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ABSTRACT

A mail survey of commercial television stations nationwide was conducted to determine if stations as a whole are accepting program length commercials (whose airing was deregulated by the Federal Communications Commission (FCC) in 1984). Sales managers at 482 of 769 commercial television stations responded to the questionnaire. Results indicated that (1) program length commercials have been widely adopted by commercial television stations nationwide; (2) broadcasters as a whole appear to be concerned with avoiding over-commercialization; although (3) less profitable stations and stations in less concentrated markets are less concerned with past FCC expectations. (Seventy-five notes and seven tables of data are included.) (RS)

THE ADOPTION OF PROGRAM LENGTH COMMERCIALS BY COMMERCIAL TELEVISION STATIONS NATIONWIDE: DO MARKET CONCENTRATION AND PROFITABILITY HAVE AN EFFECT?

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The Adoption of Program Length Commercials by Commercial Television Stations Nationwide: Do Market Concentration and Profitability Have an Effect?

Introduction:

The Federal Communications Commission lifted the ban on program length commercials when it deregulated commercial television in 1984.[1] Now local broadcasters decide for themselves whether or not to air program length commercials in which the message is interwoven so closely with program content that the entire program must be considered commercial.[2] Licensee discretion is "penalty-free," as the FCC also eliminated license challenges based on commercialization levels.[3] Preliminary evidence suggests this new time unit is being adopted.[4]

Before deregulation, the FCC maintained that commercialization was an important element in judging a licensee's overall program performance, noting that the elimination of commercial advertising excesses was a factor in determining whether a licensee's proposed program service was in the public interest.[5] Now, the FCC states that competitive market forces regulate the industry, precluding viewers from watching and advertisers from buying time on stations adding too many commercials.[6]

But just how many program length commercials are stations airing? A mail survey of commercial television stations[7] nationwide was conducted to determine if stations as a whole are accepting program length commercials, and if so, how many. The goal was to discern if certain types of stations, and stations in certain types of markets, were more likely to accept them. This exploratory study could then be used as a basis for future research assessing whether lifting the ban on program length commercials appears to be in the public interest.

Recent events suggest that this question needs examination. A syndicated show selling a "get-rich quick" scheme was the subject of the largest consumer-protection agreement in the history of the state of Iowa. Over 10,000 dissatisfied customers demanded refunds totalling more than $3 million for the "No Down Payment Real Estate Seminar" and the "Credit Card Millionaire System" courses.[8] And deregulation was the primary cause of children's programs promoting toy characters such as "She-Ra." These program length commercials for children are "first a marketing message and second an entertainment device."[9]

It is questionable whether this is what the FCC intended when deregulating television. It therefore seems prudent to begin to evaluate what the effect of lifting the ban has been.

Literature Review:

Review of the Economic Literature:

The FCC deregulated television based on the assertion that competitive market forces now regulate the television industry.[10] Economists typically use the industrial organization paradigm to determine how competitive a market is. The paradigm states that market structure predicts market conduct which predicts market performance. Market structure is the sum of the economically significant features of a market affecting firm behavior in the industry supplying that market. These factors include the level of product differentiation and number of sellers and buyers. Market conduct consists of a firm's policies toward its product market and toward the moves made by its rivals in that market.[11] Conduct includes pricing behavior, which is expected to vary according to market competitiveness. For example, as market concentration increases, firms are more likely to restrict supply in order to

inflate prices.[12] Market performance is evaluated by considering if the economic results of an industry's conduct are fair to consumers and producers.[13] Performance is therefore not as good in more concentrated markets because fewer consumers can afford the "more expensive" products.[14]

There are four structural models which yield predictions about how firms behave. These models--perfect competition, monopolistic competition, oligopoly and monopoly--represent a continuum of market concentration, with perfectly competitive markets being the most competitive and monopoly markets the least.

Television markets are oligopolies[15] as a result of FCC license allocation policies.[16] Oligopolies are characterized by a few sellers who recognize their interdependence and consider each others reactions when making price and output decisions.[17] Interdependence may be actual or perceived, resulting in coordination and anticipation of each others' actions.[18]

For example, in a three TV station market, a manager must consider what the effect of a price increase will be. Will competing stations lower their time charges to steal business away? This is similar to conduct found in the network TV market.[19] The networks may compete (or cooperate) by manipulating certain factors to gain a competitive edge (or achieve parity to limit it).[20] They apparently cooperate in areas where cheating is easily detected and responded to, such as the quantity of advertising time.[21]

Performance is not as good as in perfectly competitive markets because oligopolists typically reduce supply in order to charge higher prices.[22] Thus, one might expect that as market concentration increases, the number of program length commercials a stations airs decreases. In other words,

stations can be expected to restrict the supply of available time for airing program length commercials in order to charge higher prices.

Classifying Stations by Profitability:

Oligopolistic conduct is also applicable to larger groups of competitors. Products, like clothing, often fall into distinct quality or price classes, appealing to groups of consumers with differing incomes or tastes. For example, Saks Fifth Avenue sells clothing of higher quality and attracts a different clientele than K-Mart. A seller often competes with just a few class members and avoids price competition since a price cut forces his closest competitors to follow suit.[23]

Thus, station profitability may also affect the adoption of program length commercials. More profitable stations and large market stations air more commercial time.[24] More profitable stations typically broadcast on channels 2 to 13 (VHF) and are affiliated with a national commercial television network. Less profitable stations typically broadcast on channels 14 to 83 (UHF) and are independent (or not affiliated with a network).[25] Certain variables, including network affiliation and broadcast band, are typically used as proxies for profitability[26] since individual station financial data is confidential.[27]

Therefore, different profitability classes of stations may exist, similar to the different classes of clothing stores. In a large market like Los Angeles where there are 14 stations,[28] one might expect more profitable stations to air more program length commercials because they are more attractive to advertisers. Advertisers are willing to pay higher prices in order to reach a larger audience. More profitable stations have typically

aired more commercial time than less profitable stations, presumably because their air-time is more attractive to advertisers.

However, other variables may affect the adoption of program length commercials. Large market stations, especially those in the top 50, sell more of their commercial time inventory to national or regional "spot" advertisers, while smaller market stations sell more local ads.[29] If program length advertisers tend to be regional advertisers, for example, differences in the adoption of program length commercials may be a function of station size and/or the geographic focus of advertising.

Review of the Policy Literature:

FCC Policies Regarding Commercialization:

Despite the fact that more profitable stations tend to air more commercial time, relatively few TV stations exceeded FCC commercialization guidelines before deregulation.[30] The FCC suggested a limit of 12 minutes of commercials in 1961,[31] and 16 minutes in 1973.[32] But it never promulgated rules to limit the amount of commercial time.[33]

In the late 1960's and early 1970's the FCC began to note that some broadcasters were "subordinating programming performance in the interest of the public to programming in the interest of salability" by airing program length commercials. These programs were sponsored by firms selling items like chinchilla ranching, real estate and speed reading courses.[34] Fines and admonitions were leveled to deter the practice.[35]

Program length commercials were finally banned in 1973.[36] In 1974 the FCC reiterated its commitment to the ban, reminding broadcasters it would be concerned "when a licensee clearly broadcasts program matter which is designed

primarily to promote the sale of a sponsor's product or services, rather than to serve the public by either entertaining or informing it."[37]

Preventing over-commercialization has clearly been a responsibility for local broadcast managers. Now the FCC expects market forces to do so. The literature review has provided suggestions on how market forces will affect the adoption of program length commercials.

Hypotheses:

Market Structure or Concentration:

Given the structure of the television industry, it is assumed that stations consider whether their counterparts will adopt program length commercials, and to what extent, when deciding whether to adopt them. Albeit this is expected of oligopolists, it is predicted that conduct varies by "type" of oligopolist as well.

Although all TV markets are oligopolies, market concentration varies. The number two Area of Dominant Influence (or market),[38] Los Angeles, California, has 14 commercial television stations and is less concentrated than the number 213 ADI, Glendive, Montana, which has one.[39] Station conduct in these markets is expected to differ as their concentration level differs.

It should be more difficult for market members to cooperate in less concentrated types of markets like Los Angeles, called "loose oligopolies." Because there are more stations with different overall ratings and profits, their reasons for deciding how many program length commercials to air should vary. Some stations will not accept them, while others may accept a few, and others, many more.

In more concentrated markets where there are only a few stations, called "tight oligopolies," stations are predicted to behave like the networks. In

this market structure type, stations will accept a similar number of program length commercials. These markets are less competitive than loose oligopolies, so stations here are expected to restrict supply even more in order to charge higher prices.

Markets with concentration levels greater than loose oligopolies but less than tight oligopolies, termed "oligopolies," are expected to exhibit intermediate adoption. And in monopoly power markets with one (or one significant) competitor, stations are expected to accept the fewest program length commercials overall since they are the most concentrated (and least competitive). Therefore, the predictions regarding market structure are:

Hypothesis 1:

As market concentration increases, the number of program length commercials decreases.

Results will reveal whether market concentration has an effect on the adoption of program length commercials. It is also expected that adoption will vary significantly by market structure type.

Profitability:

But another factor may affect the adoption of program length commercials. It is likely that different stations are in greater and lesser demand by advertisers. Profitable stations may be more attractive to program length advertisers because they attract larger audiences. Consequently, the prediction based upon station profitability is:

Hypothesis 2:

As profitability increases, the number of program length commercials increases.

Results will reveal whether profitability affects the adoption of program length commercials. It is also expected that more profitable stations

as a class air significantly more program length commercials than less profitable stations.

Methods:

Statistical Techniques Employed:

Regression analysis and T-tests were used to test Hypotheses 1 and 2. Market structure types were categorized as loose oligopolies, oligopolies, tight oligopolies and monopoly power markets for the T-tests. The profitability index was divided at the mean, so the mean and below represented less profitable stations, and above the mean represented more profitable stations. Tables with means and standard deviations were included to show how these differences were manifested.

Operationalization of the Independent Variables:

Market Structure:

Concentration level is the most important determinant of market structure. The first step in measuring and proving concentration is to define the industry's relevant market. The criterion for including other local media is if they are considered close substitutes for TV advertising.[40] Newspaper and radio advertising are not perfect substitutes,[41] and researchers consider competition in only one medium because there is no accepted way of measuring inter-industry competition.[42] The model was thus tested using "more perfect" broadcast substitutes, cable and VCR, as control variables. Cable's influence is measured by entering an ADI's cable penetration as a continuous variable into a regression.[43] Cable and VCR penetration figures are provided in Arbitron TV market reports and were operationalized in this manner. Because they were highly correlated, they were combined and divided by two to represent the average penetration of broadcast substitutes in a market.[44]

The next step is to decide upon a measure of market concentration. The Herfindahl-Hirschman Index, calculated by summing the squared market shares of all firms, is the preferred measure of competition[45] because it increases as the number of firms declines, and as inequality among firms rises. It equals one if the market is a pure monopoly, and zero if perfectly competitive.[46]

Audience shares are commonly used to calculate the HHI.[47] Station shares[48] for 6 a.m. to 2 a.m., Monday-Sunday, from the February 1987 Arbitron ADI Viewing Allocation Report were used in this study. The report includes any station achieving at least a .1 share (including home market stations, stations from other ADI's, superstations and cable networks), a more liberal criteria than found in individual market reports. Both types of market reports are calculated from the same diary responses.[49] Using the ADI Viewing Allocation Report eliminated the disadvantage of using ADI shares from individual market reports, where households are assigned to one unique viewing area, and the overlap of broadcast signals across markets is not accounted for.

Researchers have typically used the following rules of thumb for evaluating H-H Indexes. An H-H Index greater than .20 (or 2000) indicates a significantly concentrated industry, while one between .10 (or 1000) and .20 (or 2000) indicates a moderately concentrated industry. The indicator for significant concentration has also been placed at .18 (or 1800).[50] Using these established rules as a guide, market structure type is operationalized as follows:

1. Stations in markets with H-H Indexes 1599 or below are assigned to the "loose oligopoly" category.

2. Stations in markets with H-H Indexes between 1600 and 1799 are assigned to the "oligopoly" category.

3. Stations in markets with H-H Indexes between 1800 and 1999 are assigned to the "tight oligopoly" category.

4. Stations in markets with H-H Indexes of 2000 and above are assigned to the "monopoly power" category.

The index was entered as a continuous variable in the regression equation. Concentration level ranged from 902 to 3361 in the study, with the average being 1751. Markets were at least moderately concentrated, supporting their characterization as oligopolies.

Station Profitability:

Proxy variables are used to measure station profitability since such data are proprietary.[51] Broadcast band, network affiliation and market rank were used to measure profitability.[52] Broadcast band is measured by indicating whether a station is VHF or UHF, and including it as a categorical variable.[53] Network affiliation is operationalized by designating which network a station is affiliated with (or its independence) as a categorical variable. Affiliates may also be combined into one category, to represent an affiliate/independent dichotomy.[54]

Market rank was measured using station shares in early fringe.[55] Most program length commercials have been broadcast on non-network stations (or by network affiliates during non-network time), primarily in weekday morning and afternoon hours.[56] Early fringe is the longest period an affiliate is responsible for programming,[57] and a time when independents compete directly with them. Thus the ranking in early fringe represented a time when all types of stations were likely to air program length commercials. A profitability index incorporating broadcast band, network affiliation and market rank was developed[58] and its reliability coefficient was .85.[59] Scores were entered as a continuous variable in the regression equation.

Type of Advertising:

The literature review suggested that larger stations sell more time overall, and sell more of their advertising inventory to national or regional spot advertisers. Because the type of advertising may affect the adoption of program length commercials, stations were asked to indicate what proportion of their commercial time inventory was sold to spot and local advertisers. The proportion of local advertising was entered as a continuous variable.[60]

Organization Size:

Organization size was also included as a control variable in case station size rather than the geographic focus of advertising affects time sales. Organization size has been operationalized as assets, revenue, value of products or services, or number of employees.[61] The number of departmental employees is also a measure of size.[62] Because the traffic and sales departments are responsible for selling and scheduling commercials, their combined size was used to measure organization size. Responses were included as a continuous variable.

Operationalization of the Dependent Variable:

Commercialization:

Commercialization was operationalized as the average number of program length commercials aired per month and entered as a continuous variable in the regression equation. Stations were asked if they air program length commercials (and if so how many they air per week and how long they are). The average was calculated by multiplying the weekly figure by four.

Survey Methods:

The aim was to predict and explain differences among stations in different types of markets, so the survey method chosen had to be feasible for

a national sample. A mail survey was chosen because questions about the adoption rate of program length commercials might be considered sensitive by some managers, and the anonymity that mail responses provide encourage candid responses.[63] Another crucial concern was making it easy for subjects to respond in about five minutes,[64] as completing a mail questionnaire at their leisure should.

Sampling Scheme:

The survey population was stratified to represent all 213 Arbitron Areas of Dominant Influence in one of the market structure categories. Strata were created by assigning all 870[65] of the stations into one of four market structure categories based on their ADI's Herfindahl-Hirschman Index

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Insert Table 1 Here

All stations were included so the expected response rate would be consistent with usual sample sizes in broadcast research. Sample sizes in broadcast economic research appear to be in the "300" range.[66]

Non-response in Mail Surveys:

Non-response is a concern in mail surveys because non-respondents may differ from respondents on the survey variables, resulting in biased estimates. Four pretests were conducted to avoid this problem and to ensure that: the proper employee was being surveyed; questions were easy to answer and correctly understood; the questionnaire could be completed in about five minutes; and no question was considered offensive or confidential. Two follow-up mailings were also used to reduce non-response. Procedures and a mailing schedule shown to be effective in minimizing non-response were used.[67]

The final questionnaires, sent to sales managers, were numbered to indicate station identity for collecting appropriate secondary data (such as network affiliation) to minimize item non-response. This was explained in both accompanying letters, and station anonymity was preserved.

Results:

A 62.6 percent response rate (482 of 769 stations)[68] was achieved. Six of these questionnaires were unusable.[69] The 1988 Broadcasting/Cablecasting Yearbook reports that there are 1017 commercial television stations in the United States (541 VHF and 476 UHF).[70] Responses thus represent 47.4 percent of all commercial television stations in this country. Responses were generally representative of the market structure categories, network affiliation and broadcast band.[71]

The average station in the study airs five program length commercials per month. The minimum was zero and the maximum was over 100. Stations were asked whether they accepted program length commercials. Of the 470 stations responding, 77.9 percent (or 366) accepted program length commercials and 22.1 percent (or 104) did not. Stations which accepted program length commercials were also asked what their usual length was. Of the 359 stations responding, 79.9 percent (or 287) said thirty minutes, 2.8 percent (or 10) said sixty minutes and 17.3 percent (or 62) said both thirty and sixty minutes.

Discussion of the Hypotheses:

A few variables had non-normal distributions so additional regressions using transformed data and outliers reduced to three standard deviations were run to see if results changed (see Appendix A).[72] These regressions are only discussed when they differ from the regression using untransformed variables.

Hypothesis 1:

Hypothesis 1 predicts that as market concentration increases, the number of program length commercials decreases. Regression results for untransformed data are in the predicted direction and significant.

Insert Table 2 Here

Market concentration was not significant after variables were transformed and outliers pulled in (See Appendix A), but the average penetration of broadcast substitutes was. This finding is interesting since this control variable represents the average influence of cable and VCR. The implication is that some aspect of market competitiveness affects the adoption of program length commercials.

The next test was to discern if the adoption of program length commercials varies by market structure type. An analysis of variance was run before T-tests were conducted on the four market structure types to ensure that main effects were present. Significant main effects were found ($p=.017$) so T-tests were run. The number of program length commercials decreased as market concentration increased, and significant results for all market

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Insert Tables 3 and 4 Here

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structure comparisons except loose oligopolies and oligopolies support the notion that commercialization varies by market structure type. Indeed, the fact that standard deviations also decreased as market concentration increased suggests that stations in more concentrated markets are more likely to air a similar number of program length commercials, as economic theory suggests. However, T-results may only be significant because other control variables

were eliminated. New regressions for each of the market structure types were run to determine if the T-test results represented true differences.[73]

Only one of these new regressions, for loose oligopolies using untransformed data on the number of program length commercials, was significant. The suggestion is that stations in the least concentrated markets air more program length commercials. Yet this weak relationship could grow stronger over time. Program length commercials were banned before deregulation so these results may represent a developing relationship. Hypothesis 1 is partially supported.

Hypothesis 2:

Hypothesis 2 stated that as profitability increases, the number of program length commercials increases. Regression results demonstrate that the number of program length commercials decreased as profitability increased, contrary to expectations, and results were significant (See Table 2). T-test results suggest that less profitable stations air more program length commercials and adoption differs by profitability class.[74]

Insert Tables 5 and 6 Here

This finding is interesting as it suggests that more and less profitable stations have adopted program length commercials differently. Although Hypothesis 4 is not supported, results still suggest that different profitability classes of stations exist.

Discussion:

It appears that the average station manager still considers past FCC commercialization expectations. Recall that the average station in the sample airs five program length commercials per month. That translates into anywhere

from two-and-a-half to five hours per month, or roughly an extra hour of commercials per week, or an extra eight or nine minutes per day, or 45 seconds per hour (in a 20 hour broadcast day). Viewed in this fashion, it seems that stations as a whole are still mindful of past public interest obligations.

However, 4.2 percent of stations air 20 or more program length commercials per month.[75] Two aired more than 100 program length commercials per month. Apparently, a few broadcasters believe that they no longer need to be concerned with the amount of commercialization on their stations. The public interest is being subordinated in the interest of salability in at least a few instances. Hopefully, this does not represent the beginning of a trend to increased commercialization.

More study is needed to examine if market concentration and/or the average penetration of direct broadcast substitutes affect the adoption of program length commercials. The finding that standard deviations declined as market concentration increased also suggests that conduct varies by market structure type. New and more precise measures of market competitiveness may be needed to clarify this possible relationship.

The finding that less profitable stations air more program length commercials suggests that adoption is related to profitability. Perhaps less profitable stations are accepting more of these programs because they cannot afford to turn them down. Program length commercials like the "get-rich quick" show may be perceived as "questionable" by viewers. More profitable stations may decline to air them, or accept fewer of them, to maintain the reputation of their stations.

Future research should examine if the type of program length advertiser varies by profitability class. Since more profitable stations air fewer

program length commercials, they may decline some types that less profitable stations accept. This may demonstrate another difference between classes.

Conclusion:

This study demonstrated that program length commercials have been widely adopted by commercial television stations nationwide. Broadcasters as a whole appear to be concerned with avoiding over-commercialization, although it appears that less profitable stations, and stations in less concentrated markets, are less concerned with past FCC expectations. Research in this area should continue to determine if these findings are true and to suggest appropriate remedies.

NOTES

[1]In the Matter of The Revision of Programming and Commercialization Policies, Ascertainment Requirements, and Program Log Requirements for Commercial Television Stations, 98 FCC 2d 1076 (1984).

[2]In the Matter of Program Length Commercials, 39 FCC 2d 1062 (1973).

[3]98 FCC 2d 1076 at 1102.

[4]Dale Kunkel, "From A Raised Eyebrow to a Turned Back: The FCC and Children's Product-Related Programming," Journal of Communication 38 (Autumn 1988), p. 100.

[5]It implied a commitment to this principle by requesting information about time sales in license applications from the beginning. See In the Matter of Amendment of Part 3 of the Commission's Rules and Regulations with Respect to Advertising on Standard, FM, and Television Broadcast Stations, 36 FCC 45 at 46-7 (1964). Commercialization was also a factor in license actions as early as 1928. For example, see the case of station WCOT, 2 F.R.C. Ann. Rep. 152 (1928), where the Federal Radio Commission did not renew the station's license because it was used "as a means of direct advertising." In 1946 the FCC again stated its concern with over-commercialization in the "Blue Book." See Public Service Responsibility of Broadcast Licensees, Public Notice 95462, 2 July 1946, pp. 12, 43-7.

[6]98 FCC 2d 1076 at 1076, 1105.

[7]Commercial television stations are defined as those that depend on national and regional spot, and local advertising for profits, and may also receive funds from national commercial television networks. They may carry network programming, originate syndicated and paid programming, and may compete with other stations for a share of the viewing audience. Stations that depend primarily upon fund raising efforts or direct sales for revenues, such as certain religious or Home Shopping Network stations, are not included. Satellite stations are not included as they do not originate, but simply carry "mother" station programming.

[8]"The Ratings Game Pinches the Beguiling Gurus of Get-Rich TV," Money (January 1987), pp. 13-14.

[9]Kunkel, p. 103.

[10]98 FCC 2d 1076 at 1077.

[11]Richard Caves, American Industry: Structure, Conduct, Performance, 5th ed., (Englewood Cliffs, N.J.: Prentice-Hall, 1982), pp. 16, 48.

[12]F. M. Scherer, Industrial Market Structure and Economic Performance (Chicago: Rand McNally, 1970), pp. 4-5, 9-10, 16.

[13]Caves, pp. 66-7.

[14]Scherer, pp. 9-10, 16.

[15]Benjamin J. Bates, "Economic Theory and Broadcasting," presented to the Mass Communication Theory and Methodology Division of the Association for Education in Journalism and Mass Communication Convention, Memphis, Tennessee, August 1985, p. 13.

[16]The FCC set aside 12 very high frequency (VHF) and 70 ultra high frequency (UHF) channels for television. Yet no more than seven VHF channels can be used at any location, because the remaining five must be unused to prevent interference from adjacent channels. Stations using the same channel must also be separated geographically. Coupled with the fact that the FCC assigned stations to as many communities as possible, the number available to any market was naturally limited, resulting in many three station markets. And although UHF allocations were made, many frequencies are unused because signal quality is inferior, making it hard for UHF stations to compete with VHF stations. See Roger G. Noll, Merton J. Peck and John J. McGowan, Economic Aspects of Television Regulation (Washington, D.C.: The Brookings Institution, 1973), pp. 3-7, 116.; Bruce M. Owen, Jack H. Beebe, and Willard G. Manning, Jr., Television Economics (Lexington, Mass.: Heath, 1974), pp. 6-7.; and Douglas H. Ginsburg, Regulation of Broadcasting (St. Paul, Minn.: West, 1979), pp. 163-6.

[17]However, firms cannot cooperate openly to fix prices because collusion is prohibited by the Sherman Anti-trust Act of 1890, 15 U.S.C.A. Sections 1-7.

[18]Edwin Mansfield, Principles of Microeconomics 3rd ed. (New York: Norton, 1980), pp. 261-82.

[19]ABC - The American Broadcasting Company; CBS - The Columbia Broadcast System; and NBC - The National Broadcasting Company.

[20]Owen, Beebe and Manning, p. 103.; and Barry R. Litman, "The Economics of the Television Market for Theatrical Movies," Journal of Communication 29 (Autumn 1979), pp. 20-3.

[21]Barry R. Litman and Jan LeBlanc Wicks, "The Changing Advertising Market for the U.S. Television Networks," in John D. Leckenby, ed., The Proceedings of the 1988 Conference of the American Academy of Advertising (Austin, Texas: John D. Leckenby, College of Communication, The University of Texas at Austin, 1988), p. 17.

[22]Scherer, p. 9-10, 16.

[23]Edward Chamberlin, The Theory of Monopolistic Competition (Cambridge, Mass.: Harvard University Press, 1933), pp. 102-3.

[24]See In the Matter of The Revision of Programming and Commercialization Policies, Ascertainment Requirements, and Program Log Requirements for Commercial Television Stations, 94 FCC 2d 678 at 699, 715-7.; and In the Matter of the Revision of Programming and Commercialization Policies, Ascertainment Requirements, and Program Log Requirements for Commercial Television Stations, 98 FCC 2d 1076 at 1103 (1984).

[25]Noll, Peck and McGowan, pp. 17-18.

[26]Audience size and the number of stations in a market have also been used as profitability proxies. See Barry R. Litman, "Measuring Divestiture of Network Owned Television Stations: An Econometric Approach," The Antitrust Bulletin 25 (Summer 1980), pp. 368, 371-4.

[27]See Barry R. Litman, "Public Interest Programming and the Carroll Doctrine: A Re-examination," Journal of Broadcasting 23 (Winter 1979), pp. 52, 59. See Note # 5.

[28]Television & Cable Factbook, Stations Volume, No. 55, (Washington, D.C.: Television Digest, Inc., 1986), pp. A1-4.

[29]Michael O. Wirth, "The Effects of Crossmedia Ownership on Television and Newspaper 'Prices'," unpublished Doctoral Dissertation, Mass Media Ph.D. Program, Michigan State University, 1977, pp. 79-80.

[30]In Re Renewals of Broadcast Licenses for Arkansas, Louisiana and Mississippi, 42 FCC 2d 3 at 25-30. This is the dissenting opinion of Commissioner Nicholas Johnson (prepared along with his staff and seminar students) entitled "Broadcasting in America: The Performance of Network Affiliates in the Top 50 Markets. See also 98 FCC 2d 1076 at 1103.; and Erwin G. Krasnow, Barry D. Umansky and William E. Kennard, Comments of the National Association of Broadcasters, MM Docket No. 83-670, 21 November 1983, p. 4.

[31]94 FCC 2d 678 at 684-5.

[32]Delegation of Authority, 43 FCC 2d 638 (1973). See also 94 FCC 2d 678 at 684-5.

[33]See 36 FCC 45 at 49; and Commercialization on TV Stations, 49 RR 2d 391 (1981).

[34]See Topper Corporation 21 FCC 2d 148 (1968); American Broadcasting Companies, Inc. 23 FCC 2d 132 (1970); KCOP-TV, Inc. 24 FCC 2d 149 (1970); Columbus Broadcasting Co. 25 FCC 2d 56 (1970); Multimedia, Inc. 25 FCC 2d 59 (1970); National Broadcasting Co. 29 FCC 2d 67 (1971); Dena Pictures, Inc. 31 FCC 2d 206 (1971); WUAB, Inc. 37 FCC 2d 748 (1972); WFIL, Inc. 38 FCC 2d 411 (1972); Taft Broadcasting Co. 39 FCC 2d 1070 (1973); Weigel Broadcasting Co. 41 FCC 2d 370 (1973); and Rush Broadcasting Corp. 42 FCC 2d 483 (1973).

[35]A number of stations were asked to submit a statement as to their future policies regarding program length commercials and told that their performance in this area would be considered in their next license renewal. Some were fined, with amounts ranging from approximately $1,000 to $8,000 for logging violations, such as failing to identify the sponsor of the program, and/or improperly indicating the start and end of the commercial matter in the program (essentially, all of it). See, for example, Rush Broadcasting Corp., 42 FCC 2d 483, 486 (1973); Channel Seventeen, Inc., 42 FCC 2d 529 (1973); Midland Television Corp., 42 FCC 2d 591 (1973); Mid New York Broadcasting Corp., 42 FCC 2d 594, 597, 1088 (1973); Turner Broadcasting of North Carolina, 42 FCC 2d 622, 626 (1973); United Television Company of New Hampshire, 42 FCC 2d 632, 636 (1973); WXON-TV, Inc., 42 FCC 2d 639, 642 (1973); Evening News Association, 49 FCC 2d 380 (1974); Eugene Television Co., Coos Bay, Oregon, 61 FCC 2d 1131 (1976); and Hubbard Broadcasting, 62 FCC 2d 970 (1977). Violations dropped dramatically after the ban in 1973. Most of these cases involved programs sponsored by National Chinchilla, Inc., which were designed to promote chinchilla ranching in the home, along with associated products and services.

[36]39 FCC 2d 1062 at 1062-3. It reiterated this ban in In Re Notification to Kaiser Broadcasting Co., Oakland, Calif. Concerning Request for Declaratory Ruling Authorizing Telecast of Program-Length Commercials, 45 FCC 2d 344 (1974).

[37]In Re Public Notice Concerning the Applicability of Commission Policies on Program-Length Commercials, 44 FCC 2d 985 at 986 (1974).

[38]The area of dominant influence is an exclusive geographic area which reflects those counties in which the dominant share of television viewing is to home market stations. The ADI is the industry's standard definition for allocating advertising dollars and often corresponds to the distribution and sales territories of many national and regional advertisers. From How To Read Your Arbitron Television Market Report (New York: Arbitron Ratings Co., 1987), p. 5.

[39]Television & Cable Factbook, pp. A1-4.

[40]Barry R. Litman, "Economic Methods of Broadcast Research," in Joseph R. Dominick and James E. Fletcher, eds., Broadcasting Research Methods (Boston: Allyn & Bacon, 1985), p. 116.; and Scherer, p. 53.

[41]Bates, "Economic Theory," pp. 8-9.

[42]John Dimmick and Eric Rothenbuhler, "The Theory of the Niche: Quantifying Competition Among Media Industries," Journal of Communication 34 (Winter 1984), p. 104.

[43]Michael O. Wirth and James A. Wollert, "The Effects of Market Structure on Television News Pricing," Journal of Broadcasting 28 (Spring 1984), pp. 219-20, 223.

[44]The correlation between Cable and VCR penetration was .952 (p=.000). Highly intercorrelated variables can be combined into a single indicator, if it makes conceptual sense. See Michael S. Lewis-Beck, Applied Regression: An Introduction (Beverly Hills, Ca.: Sage, 1980), p. 61.

[45]The HHI is the Justice Department's preferred measure of market concentration and an index of 1000 (or .10) is considered the minimum level for raising anti-trust concerns. It is calculated using audience or revenue shares and has been used as a measure of concentration in FCC proceedings. See In the Matter of Amendment of Section 73.3555 [formerly Sections 73.35, 73.240 and 73.636] of the Commission's Rules Relating to Multiple Ownership of AM, FM, and Television Broadcast Stations, 100 FCC 2d 17 at 42 (1984); U. S. Department of Justice Merger Guidelines, issued June 14, 1982; In the Matter of Amendment of Sections 73.35, 73.240, and 73.636 of the Commission's Rules Relating to Multiple Ownership of AM, FM and Television Broadcast Stations, 95 FCC 2d 360 at 386 (1983); and In the Matter of Amendment of Part 76, Subpart J of the Commission's Rules and Regulations Relative to Diversification of Control of Community Antenna Television Systems; and Inquiry with Respect thereto to Formulate Regulatory Policy and Rulemaking and/or Legislative Proposals, 91 FCC 2d 46 at 51-2 (1982).

[46]Scherer, pp. 51-2.

[47]See Wirth and Wollert, p. 217.; and 100 FCC 2d 17 at 42.

[48]A share is the estimated percent of households using TV tuned to a specific station. See Arbitron Ratings/Television: ADI Viewing Allocation Report, (New York: Arbitron Ratings Co., February 1987), or any Arbitron ratings book.

[49]Ibid. The report includes all stations with at least a .1 share, calculated from the same diary data.

[50]Litman, "Economic Methods," pp. 118-20. The Justice Department uses .18 or 1800 to indicate a significantly concentrated industry.

[51]Litman, "Public Interest Programming," pp. 52, 59. See Note #5.

[52]The original intent was to use broadcast band, network affiliation and net weekly circulation as proxies for profitability. They are all reported in the Broadcasting/Cablecasting Yearbook (Washington, D.C.: Broadcasting Publications, Inc., 1987). However, this article is culled from a study encompassing other variables not included here. A number of variables in the study were found to be multicollinear, and the factor analysis technique was used to reduce these variables to subsets which were presumably measuring the same underlying concept. Results of the factor analysis revealed that broadcast band, network affiliation and market rank were indicators of profitability, and net weekly circulation was measuring market size. As a result, a profitability index was developed after data analysis incorporating broadcast band,

network affiliation and market rank, but not net weekly circulation. Results of the factor analysis will be made available upon request.

[53]See Benjamin J. Bates, "Determining Television Advertising Rates," in Robert N. Bostrom, ed. Communication Yearbook 7 (Beverly Hills, Ca.: Sage, 1983), p. 464.; Barry R. Litman, "Measuring Divestiture of Network Owned Television Stations: An Econometric Approach," The Antitrust Bulletin 25 (Summer 1980), pp. 371-2.; Litman, "Public Interest Programming," p. 56.; Wirth and Wollert, pp. 219, 223.; and Wirth, pp. 56-7.

[54]See Bates, "Determining," p. 468.; Litman, "Measuring Divestiture," p. 372.; Litman, "Public Interest Programming," p. 56.; Wirth and Wollert, p. 219.; and Wirth, pp. 47, 56-7.

[55]ADI Daypart Audience Estimate Summaries of Shares for Monday-Friday, 3:00 p.m. to 6:30 p.m. or 4:00 p.m. to 7:30 p.m. (depending on time zone) were used to determine market ranking. Shares from individual Arbitron reports were used because rankings within markets were desired, and these reports include both meter and diary estimates.

[56]Kunkel, p. 100.

[57]William E. McCavitt and Peter K. Pringle ...ctronic Media Management (Boston: Focal Press, 1986), pp. 132-3.

[58]For broadcast band, VHF was scored as 2, ...s 1. For network affiliation, affiliation with a national network was scored as 2, and non-affiliation (independent) was scored as 1. For market rank, a ranking of first to third was scored as 2, and fourth or higher as 1. Each station's scores were summed to create the index. The lower sums, 3 and 4, represented less profitable stations (since 4 was the mean). The higher sums, 5 and 6, represented more profitable stations. Less profitable stations were assigned lower sums so an increase in profitability could be indicated by a positive sign. A number of variations were tried, and this method was by far the most reliable.

[59]Reliability estimates based on the average correlation among items comprise internal consistency. Coefficient alpha is the commonly accepted way to determine reliability based on internal consistency, and one considers a measure's intended use to determine the satisfactory level of reliability. In the early stages of research on hypothesized measures of a construct, a modest reliability of .70 is satisfactory. For basic research, reliabilities of .80 or above are considered satisfactory. In applied research where important decisions are made based on scale scores (e.g., whether a child should be placed in a special class based on a low IQ score), reliability should meet or exceed .90. Given that theoretical precedents existed for the index being created, .80 was selected as the reliability criteria. Since coefficient alpha was .8543 for the profitability index, it was retained for hypothesis testing. See Jum C. Nunally, Psychometric Theory, 2nd ed. (New York: McGraw-Hill, 1978), pp. 229-30, and 245-6.

[60]Spot and local advertising were highly correlated, as expected (-.791, p=.000). Local was retained for the regression, as its correlations with other study variables were lower.

[61]Joseph A. Litterer, Organizations: Structure and Behavior, 3rd ed. (New York: Wiley, 1980), p. 372.

[62]Eric J. Walton, "The Comparison of Measures of Organization Structures," Academy of Management Review 6 (1981), p. 157.

[63]Earl R. Babbie, The Practice of Social Research, 3rd ed. (Belmont, Ca.: Wadsworth, 1983), pp. 236-7.

[64]Follow-up telephone calls to non-respondents in the four pretests indicated that most did not respond because they thought it would take more than five minutes to complete questionnaire.

[65]The 1988 Broadcasting/Cablecasting Yearbook reports that there are 1017 commercial TV stations in the United States, and 870 were in the survey population. Therefore, 147 stations were omitted. The 147 stations excluded from the survey include small market stations, satellite stations which carry another station's signal rather than originating programming, commercial religious stations that rely primarily on fund raising rather than advertising, and Home Shopping Network stations. It is not known how many of these are small market, religious, satellite, or Home Shopping Network stations, as the small markets edition was not available to the researcher.

[66]For example, see Robert Prisuta, "Local Television News as an Oligopolistic Industry: A Pilot Study," Journal of Broadcasting 23 (Winter 1979), p. 63., who used stations in 13 markets. He used secondary FCC data for 144 stations in: Robert Prisuta, "The Impact of Media Concentration and Economic Factors on Broadcast Public Interest Programming," Journal of Broadcasting 21 (Summer 1977)," p. 56. Litman used secondary data for 347 stations in "Measuring Divestiture," p. 369. Studies of rates used secondary data for 130 to 232 stations. See Bates, "Determining," p. 465.; and Wirth and Wollert, pp. 221-2.

[67]Don A. Dillman, Mail and Telephone Surveys (New York: Wiley, 1978), pp. 180-91.

[68]Stations used in pretests (90), stations no longer on the air (5), and undeliverable surveys (6) were subtracted to obtain this figure (870 - 90 - 5 - 6 = 769).

[69]More than half of the responses on these questionnaires were left blank, so they were excluded. The great majority of respondents who returned incomplete questionnaires left only one or two questions blank. These six therefore represented "unusual cases."

[70]"A Short Course in Broadcasting, 1988," Broadcasting/Cablecasting Yearbook (Washington, D.C.: Broadcast Publications, 1988), p. A-2.

[71]Respondents represent a cross section of stations. Responses approximated market structure's natural proportions, and at least 58 percent of stations responded in each category. Loose oligopolies represented 27.7 percent of the population and 27.4 percent of respondents. Oligopolies represented 31.8 percent of the population and 32.9 percent of respondents. Tight oligopolies represented 23.9 percent of the population, and 23.7 percent of respondents. Monopoly power stations represented 16.6 percent of the population and 16.6 percent of the sample.

Responses for broadcast band approximated the population's natural proportions, where VHF stations represent 53.2 percent of all stations and UHF 46.8 percent. Of responding stations, 56.5 percent were VHF and 43.5 percent UHF, representing a departure of only 3.3 percent.

Affiliation status also mirrored nature. Independents represented 28.2 percent (134 of 476) of respondents, with network affiliates representing 71.8 percent (342). Independents represent about 32.2 percent of all commercial television stations (approximately 327 of 1017), and network affiliates represent about 67.8 percent (690 of 1017). Only a four percent difference existed. When network affiliation is partitioned, NBC stations accounted for 23.9 percent (114) of respondents, CBS stations 25.4 percent (121) and ABC stations 22.5 percent (107). The population's natural proportions are from "A Short Course in Broadcasting, 1988," cited in the previous note.

[72]The average number of program length commercials aired per month, organization size and the average penetration of broadcast substitutes were skewed. Some variables are naturally skewed. For example, since incomes are rarely less than zero, and some are much higher than average, a long tail to the right is expected. See Marija J. Norusis, The SPSS Guide to Data Analysis (Chicago: SPSS, 1986), pp. 176-7. The same is true for some of the study variables. The number of program length commercials cannot be less than zero, and a few stations averaged many more than most. Consider also that responses to organization size are limited, as a station cannot have fewer than one employee in sales and traffic, and the maximum response was 55.

Although moderate departures from normality do not seriously affect the validity of many procedures based on the normal distribution, transformations can change a variable's distribution to reduce skewness. A successful transformation may eliminate non-normality. Typically, logarithmic or square root transformations are used. A natural log transformation was selected for the number of program length commercials per month and square root transformations were selected for organization size and the average penetration of broadcast substitutes. See A. C. Atkinson, Plots, Transformations, and Regression (Oxford: Clarendon Press, 1985), p. 80-1.; Norusis, pp. 355-7.; Barbara G. Tabachnick and Linda S. Fidell, Using Multivariate Statistics (New York: Harper & Row, 1983), pp. 84-5.; and Francis J. Wall, Statistical Data Analysis Handbook (New York: McGraw-Hill, 1986), p. 16.6. for guidance on transformations.

Extreme cases may also be rescored or changed in such a way that their influence is reduced. Outliers were moved back to three standard deviations from the mean to retain their deviancy and prevent them from distorting the correlations. (See Tabachnick and Fidell, pp. 76, 92.)

Regressions using natural data, transformed data, and data with the outliers brought in to three standard deviations were utilized to see if results varied.

[73]Market structure was partitioned into the four types and twelve different regressions (four using untransformed variables, four using variables with outliers reduced to three standard deviations, and four using transformed variables) were run.

[74]It was not necessary to run new regressions for each profitability class because profitability was significant in regressions using the natural data, transformed data and data with outliers reduced to three standard deviations when all of the control variables were included. Anova results were also significant (p=.000).

[75]This represents 19 out of 453 stations responding to the question.

TABLE 1

Sampling Scheme
Market Concentration Divided Into Market Structure Types

STRATA 1	STRATA 2	STRATA 3	STRATA 4
Loose Oligopoly	Oligopoly	Tight Oligopoly	Monopoly Power
H-H Index up to 1599	H-H Index from 1600 to 1799	H-H Index from 1800 to 1999	H-H Index of 2000 and above
241 Stations	277 Stations	208 Stations	144 Stations

TABLE 2
Regression

Independent Variables

Dependent Variable	Market Concentration	Profitability Index	Organization Size	Substitute Penetration	Local	Adjusted R Square
Average Number of Program Length Commercials	-.111*	-.289***	.009	.074	.128**	.115***

* p is less than .05
** p is less than .01
*** p is less than .001

N=476 (Minimum pairwise number of cases = 418.)

TABLE 3
Means and Standard Deviations for the Average Number of Program Length Commercials by Market Structure Type

	Loose Oligopolies	Oligopolies	Tight Oligopolies	Monopoly Power
Average Number Of Program Length Commercials				
Mean	7	6	4	3
SD	14.3	10.1	6.9	2.8

TABLE 4
T-Tests Comparing Market Structure Types with the Average Number of Program Length Commercials
(One-Tailed Tests)

COMPARISONS	T	SIG	DF
Average Number of Program Length Commercials			
Loose Oligopolies/Oligopolies	0.47	.319+	204.14
Loose Oligopolies/Tight Oligopolies	1.92	.029+*	176.24
Loose Oligopolies/Monopoly Power	3.13	.001+*	135.03
Oligopolies/Tight Oligopolies	1.99	.024+*	261.77
Oligopolies/Monopoly Power	4.01	.000+*	205.37
Tight Oligopolies/Monopoly Power	1.88	.031+*	150.07

*Denotes significance at the indicated level.

+Denotes that a T-Test using a separate variance estimate (rather than pooled variance estimate) was used since the variances within groups appears unequal. Such tests are used whenever probabilities for the F-Test for equality of variance are "small." Consequently, the Separate Variance Estimate T-Test was used whenever F-Test Significance Levels were .10 or smaller.

TABLE 5

Means and Standard Deviations for the Average Number of Program Length Commercials by Profitability

	More Profitable	Less Profitable
Average Number of Program Length Commercials		
Mean	3.5	10.1
SD	4.9	16.3

TABLE 6

T-Tests Comparing Profitability with the Average Number of Program Length Commercials (One-Tailed Tests)

COMPARISONS	T	SIG	DF
Average Number of Program Length Commercials			
More Profitable/Less Profitable	-4.58	.000+*	142.34

*Denotes significance at the indicated level.

+Denotes that a T-Test using a separate variance estimate (rather than pooled variance estimate) was used since the variances within groups appears unequal. Such tests are used whenever probabilities for the F-Test for equality of variance are "small." Consequently, the Separate Variance Estimate T-Test was used whenever F-Test Significance Levels were .10 or smaller.

APPENDIX A

Alternate Regressions

Independent Variables

Dependent Variable	Market Concentration	Profitability Index	Organization Size	Substitute Penetration	Local	Adjusted R Square
Regression With Outliers Reduced to 3 Standard Deviations:						
Average Number of Program Length Commercials	-.032	-.234***	-.072	.106*	.019	.074***
Regression With Transformed Variables:						
Average Number of Program Length Commercials	-.077	-.247***	-.039	.205***	.018	.123***

* p is less than .05
** p is less than .01
*** p is less than .001

N=476 (Minimum pairwise number of cases = 418.)