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ABSTRACT

This paper examines the supply and demand for early evening news and public affairs programing aired by major market commercial television stations. The sample consists of 493 thirty-minute programs aired by 99 stations between the hours of 5:30 and 8:00 P.M., E.S.T. A frequency analysis of programing indicated that stations owned by three commercial television networks and newspapers devote considerably more time to local news during the early evening hours than do stations controlled by group owners, that is, those firms which own more than one station. All multi-media owners devote significantly more time to local news than do stations controlled by single owners. A regression analysis of audience share accruing to various types of programs indicated that the demand for local news programs aired by multi-media owners was significantly greater than local news provided by single owner stations. It was also estimated that local news tended to be more profitable than is commonly believed. Average annual revenues generated by sixty-minute early evening newscasts accounted for approximately 75 percent of the total programing expenditures of the average commercial television station in the top 25 markets. (Author/RB)

THE INFLUENCE OF TELEVISION STATION OWNERSHIP
ON EARLY EVENING BROADCAST NEWS AND
PUBLIC AFFAIRS PROGRAMMING IN
THE TOP 25 TELEVISION MARKETS

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INTRODUCTION

The purpose of this paper is to analyze the influence of television station ownership on early evening news and public affairs programming in the 25 largest television markets. It begins with a brief discussion concerning station ownership in these markets and some of the issues raised by highly concentrated control of the television medium. The second section deals with procedures used in carrying out the analysis, followed by a discussion of the results. The findings indicate that early evening local newscasts produced by media conglomerates tend to generate larger audiences and more income than news programs aired by stations owned by firms or individuals who do not have financial interests in other media. However, ownership does not seem to influence public affairs programming. Finally, the results indicate that positive correlations between the popularity of local and national news programs do exist. However, the popularity of newscasts does not appear to consistently influence viewing of entertainment programs which precede and follow broadcast news programs.

I. The Problem

Ownership of television stations in the 25 largest television markets is characterized by a high degree of concentration. In 1973, 127 commercial stations were operating in these markets.* Of those stations, 42.5 percent are owned by firms which control at least one other television station located in another market. Approximately 27.6 percent are owned by interests which also publish daily newspapers. Eleven of the 25 markets support a television station and a daily newspaper which are jointly owned. An additional 11.8 percent of the stations are owned and operated by the three commercial television networks, while only

*Data on television station ownership were obtained from the 1973 edition of Broadcasting Yearbook (Broadcasting Publications: Washington, D. C., 1973).

18.1 percent are controlled by individuals or corporations who have no financial interests in other television or print media.

The degree of concentration becomes even more apparent when network affiliation and channel frequency are taken into account.

TABLE 1

TELEVISION STATION OWNERSHIP AND AFFILIATION IN THE TOP 25 TELEVISION MARKETS

VHF Stations in the Top 25 Markets (91 Stations)

	Network Affiliation				
Ownership	ABC	CBS	NBC	Independent	Total
Group	13	9	7	9	38
Newspaper	7	9	11	5	32
Single	0	2	1	3	6
Network O & O	5	5	5	0	15
Total	25	25	24	17	91

UHF Stations in the Top 25 Markets (36 Stations)

	Network Affiliation				
Ownership	ABC	CBS	NBC	Independent	Total
Group	0	0	1	15	16
Newspaper	0	0	0	3	3
Single	0	0	0	17	17
Network O & O	0	0	0	0	0
Total	0	0	1	35	36

Ownership of VHF stations is also more concentrated in the hands of multimedia owners than is the ownership of UHF stations. Of the 91 VHF stations, 41.8 percent are owned by group owners, i.e., those firms which own more than one television station; 35.1 percent by newspaper interests and 16.5 percent by the networks. Only 6.6 percent are controlled by single owners. On the other hand, 47.3 of all the UHF stations located in the top 25 markets are controlled by single owners. An additional 44.1 percent of all UHF stations are in the hands of group owners, while newspaper interests control the remaining 8.4 percent.[1]

Undoubtedly, the high degree of concentrated ownership in this portion of the television industry is largely due to the profitability of stations, particularly the VHF stations. Just over 52 percent of all 64,800,000 television homes in this country are located in the top 25 markets. Of the $927,797,488 in gross revenue earned by all commercial television stations in 1971, over 56 percent was generated by those stations located in the 25 largest markets. In terms of total income (total revenue minus total expenses), stations in the top 25 markets also fared far better than stations located in markets below the top 25. Just under 73 percent of the $335,499,369 in total income earned by all commercial stations in 1971 accrued to those stations in the top 25 markets. Average income of these stations was $1,833,953 in 1971 compared with an average income of $212,141 for all stations located in markets below the top 25.[2]

VHF stations also tend to be much more profitable than UHF stations. Unfortunately, data on the precise differences in profitability among VHF and UHF stations in the top 25 markets are not available. However, financial data published in the 38th Annual Report of the Federal Communications Commission do provide some rough estimates. In 1971, average income for all 491 commercial VHF stations was $562,079, while the average UHF station lost $279,670. Since there is no reason to believe that such disparities are not prevalent in the top 25 markets, then average income for VHF stations located there probably ranges between $3 and $5 million annually.[3] Among the most profitable stations in the country are the 15 owned and operated (O & O) by the three major television networks. All are VHF's located in the top 13 markets and average income for each network O & O in 1971 was $6,080,000.[4]

Given the magnitude of annual income accruing to VHF television stations located in the top 25 markets, it is understandable why they are so valuable.

As a rule of thumb, the sales price of a television station can be estimated by multiplying its annual profits by a factor of 10. If a station earns $3 million a year in net income then it would cost approximately $30 million to purchase. Obviously, few individuals are in a position to raise such large amounts of capital. However, corporations which own other profitable media can raise the required capital with much less difficulty. Furthermore, multimedia owners also enjoy certain managerial advantages which others do not. They are in a position to draw upon a wealth of managerial experience and talent required to maintain profits at a level which will justify paying such large sums of money for newly acquired stations.

Nevertheless, many critics of the television industry's structure believe that concentrated ownership is a menace to the free flow of ideas. Former FCC Commissioner Nicholas Johnson has noted that "economic self-interest does influence content of the media, and as the media tend to fall into the control of corporate conglomerates, the areas of information and opinion affecting those economic interests become dangerously wide-ranging."[5] Broadcast news critic Harry Skornia adds:

> Such combines (multimedia conglomerates) represent tremendous control over what the people of the nation shall be allowed to know as news. Certainly little news which would reflect discredit on the practices of the stations, their owners, and their sponsors and friends is likely to pour forth from such stations. This immunity protects from criticism and public examination many of the practices of the most powerful social and economic mechanisms in the nation.[6]

Multimedia owners tend to dismiss the possibilities of "thought control." Broadcasters commonly point out that the Fairness Doctrine and the Equal Time provisions in the Communications Act provide safeguards against biased reporting. They also note that a strong degree of competition exists between various media in most markets. As a result the ability of any particular broadcaster or publisher to control the flow of information is, in fact, very limited.[7]

Joint owners of television and newspaper properties have argued that cross-ownership is an asset to broadcast journalism. As one joint owner recently suggested:

> ...stations affiliated with newspapers generally do a better job for their communities than stations owned by other kinds of business interests....(A) station's contribution to the diversity of ideas and information depends 'on the importance it attaches to its information and editorial functions and on the encouragement it gives to the station's personnel independently to pursue facts and opinions wherever they may lead.'[8]

It is not the author's intention to prove or disprove any or all of these propositions. This paper will simply analyze the influence of television station ownership on early evening informational programming. The section which follows provides an explanation of procedures employed in the study.

II. Procedures: The Sample, Data, Method and Model.

A. The Sample Selection.

The sample consists of news and entertainment programming aired by 99 commercial television stations located in 20 of the top 25 markets. The decision to limit the study to these markets was based on three factors. First, television station ownership is relatively more concentrated in these markets than it is in the remaining 174 television markets. As noted above, only 18 percent of all stations in the top 25 markets are owned by firms or individuals who have no other media interests. Just under 50 percent of all commercial stations operating in this country are controlled by single owners.[9] Secondly, television stations in the top 25 markets tend to have much higher incomes than other stations located in markets below the top 25. Again this is due to the fact that the 127 commercial television stations in the top 25 markets--representing approximately 20 percent of all the commercial stations--serve over 50 percent of all television homes in the U.S. Thirdly, the largest 25 television markets are able to support an average of 5 stations per market while all markets below the top 25 support an average of 2 stations per market.[10] Therefore, competition among stations serving the largest markets should be more intense.

It was felt that each of these factors may influence news and public affairs programming. Because stations in the top 25 markets earn larger profits, they should be better able to finance large news departments. Furthermore, if concentrated station ownership and the degree of competition influence news and public affairs programming, it should be most acute in this segment of the industry.

The sample was further limited to early evening programming aired between 5:30 and 8:00 p.m. E.S.T. (4:30 and 7:00 p.m. C.S.T.) during weekdays only. This particular period was selected on the basis of its importance to the individual stations. It is commonly believed that the popularity of early evening news programs plays a major role in determining the overall popularity of individual stations. More specifically, the audience share maintained by a station's early evening newscast is thought to have an appreciable effect on the station's audience share during prime time, i.e., 7:00 - 11:00 p.m.

On an average weekday, the percentage of total homes in this country that have a television set on will increase from approximately 30 percent at 5:30 p.m. to nearly 60 percent at 8:00 p.m.[11] If viewers do have a tendency to stay with their favorite local news station, then a popular newscast may enable a station to pick up and hold a relatively larger share of the audience as the program schedule moves into prime time.

Limiting the study to weekday early evening programming was done in order to increase the reliability of the estimates. Weekend early evening programming tends to be much different and less consistent than programming aired during weekdays. Also many stations do not program as much local news on the weekend as they do on weekdays. On the other hand, there tends to be more public affairs programming on Sunday evening when audiences are relatively small. Additionally, ARB audience estimates used in this study are reported on the basis of weekly averages. Since stations usually air the same program at the same time, ARB lists separate averages for weekday and weekend audiences.

As noted above, ninety-nine commercial (non-Spanish) stations located in 20 of the top 25 markets are included in the sample.* Particular stations were selected on the basis of affiliation, ownership, and channel frequency. Fifty-seven network affiliated stations and forty-two independent stations are included in the sample. This is approximately the same proportion of each type operating in the top 25 markets. An effort was also made to select stations controlled by different types of owners which would be representative of the actual ownership structure of the television industry in the top 25 markets. Ownership of stations in the sample breakdown is as follows: group owners (44%); newspapers (26%); single owners (17%); and networks (13%). These percentages are also similar to actual figures in the top 25 markets as reflected in Table 2. Finally, 28 percent of the stations in the sample broadcast on a UHF channel, while 25 percent of all stations in the top 25 markets do so.

B. The Data

All but two of the ninety-nine stations in the sample are represented by 5 thirty-minute program segments, i.e., one segment for each 30-minute period between 5:30 and 8:00 p.m. Two stations are represented by four segments only. (Both were VHF's and were programming entertainment at the time.) In all, 493 program segments are defined. Each case includes data on the following variables:

*Markets included in the sample are: New York (1), Los Angeles (2), Chicago (3), Philadelphia (4), Boston (5), Detroit (7), Cleveland (8), Washington, D.C. (9), Pittsburgh (10), Dallas-Fort Worth (11), Minneapolis-St. Paul (13), Houston (14), Seattle (15), Atlanta (16), Indianapolis (17), Miami (18), Baltimore (19), Tampa-St. Petersburg (20), Hartford (21), Cincinnati (23).

type of station ownership; network affiliation; channel frequency; program type and time; audience share; total men and women viewing; total men and women between ages 18 and 49 viewing; total teenagers and children viewing; 30 second advertising spot costs; the cost per thousand viewers; and the number of competing independent stations. All demographic variables are defined in terms of thousands of viewers.

Data concerning station ownership, affiliation status, and channel frequency were obtained from the 1973 edition of Broadcasting Yearbook. Advertising spot costs were obtained from the September 1973 edition of Standard Rate and Data Service: Spot Television. All other data were collected from American Research Bureau's Television Audience Estimates: February 7 through March 6, 1973.

C. The Research Method: Regression Analysis and Correlation Analysis

As noted above, the primary purpose of this study is to determine what, if any, relationships exist between television station ownership and the demand and supply of broadcast news and public affairs programming. Multiple regression analysis is one appropriate statistical technique which can be used to specify the nature and scope of such relationships. Multiple regression allows one to estimate causal relationships between a set of independent variables and a single dependent or criterion variable.

Regression analysis has been used in other studies which attempted to define causal relationships between various factors which are thought to influence the demand and supply of television programming. Noll, Peck and McGowan found that the fraction of the total audience watching a particular station at any given time is highly dependent on network affiliation, channel frequency (e.g., VHF or UHF) and the number of competing stations in the market.[12]

Peterman also employed regression analysis in a study dealing with the effect of station ownership on the cost of advertising time to national advertisers. His results indicate that ownership in and of itself is not a significant factor in determining the price of a television advertising spot. His results also show that the price of television time is highly dependent on the size of the audience.[13]

Park has published a study using regression analysis to estimate the impact of cable television subscription on audience shares of UHF television stations. His results indicate that cable television systems appreciably increase the audience for UHF television. The reason being that cable systems place UHF signals on VHF channels, thereby eliminating differences in reception quality and tuning which exist when both types of stations are received over home television antennas.[14]

The Regression Model: Ownership, Affiliation, Competition, and Audience Share.

The Dependent Variable: Audience Share.

As noted above, audience share is the ratio of the total number of homes watching a particular program to the total number of homes watching all programs at a given time. Audience share was selected as the dependent variable on the basis that it is a good measure of a program's value, not only to the viewer but to the broadcaster and advertiser as well.

There are actually two distinct markets associated with television programming: one involves the viewers who demand, pay for (albeit indirectly) and consume various programs supplied by television stations; the other involves the advertisers who demand, pay for and consume television viewers supplied by the stations' programming. Therefore, in one respect, audience share measures the relative demand for programming while in another sense it represents a commodity supplied to advertisers. As such, the variable is well equipped to measure the value of a program.

The Independent Variables: Station Ownership, Network Affiliation, Reception Quality and the Degree of Competition.

It can be assumed that audience share will be a function of three factors: program value; reception quality; and the degree of competition from other stations. Program value is, of course, subject to a number of factors. Two possible determinants of a program's value will be hypothesized and examined in this study. First, it will be assumed that the value or popularity of locally produced programming (e.g., local news and public affairs) is a function of station ownership. More specifically, a program's value will differ depending on what type of owner controls the station. Four types of ownership are defined: (1) stations controlled by single owners, i.e., those who do not have financial interests in other media; (2) group owners who control one or more television stations located in different markets; (3) stations controlled by newspaper publishers; and (4) stations owned and operated by the three commercial television networks.

Similarly, it can be assumed the value of programming which is not produced locally will depend on network affiliation. Since independent stations tend to rely heavily on network reruns and old movies, the demand for programming aired by independent stations can be assumed to be lower than first run fare carried by stations affiliated with one of the three commercial television networks.

Reception quality will vary depending on the strength of the signal and the station's broadcast frequency, e.g., UHF or VHF. Since VHF stations located in each market have similar broadcast contours and signal strengths, reception quality should not be appreciably different between stations. The same situation applies to UHF stations. However, reception quality of VHF can be assumed to be significantly better than that of UHF stations. UHF signals tend to attenuate more rapidly than VHF signals as distance between the station's tower and the viewer's home increases. UHF stations are also more difficult to tune in than are VHF stations. Finally, approximately 10 percent of all televisions in this country are not equipped with UHF tuners. As a result, audience shares maintained by UHF stations should be relatively lower than shares maintained by VHF stations.

The degree of competition should also influence audience shares. As the number of stations increases so does program choice. Hence, the total audience will be more fragmented and audience share should decline. As noted above, each of the top 25 markets have three network affiliated stations. Therefore, variance in the number of stations between markets will only entail independent stations. It can be assumed that as the number of independent stations increases, the total share of the audience viewing those stations will, on the average, increase at a decreasing rate. This assumption is also based on the fact that most of the programming aired by independent stations consists of network reruns and old movies. Again, since television viewers have seen many of these programs before, the demand for second or third run shows should be less than the demand for first run network programming. For example, suppose a market is served by three network affiliates and one independent station. Now assume that a second independent station commences operations in that market. Undoubtedly, some of the viewers who normally watch one of the network stations would now prefer to watch the new independent's programming. As a result the combined audience shares maintained by both independent stations would increase. However, it is unlikely that the combined shares would be twice as large as the audience share enjoyed by the established independent station before the new station began broadcasting. Therefore, audience share accruing to all independent stations should increase as the number of independents increases but the <u>rate of increase</u> in audience share should at the same time decline.

In addition to the regression analysis described above, a correlation analysis of audience shares accruing to local and national newscasts, and programs leading into and out of newscasts was also done. The correlation analysis reported in this study employs Pearson product-moment coefficients. This statistic essentially describes the strength of association between two variables. The results of the correlation analysis will be used to analyze relationships between the popularity of early evening news and entertainment programming.

III. The Results

Before analyzing the least squares estimates of audience shares, let us consider audience demographics and advertising costs associated with the various types of programs. The following table provides a basis for comparing the relative popularity and advertising values of local and national news, public affairs and entertainment programs aired in the early evening by stations in the top 25 television markets. All figures are averages for each type of program. For example, local news programs in these markets maintained an average audience share of 22.5 percent compared with an average share of 21.4 percent for all national news programs. Also the average local early evening newscast was viewed by 398 thousand persons and a 30-second advertising spot during that program cost $515. Similarly an average national news program aired in the top 25 markets was watched by 337 thousand persons. Network affiliated stations, all of which carry national network news, charged an average of $753 for 30 seconds of commercial time aired during the program segment.

TABLE 2

AUDIENCE DEMOGRAPHICS AND ADVERTISING COSTS
FOR EARLY EVENING TELEVISION PROGRAMS
AIRED IN THE TOP 25 TELEVISION MARKETS

Audience Demographics	Program Type: Local News	National News	Public Affairs	Entertainment
Audience Share	22.5%	21.4%	10.0%	15.5%
Total Persons (thousands)	398	337	137	306
Total Men (thousands)	160	119	55	80
Men, 18-49 yrs. (thousands)	57	52	14	41
Total Women (thousands)	196	145	66	103
Women, 18-49 yrs. (thousands)	72	59	19	53
Housewives (thousands)	157	133	47	78
Teenagers (thousands)	18	11	5	38
Children (thousands)	15	10	10	73
Advertising Costs				
Spot Costs (30 sec.)	$515	$753	$321	$417
CPM*	$1.62	$2.10	$1.84	$2.10
No. of Cases	102	57	3	321

*CPM is cost per thousand viewers reached. It is found by simply dividing the spot cost by the total number of persons watching.

The figures in Table 2 indicate that local broadcast news is very popular among the adult audiences. Note that the average audience share for local early evening news is higher than any of the other program types, including national news. Furthermore, the average number of total men and women watching local newscasts far exceeds the average number of men and women watching other types of programming.

Local news also appears to be a very good buy from the advertiser's point of view. Women and men between the ages of 18 and 49 and housewives seem to have a stronger preference for local news than other program types aired during the early evening hours. They also represent three groups which purchase a large percentage of the products advertised on television. Also note that the cost per thousand viewers during local news programs is $1.62 compared with an average CPM of $2.10 for advertising time during national news and entertainment programs. The differences in the cost per thousand viewers are very important to the advertiser. As noted above, advertisers are interested in reaching as many people as possible, particularly adults between 18 and 49 years, with a given amount of money. Therefore, demand for advertising time should increase as the cost per thousand viewers declines.

Given the relatively low CPM and the advantageous demographics associated with local news audiences, broadcasters should have little difficulty in selling advertising time during local early evening news programs. Most television stations limit the amount of commercial time sold during a 30-minute program segment to six minutes, or 12 thirty-second spots. In Table 2 the average price for a thirty-second spot during early evening news programs is $515.

Assuming that a station sells 12 spots at $515 each, then advertising revenue generated by a thirty-minute local newscast will amount to $6,180. If the station is able to consistently sell all advertising time available during local news programs throughout the year, then annual revenue accruing from early evening news (during weekdays only) will amount to $1.60 million if the newscast is 30 minutes long and $3.20 million if it is 60 minutes in length.

It should be noted that total revenue derived from local news programs is subject to a great deal of variation within and between markets. Additionally, the spot costs used in this study do not include discounts given to advertisers who purchase large amounts of time. On the other hand, revenue from local news programs aired during the weekend is not included in the figures. Therefore, the average amount of advertising revenue generated by early evening local news programs may be slightly above or below the estimates listed above.

Even though the estimates of average revenue associated with local early evening news programs may be rough, they still indicate that local news programs can be very profitable. In 1973 the average annual program budget for all commercial stations in the top 25 markets was $2.70 million.[15] On the very liberal assumption that a station's news division spends 75 percent of the total budget, then total annual cost of all news programs, including public affairs, will average out to slightly over $2 million a year or $5,500 a day. Even if expenses are this high the fact remains that advertising revenue from the early evening local newscast alone should just about cover the station's total news budget. If so, then revenue derived from local news programs aired at other times during the day will be equivalent to net income.

One would then expect stations in the top 25 markets to devote a sizeable proportion of the early evening air time to local news. The figures in Table 3 below indicate percentages of the early evening hours devoted to the different types of programs aired by stations which in turn are controlled by various types of owners. Table 3 also lists comparative audience shares generated by different types of programs.

TABLE 3

PROGRAM TYPES AND AUDIENCE SHARES
OF EARLY EVENING TELEVISION PROGRAMMING AIRED
BY STATIONS IN THE TOP 25 TELEVISION MARKETS

Percentage of early evening programming devoted to:			Station Ownership		
	Group	Newspaper	Single	Network O&O	Total Average
1. Local news	16.9	24.7	5.2	40.0	20.9
2. National news	10.5	15.8	5.2	20.0	12.0
3. Public affairs	----	9.6	3.4	----	.6
Total news and public affairs	27.4	50.1	13.8	60.0	34.2
4. Entertainment	72.6	49.9	86.2	40.0	65.8
Total	100.0	100.0	100.0	100.0	100.0
Average share of audience					
1. Local news	24.9	21.9	7.33	20.9	22.5
2. National news	13.4	25.1	10.0	17.7	21.4
3. Public affairs	----	20.0	9.6	----	16.0
4. Entertainment	14.9	22.3	6.8	19.3	15.5
- Lead-in	15.1	22.0	9.0	19.1	16.7
- Prime time access	14.8	23.9	5.7	20.6	12.6

The figures listed at the top of Table 3 indicate that the network owned and operated stations devote 40 percent of the early evening hours to local news. All of the network owned stations program 60-minute early evening local newscasts during the week. Stations owned by newspapers and groups devote 24.7 and 16.9 percent of their early evening air time to local news. Single owner stations devote only 5.2 percent of the early evening hours to local news. Additionally, thirty-six percent of the newspaper owned stations program 60 minute local newscasts, while only 20 percent of the group owned stations do so. Early evening news programs produced by single owner stations are all thirty minutes in length.

In terms of audience shares, local news aired by group owned stations appears to be slightly more popular than news provided by newspaper and network owned stations. The figures in Table 3 also indicate that all types of programs, including local news, produced by stations controlled by all three types of multimedia owners are substantially more popular than programming provided by stations controlled by single owners.

Finally, figures in Table 3 also point to a scarcity of public affairs programs. Only three stations, two owned by newspapers and one by a single owner, broadcast a regularly scheduled public affairs program during the early evening hours on weekdays. Only one of these programs was used to fill the prime time access slot. The reason for the scarcity of public affairs programming is largely due to two factors. First, public affairs programs are expensive to produce; much more so than the cost of purchasing syndicated television fare. Secondly, average audience shares in Table 3 suggest that public affairs programming is slightly less popular than entertainment programming. Assuming that most broadcasters are interested in maximizing profits it is not difficult to understand why less than 4 percent of all (weekday) early evening programming in the top 25 markets is devoted to public affairs.

Local News.

It is now left to determine the extent to which those factors defined in the model above determine the size of audience shares. The following table lists the results of least squares estimate of audience share for local news programs.

TABLE 4

Regression Results: Influence of Television Station Ownership on Audience Shares of Early Evening Local Newscasts

Dependent Variable: Audience Share
102 observations
$R^2 = .17 \quad p < .01$

Coefficient of Independent Variable	Description	Level of Significance
12.98	Intercept single owner stations	.017
-.064	Log number of competing stations	.539
-.256	UHF*	.011
.698	Group stations*	.017
.619	Newspaper stations*	.036
.469	Network stations*	.077

*Dummy variables

The reader should take care in interpreting the results in Table 4. Since the regression program automatically calculates an intercept term, one dummy variable must be dropped out of each set denoting station ownership. The intercept calculated in each equation will then represent the expected value of the dependent variable (audience share) for the excluded variable. For example, in Table 4 the dummy variable denoting single ownership was excluded. As a result the intercept (12.980) is the expected audience share for local news programs produced by single owner VHF stations.[16]

The coefficients for the variables included in the equation represent the percentage difference between those variables and the intercept term. Again, the expected audience share for single owner station in Table 4 is 12.980. The coefficient for group owned stations is .698. The latter figure indicates that the expected audience share generated by local news programs aired by group owned stations is 69.8 percent greater than the expected audience share accruing to local newscasts produced by single owner stations.

This approach only applies to dummy (discrete) variables since all coefficients associated with those variables actually denote differences with respect to the intercept term. The variable representing the number of competing independent stations is a continuous variable, i.e., it can be 0, 1 or greater than 1. Therefore, it cannot be interpreted as a difference in intercept. The coefficient for this variable in Table 4 is -.064 and is not significantly different from zero. If it were significant, then audience share could be expected to decline by 6.4 percent for every 100 percent increase in the number of competing independent stations, e.g., if that number were increased from say 2 to 4.

It should also be pointed out that the tests of significance for each of the dummy variable coefficients indicate whether or not a particular coefficient is significantly different from the intercept term. On the other hand, significance tests for continuous variables indicate whether coefficients for those variables are significantly different from zero.

The results in Table 4 suggest that local news programs aired by group, newspaper and network owned stations are all substantially more popular than local newscasts produced by single owner stations. As noted above, the expected audience share of newscasts aired by group owned stations is 69.8 percent greater than the expected audience share accruing to local news programs aired by single owner stations. Stations owned by newspapers are in a similar position. The expected audience share generated by their early evening local newscasts is 61.9 percent greater than the expected audience share accruing to single owner stations. The expected audience share for local news provided by network owned stations is 46.9 percent greater, albeit the coefficient for this variable is not significant at the .05 level of significance.

The figures in Table 4 also suggest that the relative demand for local news aired by group and newspaper owned stations appears to be stronger than the demand for local news provided by the network owned and operated stations. This is somewhat surprising since the network owned stations should attract a plethora of talented broadcast journalists looking for avenues into the networks' prestigious national news operations.

These differences can partially be explained by the stronger degree of competition in the top 13 markets where all 15 network owned stations are located. However, given that the coefficient of the variable denoting the number of competing stations is small and nonsignificant, it can be concluded that newscasts provided by group and newspaper owned stations are relatively more popular than local newscasts aired by network owned stations.

As expected, the coefficient denoting UHF stations is relatively large and negative, indicating that the expected audience share for newscasts aired by UHF stations will on the average be 25 percent smaller than local news programs aired over VHF channels. Finally, it should be noted that while the least squares estimate of audience share is significant at the .01 level of significance, the independent variables in the equation account for only 17 percent of the total variance of the audience share for local early evening news programs.

Undoubtedly, the low R^2 in this equation is due to the fact that a number of other factors not included in the equation influence the popularity of a local newscast. Personalities, program format and other qualitative factors obviously play a major role in determining audience share. Nevertheless, with the exception of the variable denoting the number of competing stations, all other independent variables are significant indicating that ownership in and of itself does influence the popularity of local news programming.

National News.

A least squares estimate for audience share of national evening news programs was also obtained. This was done in order to ascertain whether the popularity of the three network news programs is significantly different.

TABLE 5

Regression Results: The Influence of Network Affiliation on the Audience Share for National News Programs

Dependent Variable: Audience Share
57 observations
$R^2 = .336$ p .001

Coefficient for Independent Variable	Description	Level of Significance
28.34	Intercept (CBS)*	.001
-.424	ABC Affiliates*	.001
-.222	NBC Affiliates*	.075
-.451	UHF*	.001
-.188	Log number of competing stations	.09

*Dummy variables

Figures in Table 5 indicate that the CBS evening news program is substantially more popular than the ABC or NBC evening news programs. The expected audience share for CBS news is 28.34 which is 42.4 percent larger than expected audience share accruing to the ABC newscast and 22.2 percent larger than expected audience share generated by the NBC evening news program. As in Table 4, the coefficient denoting UHF is negative and significant, indicating that national news carried by UHF network affiliates will on the average be 45.1 percent smaller than the same program aired by a VHF affiliate.

The reader should also note that the coefficient for the number of competing independent stations in Table 5 is larger than the same coefficient in Table 4. This suggests that local newscasts are more able to draw audiences away from competing entertainment programming aired by independent stations than are the national news programs. This in turn substantiates the proposition that television viewers in the top 25 markets seem to have stronger preferences for local news than they do for national news.

Lead-in and Lead-out Programming.

It is now left to determine whether the popularity of local and national newscasts influence audience shares of programs which precede and follow them. Table 6 below contains the results of a correlation analysis done on local and national news and programs which lead into and lead out of newscasts. Each matrix lists correlation coefficients between audience shares of programs produced by stations operated by the various types of owners and affiliated with each of the three networks. Lead-in programs are those which immediately precede local newscasts. Similarly lead-out programs are those which immediately follow national newscasts. No results appear for single owner stations. This was due to the fact that only two single owner stations in the sample are affiliated with one of the three networks. An effort was also made to obtain correlations between audience shares for local newscasts and shares accruing to lead-in and lead-out programs aired by independent stations. The number of program segments meeting this criterion was not sufficient to warrant correlation.

TABLE 6

Correlation Results: The Relationships Between Audience Shares of Local News, National News, Lead-in and Lead-out Programming

Stations Owned by Groups

Affiliated with ABC n = 7

	Local News	National News	Lead-out
Lead-in	.550	.587	.619
Local News		.925*	.484
National News			.707

Affiliated with CBS n = 8

	Local News	National News	Lead-out
Lead-in	.915*	.915*	.627
Local News		.932*	.628
National News			.507

Affiliated with NBC n = 8

	Local News	National News	Lead-out
Lead-in	.494	.803	-.322
Local News		.366	-.357
National News			.136

Stations Owned by Newspapers

Affiliated with ABC n = 6

	Local News	National News	Lead-out
Lead-in	.248	.334	-.219
Local News		.865*	-.819*
National News			-.470

Affiliated with CBS n = 7

	Local News	National News	Lead-out
Lead-in	.066	.552	-.651
Local News		.766*	-.706
National News			-.838*

Affiliated with NBC n = 6

	Local News	National News	Lead-out
Lead-in	.860*	.891*	.464
Local News		.909*	.391
National News			.343

Stations Owned by Networks

ABC Stations n = 4

	Local News	National News	Lead-out
Lead-in	-.283	-.389	.847
Local News		.572	-.249
National News			.083

TABLE 6 (cont.)

Stations Owned by Networks (cont.)

CBS Stations n = 4

	Local News	National News	Lead-out
Lead-in	.669	.720	.611
Local News		.971*	.995*
National News			.946

NBC Stations n = 5

	Local News	National News	Lead-in
Lead-in	.669	-.266	-.404
Local News		.310	-.826
National News			-.602

*Significant at the .05 level of significance

The correlation coefficients in Table 6 indicate that a significant relationship does exist between the popularity of local and national news. Six of the nine coefficients between these program types are statistically significant. Unfortunately, the correlation coefficients do not indicate whether audience shares for local news influence audience shares for national news or vice versa. An intuitive analysis of the results in Table 6 would seem to suggest that the causal effect may be in both directions.

All coefficients between local and national news aired by CBS affiliates are significant. CBS evening news is also more popular than the national news programs aired by the other two networks. One could infer from both of these factors that the popularity of CBS's evening news program is contributing to the popularity of local newscasts programmed by CBS affiliates.

On the other hand, results in Tables 2 and 4 and 5 indicate that local news is relatively more popular than national news among adult audiences. Figures in Table 4 also indicate that local newscasts aired by newspaper owned stations are quite popular. The coefficients in Table 6 indicate significant correlations between audience shares for local and national newscasts aired by newspaper owned stations affiliated with each of the three networks. Therefore one could argue that the national newscasts are primarily benefiting from the popularity of local news programs produced by newspaper owned stations.

With respect to lead-in and lead-out programming, no consistently strong relationships seem to exist. In only two of the nine instances are the coefficients between local news and lead-in programming statistically significant. However, all but one of the coefficients are positive which is what one would expect given the assumption that the popularity of local news does in fact influence audience shares of programs leading into it. It should be noted that the number of cases defined in Table 6 is relatively small which of course tends to elevate critical values used in tests of significance. Had there been a larger number of program segments in each category, a larger number of significant correlations between audience shares for lead-in and local news programs may have appeared.

The same situation applies to correlations between national news and lead-out programs. Only one significant coefficient appears and it is negative. Two other coefficients between national news and lead-out programs are also negative, albeit nonsignificant. This would seem to indicate that the popularity of local and/or national newscasts does not consistently influence audience shares during prime time.

IV. Discussion and Conclusions

It appears that ownership of television stations in the top 25 markets does influence local early evening news programming. Stations controlled by multimedia owners tend to program more local news than do stations operated by single owners. Local newscasts of stations owned by media conglomerates are also substantially more popular than local newscasts aired by single owner stations.

This would seem to lend some support to the belief that multiple ownership of the media is not detrimental to broadcast journalism. Critics of existing ownership patterns would undoubtedly object to this reasoning. To begin with, ownership *per se* accounts for less than 17 percent of the variance in audience shares of local news programs. Additionally over 70 percent of all single owner stations in the top 25 markets are independents and over 70 percent are UHF stations. As a result, it can be safely assumed that single owner stations are in a relatively weaker financial position than network affiliated stations owned by media conglomerates.

The analysis also indicates that local news can be very profitable. However, successful newscasts are expensive to produce. Furthermore, the correlation analysis discussed above indicates that the popularity of national network evening newscasts may influence the popularity of local news programming aired by network affiliates. Both of these factors suggest that single owner stations in the top 25 markets face a substantial competitive disadvantage vis-a-vis network affiliated stations controlled by multimedia owners.

One could reasonably argue that if more single owners controlled lucrative VHF, network affiliated stations, then the performance of single owner stations would be improved with respect to their programming of local news. Furthermore, critics of multiple ownership could argue that the results discussed above do not alleviate the possibility that media conglomerates will "slant" the news in accordance with their financial and/or personal interests.

It was also mentioned above that joint owners of television and newspaper interests argue that broadcast news benefits from joint ownership since newspaper publishers will likely have a higher regard for the value of news than will other types of television station owners. The results lend some support to this contention. Stations owned by newspapers do in fact devote a larger proportion of their early evening air time to local news than do group or single owner stations. Local newscasts aired by newspaper owned stations also tend to be quite popular. Both of these factors may indicate that local broadcast journalism may be adversely affected if newspapers are forced to divest their broadcast properties.

Footnotes

1. All information concerning station ownership was taken from the 1973 edition of the Broadcasting Yearbook (Broadcasting Publications: Washington, D. C., 1973), pp. A85-A98.

2. Federal Communications Commission, 38th Annual Report/Fiscal Year 1972 (Government Printing Office: Washington, D. C.), pp. 188-189.

3. Ibid. pp. 180-186.

4. Ibid. p. 186.

5. Nicholas Johnson, "The Media Barons and the Public Interest," Mass Media and Society, Alan Wells, ed. (National Press Books: Palo Alto, Calif., 1972), p. 95.

6. Harry J. Skornia, Television and the News: A Critical Appraisal (Pacific Books: Palo Alto, Calif., 1968), p. 58.

7. See "FCC Has Plenty of Food for Thought on Cross Ownership," Broadcasting, May 27, 1974, pp. 34-35.

8. "Justice Offers Two Methods to FCC for Breaking Up Multimedia Holdings," Broadcasting, May 20, 1974, p. 26.

9. Sydney W. Head, Broadcasting in America: A Survey of Television and Radio (Houghton Mifflin Co.: Boston, 1972), p. 460.

10. Federal Communications Commission, op. cit., pp. 188-189.

11. Head, op, cit., p. 276.

12. Roger Noll, Merton Peck and John McGowan, Economic Aspects of Television Regulation (The Brookings Institute: Washington, D. C., 1973), Appendix A.

13. John L. Peterman, "Concentration and the Price of Television Time," American Economic Review: Papers and Proceedings, May, 1971, pp. 74-81.

14. Rolla Park, "The Prospect of Cable Television in the 100 Largest Television Markets," Bell Journal of Economics and Managerial Science, Vol. 3, No. 1, Spring, 1972, pp. 130-150.

15. National Association of Broadcasters. 1973 Television Financial Report (National Association of Broadcasters: Washington, D. C., 1973), pp. 5-6.

16. See J. Johnston, Econometric Methods (McGraw Hill: New York, 1963), pp. 176-185.