12.08	27.57
O&O	1.33	3.96	0.34	0.7406	-6.87	9.52

Table A2: NAB/NASA DATA - ABC, CBS, Fox, and NBC Stations

<i>Regression Statistics</i>						
Multiple R	0.628					
R Square	0.394					
Adjusted R Square	0.378					
Standard Error	5.980					
Observations	117					

ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	3	2629.605	876.535	24.508	0.0000	
Residual	113	4041.425	35.765			
Total	116	6671.030				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	13.63	1.58	8.62	0.0000	10.50	16.76
Market Rank	-0.04	0.03	-1.25	0.2151	-0.10	0.02
VHF	9.14	1.31	7.00	0.0000	6.55	11.73
O&O	2.61	1.17	2.23	0.0277	0.29	4.93

Table A3.
Factors Taken Into Account in EI Analysis
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 station is an O&O station; 0 otherwise (BIA)
VHF	1 if a station is a VHF 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 (BIA)
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)

Table A4. Dependent variable: totmin_lpc_sta_tvg (tobit)

Full Model Including VHF

Tobit estimates Number of obs = 129
LR chi2(18) = 85.23
Prob > chi2 = 0.0000
Log likelihood = -953.03554 Pseudo R2 = 0.0428

totmin_lpc~g	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
oando	405.5256	96.57219	4.20	0.000	214.1614	596.8898
vhf	563.3407	100.9132	5.58	0.000	363.3745	763.3069
rank	-3.127228	4.149461	-0.75	0.453	-11.34966	5.095207
abc	-96.00401	120.2696	-0.80	0.426	-334.3263	142.3183
cbs	46.413	114.3218	0.41	0.686	-180.1233	272.9492
nbc	-18.82755	112.9643	-0.17	0.868	-242.6739	205.0188
num_stas	-7.10171	2.876925	-2.47	0.015	-12.80253	-1.400891
starev8	.0045593	.0023532	1.94	0.055	-.0001038	.0092224
numrated_m	2.149912	25.69465	0.08	0.933	-48.76574	53.06557
gross6	-.0003612	.0009058	-0.40	0.691	-.002156	.0014336
avghhinc	-.0018207	.0137239	-0.13	0.895	-.0290156	.0253742
tot50plus	-15.17106	17.61886	-0.86	0.391	-50.08401	19.74189
papercapita	-.1975947	.1992643	-0.99	0.324	-.5924502	.1972608
ads	1.44124	21.60063	0.07	0.947	-41.36184	44.24432
cable	.5606064	10.79059	0.05	0.959	-20.82166	21.94287
channelsin~e	7.730375	5.034012	1.54	0.127	-2.244856	17.70561
internet	-10.84556	7.649269	-1.42	0.159	-26.0031	4.311975
pctlistening	7.154189	69.75112	0.10	0.918	-131.0623	145.3707
_cons	1733.033	2364.141	0.73	0.465	-2951.669	6417.736
_se	431.2947	27.16646	(Ancillary parameter)			

Obs. summary: 2 left-censored observations at totmin_lpc_sta_tvg<=0
127 uncensored observations